

# **Financial literacy among working women in different sectors: A study of Bundelkhand Region of Uttar Pradesh**

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## **RESEARCH SUMMARY**

### **1. INTRODUCTION**

“Financial literacy is the ability to make informed judgments and to take effective decisions regarding the use and management of money. Financial literacy is therefore a combination of a person’s skills, knowledge, attitudes and ultimately their behaviour in relation to money” **ANZ Bank (2011)** .In simple words financial literacy is “the ability to understand how money works, how an individual makes his money, how he manages it and how he invest it and also extends help to others regarding matters of investment in financial matters”.

Women traditionally were primarily responsible for the home and daily maintenance activities, which often include household budgeting and bill paying. They spend money primarily on their children and families rather than put money away for their retirement. Most of the women do not take decisions with respect to management of personal finances as they do not have confidence due to lack of knowledge about the various investment avenue, portfolio management rules, investment procedures and regulatory practices . Many women let their father to handle their finances prior to marriage and after marriage this job is done by husband. They simply sign financial documents without question.

There are very few realistic examples where women actually participate in decision making process in the family. There are many studies which indicate that women working in organized sector even in urban areas do have freedom to manage their personal finance. Still majority of females are highly ignorant about different investment opportunities in the market. The answer to the above problem lies in the promotion of financial literacy as it allows people to manage their earnings for better future. Financial literacy enable individuals to navigate the financial world make informed investment decision and minimize chances of being misled. Financial literacy has gained universal recognition all over the world. Women's lack of knowledge and confidence with regard to money management and investment programs impacts their ability to reach their financial potential. The basic principles of investing are the same across all gender, but women do not look at financial matters in

the same way as their counterpart does. Women who are empowered and educated must utilize tools and resources to reach their financial potential.

Financial literacy among women can contribute to inclusive growth of socially and economically backward region like Bundelkhand. If women are financially educated the household would resort to regular savings which in turn would lead to investment in right channel for income generation. It is presumed for particularly women that the financial well being of household could be achieved more through financial literacy. Financial education can have a cascading effect on inclusive growth of Bundelkhand region

In this backdrop this work aims at studying the status of financial literacy among women working in different sectors of Bundelkhand Region of Uttar Pradesh. Bundelkhand region is a backward region where still women lacks knowledge of finance decisions specially investment in various financial instruments, they still look for someone who can invest on behalf of them due to lack of financial literacy, they can also be cheated by others by taking wrong investment decisions so it is the need of the hour to teach financial instruments to women specially at the school level and also one separate subject should be implemented at the schools and college levels of financial literacy so that our women can also take decisions regarding financial literacy without looking for others help.

The study evaluates the status of financial literacy among working women in Bundelkhand Region of Uttar Pradesh. The study also evaluates the basic financial skills among working women in the area of study. The study also assesses impact of financial literacy level on investment behavior of respondent. The study also identifies the factors influencing the financial literacy among women working for different sector in the region.

## **2. RESEARCH METHODOLOGY AND LITERATURE REVIEW**

### **2.1 Statement of the Problem**

India is among the world's most efficient financial markets in terms of technology, regulation and systems. It also has one of the highest savings rate in the world. While people in India prefer to save but where the savings are invested is a cause for concern. As per an RBI report, only 1.4% of household savings was invested in equity, mutual funds and debentures in 2003-04 which went up to about 4% in 2005-06. Investors in majority households is in traditional avenues such gold or silver jewelry, bank fixed deposits, post office schemes or government-backed securities

and or other non-financial assets which provide low yield. Different studies reveal that majority of our households still do not prefer modern investment avenue.

Until and unless the common person becomes a wise investor and are protected from wrong investment decisions; financial security and wealth creation for the individuals and the economy will remain a distant dream. We need to convert a country of savers into a nation of investors.

Participation in modern finance requires answers to host of questions viz. (i) Do you make household budgets? (ii) How much do you need to save every month to meet all your financial goals? (iii) How should you allocate your savings into various asset classes and among asset classes to various products? (iv) How should you change your asset allocation pattern with age and circumstances? (v) What should be the basis of selecting a mutual fund house, insurance company, bank or lender? (vi) Do you know there is a need for diversification of your investments to diversify risk? (vii) What are the channels through which financial services are provided?

Such questions and choices appear tough to even educated individuals. One may be educated but financially illiterate or partially literate. Thus, when it comes to financial solutions, investors tend to use thumb rules or seek advice from friends or relatives, which are often poor approximations. A financially literate person is more prone to be carried away by demonstration effect. The probability of loosing hard earned wealth is more for the financially illiterate individuals. An individual who is financially literate generally adopt systematic investment process and achieve their investment goals.

## **2.2 OBJECTIVES OF THE STUDY**

1. To evaluate status of financial literacy among women in Bundelkhand Region of Uttar Pradesh.
2. To evaluate the basic financial skills among working women in the area of study.
3. To assess impact of financial literacy level on investment behavior of respondent.
4. To identify factors influencing the financial literacy among women working for different sector in the region.

## **2.3 Hypothesis for the study**

1. **H<sub>10</sub>:** There is no significant relationship between the different levels of financial literacy (the outcome variable) against a set of demographic and socio-economic attributes (Explanatory variables) viz. age, educational qualification, marital status, family structure and working sector.
2. **H<sub>20</sub>:** Women working in different sectors have indifferent knowledge with respect to investment.
3. **H<sub>30</sub>:** Women working for government and non-government sector have indifferent knowledge with respect to investment avenues of different risk profile.
4. **H<sub>40</sub>:** Financial literacy has a significant and negative impact on investment behavior.
5. **H<sub>50</sub>:** Investment constraints have a significant and negative impact on Investment behavior

## **2.4 RESEARCH TYPE**

This research is basically exploratory in nature. In this research both primary and secondary data has been used to explore the research questions.

## **2.5 SELECTION OF SAMPLE**

Sampling deals with the selection of items to be observed. Working women from Medical, Insurance, Education, Banking and Community & Personal Services were considered for the study due to time and resources constraints. The study is also confined to all the seven district of Bundelkhand Region of Uttar Pradesh only viz. Jhansi, Banda, Lalitpur, Mahoba, Hamirpur, Chitrakoot, & Jalaun.

## **2.6 SAMPLE SIZE**

It was decided to have a sample at the 95 % confidence level while estimating a true proportion to be within +\_0.045. As the population mean is not known, the sample size is calculated by using the following formula:

$$n = \frac{1}{4} * (Z^2 / e^2)$$

where n= sample size, Z= standard normal variance, e= allowable error, Value of z at 95 % confidence level = 1.96

$$\text{Therefore, } n = [(1.96)^2 / (0.045)^2] = 474$$

## **2.7 TESTING OF QUESTIONNAIRE**

In order to validate and find out the reliability of the questionnaire, a pilot study was conducted before proceeding with the actual survey then appropriate modifications in contents and format of the questionnaire were then incorporated in the light of experience gained during the pilot study.

## **2.8 METHODS OF DATA COLLECTION**

This study is primary based on data collected mainly from primary source. In order to collect the data a questionnaire was prepared in line with the objectives of the study. A pilot survey was conducted to test the questionnaire. After pilot survey necessary changes were made and then questionnaire was finalized.

However, secondary data were also collected from the secondary sources such as various records and district centers, Periodicals, Publications, Magazines, Newspapers, various Research Centers & Books and website of Government and Non-Government Organizations. Secondary sources data has been primary used for conducting literature review and drawing theoretical construct.

## **2.9. TOOLS AND TECHNIQUES OF DATA ANALYSIS**

In this section statistical tools and techniques used to accomplish the study has been explained. All the statistical analysis and testing of hypothesis have been conducted using SPSS 20 version

This study is both descriptive and inferential in nature. In order to conduct descriptive study descriptive statistics such as normal distribution, percentage analysis and mean have been used.

The inferential study was conducted using statistical tools like ANOVA, Chi-Square, Correlation Matrix, Chi-Square and Factor Analysis.

In order to assess factors that influence the financial literacy of individual; Multinomial Logistic Regression (MNL) Model which has been explain in the following section.

## **2.10 Proposed Financial Literacy Model Description:**

To identify the factors which affects the level of basic financial literacy a Multinomial Logistic Regression (MNL) Model is used to explore potential relationships between the different levels of financial literacy (the outcome variable) against a set of demographic and socio-economic attributes (explanatory variables). It makes use of a general logit transformation which is the logarithm of the odds of a particular outcome level relative to the reference level (**Stokes et al. 2000**).

**2.10.1 Purpose** –Like all regressions, the MNL is a predictive analysis. MNL is used to describe data and to explain the relationship between one dependent nominal variable and one or more independent variables (continuous or categorical in nature). MNL is used whenever dependent variable has a ‘polytomous outcome’. The strategy of MNL is to contrast outcomes with a common ‘reference’ category. The ‘reference category’ is like the reference group when using dummy variables in a regression. It serves as the contrast point for all analyses. Effects are always in reference to the contrast category. MNL is designed for outcomes that are not complexly interrelated. One critical assumption in this case is ‘Independence of Irrelevant Alternatives’ i.e. odds of one outcome versus another should be independent of other alternatives. Therefore, MNL is used in cases where the alternatives can plausibly be assumed to be distinct and weighed independently in the eyes of decision-maker. MNL is a multi-equation model. For a nominal dependent variable with ‘k’ categories the MNL model estimates k-1 logit equations.

**2.10.2 Interpreting Logistic Coefficients** - Logistic slope coefficients can be interpreted as the effect of a unit of change in the X variable on the predicted logits with the other variables in the model held constant. That is, how a one unit change in X effects the log of odds when the other variables in the model are held constant. Coefficients need to be interpreted always with respect to the ‘reference’ category. Each coefficient is interpreted using a **Wald test** (really just a Z test).  $W_j = B_j / SE_{Bj}$ . The tests of the coefficients are approximately z-scores so they are tested as z-scores.

**2.10.3 Model Fit and The Likelihood Function** – Likelihood just means probability. It always means probability under a specified hypothesis. In MNL two hypotheses are of interest: Null hypothesis, which is when all the coefficients in the regression equation takes the value ‘zero’; and the alternate hypothesis that the model with predictors currently under consideration is accurate and differs significantly from the ‘zero’ or the ‘null’. The likelihood of observing the data which was actually observed under each of these hypothesis is then worked out. The result is usually a very small number and thus for computational ease, natural logarithm is used while

producing a log-likelihood. Probabilities are always less than one, so log-likelihoods are always negative. Log likelihood is the basis for tests of a logistic model.

**2.10.4 Pseudo R Square** – Logistic regression models are fitted using the method of maximum-likelihood – i.e. the parameter estimates are those values which maximise the likelihood of the data which has been observed. So, the model estimates from a logistic regression are maximum likelihood estimates arrived at through iterative process. They are not calculated to minimise variance, so the OLS approach to goodness of fit does not apply. However, several Pseudo R-squares have been developed in this connection. They are called ‘pseudo’ because they look like R square as they range from 0 to 1; and so higher values indicate a better fit. There are three main types of Pseudo R Squares –

1. McFadden's  $R^2$  : It is  $1 - \frac{\log(L_c)}{\log(L_{null})}$  where  $L_c$  denotes the (maximised) likelihood value from the current fitted model, and  $L_{null}$  denotes the corresponding value but for the null model – the model with only an intercept and no covariates.
2. Cox & Snell  $R^2$  : It is based on the log-likelihood for the model compared with log-likelihood for a baseline model. However, with categorical outcomes it has a theoretical maximum value of less than “1” even for a perfect model.
3. Naglekerke's  $R^2$ : It is an adjusted version of the Cox & Snell  $R^2$  that adjusts the scale of statistic to cover the full range from 0 to 1.

A ‘good Pseudo R square’ varies in accordance with areas of application. However, it is most useful to compare competing models for the same data, so  $R^2$  with largest values are usually the best. Therefore, in this study **Naglekerke's Pseudo R Square has been used for analysis.**

**Chi-Square**– Models are also compared by taking two times the difference between log-likelihoods. Models, however, must be nested to be compared. Nested implies that all components in the smaller model must be there in the larger model.

$$\text{Chi Square } (\chi^2) = 2 [(\text{log-likelihood for bigger model}) - (\text{log-likelihood for smaller model})]$$

## **2.10.5 Multinomial Logit Model (MNL) Specification (Equations)**

Let  $FL_i$  be a random variable representing the financial literacy level of any respondent. These are a set of discrete, mutually exclusive levels. These levels are assumed to depend on a number of personal attributes, socioeconomic characteristics

and other factors X. The MNL model for the calculated financial literacy level specifies the following relationship between the probability of having a literacy level FLi and the set of explanatory variables X as (Greene, 2003):

$$\text{Prob } (\text{FLi} = j) = \frac{e^{\beta_i x_i}}{\sum_{k=0}^j e^{\beta_k x_k}} \quad \dots \quad (1)$$

Where  $j = 0, 1, \dots, J$

And  $\beta_i$  is a vector of coefficients on each of the independent variables X.

Equation (1) can be normalized to remove indeterminacy in the model by assuming that  $\beta_0 = 0$  and the probabilities can be estimated as:

$$\text{Prob } (\text{FLi} = j / x_i) = \frac{e^{\beta_i x_i}}{1 + \sum_{k=0}^j e^{\beta_k x_k}} \quad \dots \quad (2)$$

Estimating equation (2) yields the J log-odds ratios

$$\ln(P_{ij} / P_{ik}) = x_i^* (\beta_j - \beta_k) = x_i' \beta_j, \text{ if } k = 0 \quad \dots \quad (3)$$

The dependent variable is therefore the log of one alternative relative to the base alternative.

The MNL coefficients are difficult to interpret, and associating them with the jth outcome is tempting and misleading. To interpret the effects of explanatory variables on the probabilities, marginal effects are usually derived as (Greene, 2003):

----- (4)

$$\delta_j = \frac{\partial p_j}{\partial x_i} = p_j \left[ \beta_j - \sum_{k=0}^J p_k \beta_k \right] = p_j (\beta_j - \bar{\beta})$$

The marginal effects measure the expected change in probability of a particular choice being made with respect to a unit change in an explanatory variable (Greene, 2003). The signs of the marginal effects and respective coefficients may be different, as the former depend on the sign and magnitude of all other coefficients.

In the level of financial literacy of the respondents the MNL model is used to estimate the effects of explanatory variables on the dependent variables. Based on the above theoretical justification, we specify the multinomial logit model for the calculated financial literacy level of the respondents as follows:

$$\text{FL}_i = \mathbf{X}_i' \boldsymbol{\beta}_j + \mathbf{U}_i \quad \dots \quad (5)$$

Where  $\text{FL}_i$  is the calculated **financial literacy level** of the surveyed respondents,  $\beta_j$  are the **regression parameters**,  $X_i'$  is **vector of the explanatory variable** and  $U_i$  is **the error term**. This model is estimated by using the software, SPSS.

### **2.11 Limitations of study:**

- Lack of adequate literature
- Time and money constraints
- Reluctance of respondents
- Gender Constraints
- Restricted Study

## **2.12 Review Literature**

### **2.12.1 Reviews on Financial Literacy & Financial Stability**

It is very necessary even for a single individual to realize the importance of financial stability, if we want growth of any nation then financial stability cannot be overlooked. For being financially stable one must be financially literate. There are many studies which highlighted the importance of financial literacy. There is one such pioneering study which begins with exploring the dimensions of financial literacy and after that it also provided the institutional framework so as to spread the financial literacy. Financial literacy is a perquisite to financial stability. The study focused on the fact that many people are not aware about the interest rate they get on their bank accounts. Many people sign the documents blindly without reading the terms and condition of the banks. The author also explained about the loss which was associated with this process and hence considered spreading of financial literacy among masses as an extremely important task (**Majumdar, G. 2014**). Another similar study also considered financial literacy and financial stability as an extremely important and hence is the two important aspects of an efficient economy. The author tried to identify the impact of financial literacy among individuals and its macro - economic advantage for economy (**Singh, 2014**).

### **2.12.2 Reviews on Factors Influencing Financial Literacy**

Factors which influence financial literacy are extremely important to be rightly traced. One of the pioneering studies in this regard concerns itself with the factors which influence the financial literacy among university students in Malaysia (**Albreedy & Gharleghi, 2015**). Pearson Correlation analysis and multiple regression tables were used to determine the interrelation of different variables in financial literacy. In their study they found empirical results which depicted that there is a significant relationship between independent variables of education, and money attitude toward the dependent variable of financial literacy, while no relationship was found between financial socialization agents and financial literacy. The need was also felt to find out the financial literacy level especially of college students. This was traced effectively in a path breaking study by Aggarwal and Gupta. The objective of the paper was to evaluate the influence of various demographic factors like gender, discipline and level of qualification on financial literacy. The primary data was collected and filled by 148 respondents. This study also identifies areas where financial literacy may be lacking. Authors asserted that the determination of critical areas will assist educators, regulators and financial institutions to design financial planning courses with greater significance in helping adults to achieve greater financial freedom and be better equipped for retirement (**Aggarwal & Gupta, 2014**).

### **2.12.3 Reviews on the basis of attitude of working women**

The women are more likely to be dissatisfied with their finances than men. A woman's concerns about her personal finances are more likely to affect her work performance (**Hira& Mugenda, 2000**).

New international research demonstrates that financial illiteracy is widespread in both well-developed and rapidly changing markets. Women are less financially literate than men, the young and the old are less financially literate than the middle-aged, and more educated people are more financially knowledgeable. The people who are financially literate are more likely to plan for their retirement and Instrumental variables estimates that the effects of financial literacy on retirement planning tend to be underestimated. In a nut shell, financial literacy is very essential for retirement security (**Lusardi & Mitchell, 2011**).

### **2.12.4 Reviews on Savings & Investment Behavior**

Saving for retirement has become an increasingly important research and policy topic. Learning the concept of compound interest can help to increase retirement savings in rural areas. one of the study discuss whether consumers/ investors appear to possess the financial literacy necessary to possess the financial literacy necessary to process financial information and formulate adequate saving plans, it also highlighted that people differ widely in their degree of financial literacy and saving patterns(**Lusardi,2006**). Another study present an intertemporal portfolio choice model where individuals invest in financial literacy, save, allocate their wealth between a safe and a risky asset, and receive a pension when they retire and the study concluded that lack of financial sophistication as a potential explanation for limited financial market participation (**Song, 2012**).

### **2.12.5 International Studies**

International comparative studies aiming at cross-country comparison or focusing on a single country with specific features has been the trend in literature. One such study provides a first set of international indicators on the level of financial knowledge, behaviors and attitudes of individuals in different settings (**Atkinson, 2011**). The dimension of ageing has been specifically traced in international comparison and also in country specific case studies.

It has been demonstrated by the new international research that financial illiteracy is widespread in the developing countries as well as rapidly changing markets. Women are less financially literate than men, the young and the old are less financially literate than the middle-aged, and more educated people are more financially knowledgeable. The majority who are financially literate plan for retirement. As per the estimates of instrumental variables, the effects of financial literacy on retirement planning tend to be underestimated (**Lusardi & Mitchell, 2011**).

#### **2.12.6 Review on the basis of Multinomial Regression Model Framed in Analysis Part.**

Chen and Volpe (1998) employed a comprehensive questionnaire-based method of data collection. They made use of multiple choice based on personal finance, investors' opinion and beliefs as well as their demographic data. For assessing the level of financial literacy of the sampled units, authors used median percentage of the correct answers in the sample. The respondents were then divided into two groups. The dichotomous variable was then used in the logistic regression as the dependent variable. Independent variables considered were gender, academic discipline, class rank, race, nationality, work experience, age and income. A higher level of income was significantly associated with a higher level of financial literacy.

Education came out to be significantly associated with a higher level of financial literacy in a study by Prawitz, Kalkowski and Cohart (2011) linked through perceptions. They found that impartation of financial education positively changed participants' perceptions about their ability to handle financial matters and achieve financial goals (Prawitz, Kalkowski, & Cohart, 2011)

### **3. The findings of the study**

#### **1. To evaluate status of financial literacy among women in Bundelkhand Region of Uttar Pradesh.**

In order to assess status of financial literacy among women in the Bundelkhand Region of Uttar Pradesh the researcher has considered broad three parameters viz. (i) participation in financial decision of the family, (ii) knowledge of investment management and (iii) banking ability

##### **i. Participation of Working Women in Financial Decision of the Family:**

- It has been observed that about 64 per cent of the working women take decision regarding day to day money related household decisions. It indicates that majority of the women working for different sector are independent to

take day to day financial decision of the family. 75.8 per cent of the respondents agree that family budget is prepared in the family and 44.2 per cent of the women reported that they prepares family budget by themselves. This indicates that they have say in family money matters and they also have knowledge of budgeting. However, more than 45.8 per cent do not have say in the family finance even though they are working.

- It was found out that there are 92.6 per cent of the women invest their savings. By this it can be stated that a majority of working women is likely to invest their saving. However, only 8 per cent of the respondents agreed upon they have extreme knowledge of managing money and 7 per cent have reported that they have no knowledge of money management. While 34 per cent prefer to remain neutral.
- It was observed that majority of the respondent prefer contingent planning over other investment preference variable viz. regular income, tax planning, capital appreciation and liquidity etc.
- Only 13.7 per cent reported that they have poor personal finance skills. However, 14.5 per cent of the respondents reported that they possess very good personal finance management skills, 27.4 per cent agreed that they are good at managing personal finance. While 44.5 possess average finance skills.

## (ii) Knowledge of investment management

- i. **Knowledge of Diversification:** In order to assess knowledge regarding benefits of diversification investment the respondents were asked, "whether investing in more than one stock is safe?". Only 39.47 per cent of the respondents replied in affirmative. This indicates that majority of the respondents (about 60 percent) are not aware about the benefits of diversification in investment.
- ii. **Knowledge of Impact of Inflation on Investment:** Similarly when the respondents were asked whether inflation have the positive or negative impact on investment; only 25.53 per cent agreed that inflation level would be affecting the value of their investment. This indicates that majority of the respondents (about 74.47 per cent) lack knowledge of basic economics of inflation and its impact on investment.
- iii. **Knowledge of Risk and Return Relationship:** The researcher has also tried to evaluate whether the respondents are aware about the risk and return relationship, whether your expected return from investment increase with increase in your risk perception. Only 16.84 per cent of the

respondents replied in affirmative that expected retrun increase with the increase in risk perception while 83.16 per cent failed to answer that risk and return are positively correlated which is another indicator of poor knowledge of basic finance.

- iv. **Knowledge of Investment Avenues and Investment Preference:** It has also been observed that 51.05 per cent of the respondets prefer investing in debenture,bonds or Fixed Deposite for regular income. This indicates that they have idea of selecting investment instrument based on their return preference. However, remaing 48.95% of the respondent failed to correctly identify their investment avenue based on retrun preference. Only 24.21 per cent of the respondents are aware of benefits of shares market while 45.53 per cent are not aware.
- v. **Knowledge of Arithmetic Behind Investment:** 56.32 per cent of the respondents were of the opinion that investing in scheme that offers compound interest is better than schme offering simple interest while according to 17.89 % of the respondents schemes of offering simple interest is better. However, remaing said that they no idea about the concept of either simple interest or compound interest. It indicates that still large section of the working women are not aware about the simple arithmetric that one must consider while selcting investment schemes. 50.79 per centof the respondents reported in affirmative that they are awarne of benefits of investing in mutual fund and SIPs and prefer to invest in these schemes. It again reflects that major chuck of the women are aware of benefits of investing in such schemes.
- vi. **Knowledge of Time Value of money its relevance in Investment:** The result indicate that only 9.2 per cent of the respondent have complete knowledge about time value of money and its relevance in investment and 18.4 per cent have fair knowledge about time value of money and its relevance in investment. Remaining 72.4 percent have no knowledge concept of time value of money and its relevance in investment that is considered as one of the most important concept in finance.
- vii. **Knowledge of Risk and Return Tradeoff and its Relevance in Investment:** Only 7.9 per cent have agreed that they have complete knowledge about risk and return trade off and its importance while remaining 74.5 per cent have no knowledge of the concept.

**viii. Knowledge of Risk Categories of Different Investment Avenues:**

Another important parameter to assess the financial literacy was to assess the respondents' awareness about risk characteristics of different investment avenues. For this purpose investment avenues were classified in the categories viz. low risk, medium risk and high risk instruments etc.

- a) Low Risk Investment Avenues: It was observed large number of working women are not aware of low risk investment avenues such NSC (13.2 per cent), KisanVikasPatra (10 per cent), Post office saving schemes (4.7 per cent ) and government securities (17.1 per cent )
- b) Medium Risk Low Risk Investment Avenues: It was observed large number of working women are not aware of medium risk investment avenues such as Mutual Fund (18.9 per cent), Life Insurance (6.6 per cent), Debenture (29.5 per cent) and Bonds (30.8 per cent)
- c) High Risk Low Risk Investment Avenues: It was observed large number of working women are not aware of high risk investment avenues such Equity Market Instruments (46.8 per cent) and Commodity Market Instruments (49.2 per cent).
- d) Traditional Risk Investment Avenues: It was observed large number of working women are not aware of traditional risk investment avenues such Investment in Real Estate (37.4 per cent), Investment in Gold and Silver (22.9 per cent) and Investment in Gold and Silver (45.5 per cent).

**ix. Awareness of the factors influencing investment decision:**

It was observed that the respondents gives top most priority to regular income (mean score 4.34) followed by tax planning (Mean Score 3.79), maturity value of investment (3.77), capital appreciation (3.57) and marketability of the investment instrument (lowest mean score of 3.23). Thus, it could be concluded that investors do consider different factors while making investment decisions and do rank it according to their investment need.

**x. Purpose of Investment:**

It is observed that respondents prefer to invest mostly for leading a comfortable (mean score 4.01) followed by contingency need (mean score 3.93), health (mean score 3.88) and children's education (mean score 3.82), status and prestige (mean score 3.76), family well-being (mean score 3.72) and Construction of house is the least preferred purpose of investment

### **(iii) Banking ability of working women**

- It was observed that 96 per cent working women are aware of methods opening bank account .
- about 90 per cent of the respondents have knowledge of different types of bank account and their characteristics.
- About 64.21 per cent have knowledge of various utility services offered by banks while 32.89of the respondent's don't have any idea of such services
- It has also been observed that only 39.74 per cent of the respondents are having good knowledge about internet banking while 56.32 per cent said that they do not have any knowledge of internet banking
- 45.26 per cent of the respondents have acknowledged that they are not aware of the process of buying bank draft.
- It was also found that 25.53 per cent have no knowledge of debit and credit cards while 22.63 per cent have acknowledge they do not have enough knowdge of using ATM and e-banking .

2. **To evaluate the basic financial skills among working women and assessing impact of financial literacy level on investment behavior of respondent in the area of study.**
  - In order to assess the level of financial literacy among working women in the region simple basic questions on finance and investment were put to the respondents in the form of quiz. These questions were based on (i) impact of diversification on investment, (ii) impact of inflation on investment, (iii) Behaviour relationship between risk and return, (iv) Retrun prefrences and selection of investment avenues, (v) awareness about benefits of investing in share market, (vi) implication of simple interest and compound interest on investment and (vii) awareness of benefits of investing in Mutual Funds and SIP.
  - Only 39.47 per cent of the respondents replied in affirmative. This indicates that majority of the resondents (about 60 percent) are not aware about the benefits of diversification in investment. when the respondents were asked whether inflation have the positive or negative impact on investment; only 25.53 per cent agreed that inflation level would be affecting the value of their investment . This indicates that mojirity of the respondents (about 74.47 per cent) lack knowledge of basic economics of inflation and its impact on investment.
  - Only 16.84 per cent of the respondents replied in affirmative that expected retrun increase with the increase in risk perception while 83.16 per cent

failed to answer that risk and return are positively correlated which is another indicator of poor knowledge of basic finance.

- It has also been observed that 51.05 per cent of the respondents prefer investing in debenture, bonds or Fixed Deposits for regular income. . However, remaining 48.95% of the respondent failed to correctly identify their investment avenue based on return preference
- Only 24.21 per cent of the respondents are aware of benefits of shares market while 45.53 per cent are not aware.
- 56.32 per cent of the respondents were of the opinion that investing in scheme that offers compound interest is better than scheme offering simple interest while according to 17.89 % of the respondents schemes of offering simple interest is better
- 50.79 per cent of the respondents reported in affirmative that they are aware of benefits of investing in mutual fund and SIPs and prefer to invest in these schemes
- only 9.2 per cent of the respondent have complete knowledge about time value of money and its relevance in investment and 18.4 per cent have fair knowledge about time value of money and its relevance in investment
- 72.4 percent have no knowledge concept of time value of money .
- Only 7.9 per cent have agreed that they have complete knowledge about risk and return trade off and its importance while remaining 74.5 per cent have no knowledge of the concept
- It was observed large number of working women are not aware of low risk investment avenues such NSC (13.2 per cent), KisanVikasPatra (10 per cent), Post office saving schemes (4.7 per cent ) and government securities (17.1 per cent )
- It was observed large number of working women are not aware of medium risk investment avenues such as Mutual Fund (18.9 per cent), Life Insurance (6.6 per cent), Debenture (29.5 per cent) and Bonds (30.8 per cent)
- It was observed large number of working women are not aware of high risk investment avenues such Equity Market Instruments (46.8 per cent) and Commodity Market Instruments (49.2 per cent).
- It was observed large number of working women are not aware of traditional risk investment avenues such as Investment in Real Estate (37.4 per cent), Investment in Gold and Silver (22.9 per cent) and Investment in Gold and Silver (45.5 per cent).

### **3. Factors influencing the financial literacy among working women**

- It is observed that the respondents gives top most priority to regular income as it has the highest mean score of 4.34.
- Tax planning is second most relevant factor considered by the respondents (Mean Score 3.79) followed by maturity value of investment and capital appreciation.
- Marketability of the investment instrument has the lowest mean score of 3.23, which indicates that it is of lesser priority factor for respondents
- 17.7% of the respondents strongly agree that liquidity is an important factor while making investment decision while 36.8% of the respondents agreed that they give due importance to liquidity.
- Only 6.6% of the respondents strongly disagree and another 1.8% disagree that liquidity is an important factor while making investment decision
- 25.8% of the respondents strongly agree that regular income is an important factor while making investment decision while 30.8% of the respondents agreed that they give due importance to regular income
- Only 2.6% of the respondents strongly disagree and another 1.8% disagree that regular is an important factor while making investment decision
- 57.1% of the respondents strongly agree that capital appreciation is an important factor while making investment decision while 24.2% of the respondents agreed that they give due importance to capital appreciation.
- Only 3.2% of the respondents strongly disagree and another 1.8% disagree that capital appreciation is an important factor while making investment decision
- Only 7.6% of the respondents strongly agree that marketability of investment instrument is an important factor while making investment decision while 30.8% of the respondents agreed that they give due importance to marketability
- 7.9% of the respondents strongly disagree and another 2.9% disagree that liquidity is an important factor while making investment decision
- 32.4% of the respondents strongly agree that tax planning is an important factor while making investment decision while 24.2% of the respondents agreed that they give due importance to tax planning
- Only 6.6% of the respondents strongly disagree and another 1.3% disagree that tax planning is an important factor while making investment decision
- Only 9.2% of the respondents strongly agree that goodwill of the issuing authority is an important factor while making investment decision while 22.4% of the respondents agreed that they give due importance to reputation of issuer of security

- 10.3% of the respondents strongly disagree and another 2.4% disagree that goodwill of issuer is an important factor while making investment decision
- 13.7% of the respondents strongly agree that maturity value of investment is an important factor while making investment decision while 28.4% of the respondents agreed that they give due importance to maturity. Only 8.2% of the respondents strongly disagree and another 2.1% disagree that maturity is an important factor while making investment decision.

#### **4. The main Conclusions of Hypothesis are as follows-**

##### **Hypothesis 1**

1. **H1<sub>0</sub>:** There is no significant relationship between the different levels of financial literacy (the outcome variable) against a set of demographic and socio-economic attributes (Explanatory variables) viz. age, educational qualification, marital status, family structure and working sector.

**H1<sub>1</sub>:** There is significant relationship between the different levels of financial literacy (the outcome variable) against a set of demographic and socio-economic attributes (Explanatory variables) viz. age, educational qualification, marital status, family structure and working sector.

##### **Result of Hypothesis-1:**

The result of the hypothesis 1 indicates that variables like Educational qualification, work sector, age, education qualification etc. have significant impact on financial literacy. For this purpose Multinomial Regression Model was framed.

The model result indicates that education is the most important factor in determining the level of financial literacy among the respondents. The model indicates that with the increase in education qualification. From the model result, it could be concluded that women who possess Ph.D. degree and Post Graduate Degree are most likely to have high level of financial literacy as compared to women who possess lower degree. Women who are graduates have mid level financial literacy. Thus, it could be concluded that Education is one of the important factors influencing the level of financial literacy among women. Thus, governments continue the policy of educating the girl child.

The model result also indicates that sector for which the women are working plays a significant role in influencing the level of financial literacy amongst them. It is observed that in reference to community and personal services women who are working for Insurance followed by education, medical and banking sector possess

higher level of financial literacy. Thus, our policy makers should focus financial literacy campaign amongst female who are working for community and personal services.

The model result also indicates that different age group also influences the level of financial literacy. It is observed that respondents in the age group of 18-30 years possess medium level of financial literacy as compared to person have age group of 51-60 years. Thus, our policy makers must focus financial literacy among higher age bracket.

### **Hypothesis 2**

**H2<sub>0</sub>:** Women working in different sectors have indifferent knowledge with respect to investment.

**H2<sub>1</sub>:** Women working in different sectors have different knowledge with respect to investment.

### **Result of Hypothesis- 2 :**

The p-value of all the four sub-hypothesis is less than 0.05. The results for these sub hypotheses are:

1. The distribution of knowledge regarding, how to make a financial plan is not same across categories of working sector
2. The distribution of knowledge regarding how to initiate investment is not same across categories of working sector
3. The distribution of knowledge regarding risk and return trade off and its importance in investment is not same across categories of working sector.
4. The distribution of knowledge regarding the time value of money and its importance in investment is not across categories of working sector.

So with according to the result of these sub hypotheses it can be concluded that as the knowledge regarding financial plan, how to initiate investment, risk and return trade off and time value of money is not same among the working women of different sectors.

### **Hypothesis 3:**

**H3<sub>0</sub>:** Women working for government and non-government sector have indifferent knowledge with respect to investment avenues of different risk profile.

**H3<sub>1</sub> :** Women working for government and non-government sector have different knowledge with respect to investment avenues of different risk profile.

### **Result of Hypothesis 3:**

As the p-value is less than 0.05 for NSC, KVP, Post office savings and Government securities. The result second sub hypothesis stated that the P-value is less than 0.05 for Mutual fund, life insurance, debentures and Bond. So, it can be conclude that that government and non-government working women have different knowledge with respect to investment avenues of moderate risk. As per the result of the third sub hypothesis it is stated that P-value is less than 0.05 for equity share market, commodity market, forex market. So, it can be concluded that government and non-government working women have different knowledge with respect to investment avenues of high risk. By the result of these three sub-hypothesis that states that, there is a different knowledge between the working women of these two sectors with respect to investment avenues of low risk, moderate risk and high risk. So, it can be concluded that Women Working for government and non-government sector have different knowledge with respect to investment avenues of different risk profile.

#### **Hypothesis 4**

**H4<sub>0</sub>:** Financial literacy has a significant and negative impact on investment behavior.  
**H4<sub>1</sub>:** Financial literacy has a significant and positive impact on investment behavior

#### **Result of hypothesis 4:**

To examine the hypothesis three sub hypotheses are taken into measure:

The first sub hypothesis states that basics of finance show a significant and positive impact on investment behavior. The result stated that the odds ratio for the variable is 4.313. This means that it accept the hypothesis. Therefore, it can be concluded that as basic knowledge of finance increase, the investors become rational. The impact of financial knowledge is positive and very important for investor having best and rational decision-making.

Banking Ability has a significant and positive impact on investment behavior. The result shows that the odds ratio for this variable is 2.745. It means that it accept the hypothesis. So it can be stated that as the banking knowledge is important factor to analysis the financial literacy of an investor. This can be concluded that as banking ability increase the rationality in the behavior of investors also increase. It is very important to have good banking knowledge to behave rational while investing.

Investment Awareness has a significant and positive impact on investment behavior. According to the result, the odd ratio for this variable is 0.673. The hypothesis is rejected. Therefore, it can be concluded that investment awareness has insignificant and negative impact on investment behavior.

Financial literacy is somewhat very important aspect taken into consideration while examine the investment behavior of investors. With according to the result of sub hypothesis it can be stated that financial literacy has a positive impact on investment

behavior. As the investors' financial literacy increases, investment decision is regarded as rational. They move in a same direction as literacy increase, rationality in decision making also increase.

**Hypothesis 5:**

**H5<sub>0</sub>:** Investment constraints have a significant and negative impact on Investment behavior

**Result of Hypothesis 5:**

As per the result this hypothesis is accepted. Investors must identify individuals constrains while taking investment decisions. It is concluded that investment constrains having very important and negative impact. For the assessment of investment constrains three sub hypothesis were tested. There are as follow:

The sub hypothesis states that Liquidity constraints have a significant and negative impact on investment behavior. The odds ratio for this variable is 0.556. According to result the hypothesis is accepted. It means that liquidity constrain aspect put a negative impact on investment behavior. It can be concluded that as liquidity need increase there would be certain restrictions on investment in investment decision making.

The result of tax constrains states that tax constrain has positive and insignificant impact on investment behavior. The odds ratio for this variable is 1.582. It can be concluded that tax constrains is an important aspect while assessing the investment behavior. Its impact is positive means that investor invest their fund so as to get tax benefit. It does not put any negative impact on investment behavior.

There are certain legal aspects which put a restriction on investment. The odds ratio for this variable is 0.66. The result shows that Legal constraints have a significant and negative impact on investment behavior. It means that legal aspect is important and its impact is negative on investment behavior. As the legal constrains increase it put a negative impact on investment behavior.

After the assessment of these constraints it can be concluded that investment constrains have a significant impact on investment behavior. It means that as the restriction increase in investment, the behavior of investor show a negative impact. It can be considered that investment constraints have an important but in a negative sense. As the investment constraint increase, it is difficult for an investor to invest.

## **5. Suggestions**

- It was observed that 44.5 per cent of the women who are working possess average financially skills in the region. From the above discussions it is also evident that many women do not participation in day-to-day money related decision of the family even though they are educated and working but do not have say in the finance related decision of the family. Only 8 per cent of the respondents agreed upon they have extreme knowledge of managing money. Thus, it suggested that our policy makers must take more steps to provide financial literacy even among the educated and working women.
- Our regulators SEBI and RBI need to launch massive literacy campaign to increase awareness level among working women in the region focused on (i) factors influencing investment (ii) characteristics of various investment avenues (iii) pros and cons of investing in such instruments (iv) how to identify personal constrains and turn them into investment opportunities.
- It was also observed that still relatively good size of respondents working for different sectors lack banking ability as they are not aware of the different products offered by banks. Thus, it is advisable that banks must lauch aggressive litercacy campaign even among the educated and working pupulation to make them financially literate. The sales executives must identify such customers and must educate them so that they develop banking habits of almost of the consumer products offered by banks.
- It is observed that respondents in the age group of 18-30 years possess medium level of financial literacy as compared to person have age group of 51-60 years. Thus, our policy makers must focus financial literacy among higher age bracket. Person with the age group of 18-30 also have medium level of financial literacy thus we want to realize the highest level of financial literacy youths we must also focus on this age group besides age group of 51-60. This will ultimately lead to more synchronized investment behavior and ultimately to effective investment decision making.
- It is also recommended that working women be targeted to provide financial education and to empower and encourage them or to make them realize the importance of their role/participation in investment decision making at household level.

- There is a strong need to start the financial education program amongst youth who are at an earlier stage in the life cycle. This will ensure that the habit of money management, savings and investment are inculcated in them right from the stage they start earning. This would ultimately result providing financial security to the women at the later stages of their lives.
- Colleges and universities must introduce in their curriculum financial education to enhance the financial literacy among students. A common learning goal and financial language should be established for financial literacy education across the various masses of society. The development of financial skills and knowledge should ideally begin at home and be continued in school, college, workplace levels and the community as a whole. It should be easily and widely accessible to all sectors of the working women at all stages of the lifecycle.
- Different working sector have different levels of financial literacy because of their working environments. Thus, the policy makers must identify sector where the level of financial literacy is low and conduct financial literacy programme for such sectors.
- As banking ability is considered as important aspect in field of financial literacy. Banks should provide basic knowledge about banking to their customers for the improvement of their basic financial knowledge. The banks must conduct workshop for those persons who are newly recruit and approach banks for salary accounts. These workshops must focus on enhancing banking ability among the newly recruited persons. This will be very instrumental in enhancing financial literacy.

## 6. Future Work

Every research opens path for further research. Seeing the limitations of this study following future works can be made:

- i. This is one of the first formal study on Financial literacy of working women in Bundelkhand region. Thus, sufficient literature was not available for review. A more literature is required in this area by doing more research.

- ii. Factor affecting financial literacy of working women are limited. Another factors could be defined.
- iii. The study is also confined to five sectors only viz . Banking, insurance , medical, education and community and personal services so This study could be applied in another sectors also.
- iv. As this study covering working women from districts of Bundelkhand region of Uttar Pradesh only. A comprehensive study could be made covering male respondents in Bundelkhand Region.
- v. A comparative study on the Financial literacy among working women be made between the districts lying in Bundelkhand region of Uttar Pradesh and districts lying in Bundelkhand region of Madhya Pradesh.
- vi. The present study focuses on financial literacy among working women, on parameters in terms of socio-economic status, financial behavior, measuring basic level of financial literacy, assessing level of knowledge about investment avenues. Further work can be done taking in consideration other variables.
- vii. This study was confined to financial literacy of females working in different sectors only so a study on financial literacy of non working women like households could also be studied.

## **7. Conclusion**

It has been widely reported that prior to marriage father controls the earnings of daughters and after marriage husband does controls the earnings of the same. A big number of women being added to workforce of the country every year. However, many studies indicate that women still do not enjoy financial independence. Ignorance may be one of the key reasons for this factor. Financial literacy can be instrumental in promoting financial independence among the women. The following conclusion of this study are as follows:

- In Bundelkhand region working women in bank are well aware about the basic understanding of investing as compared with other sectors.
- It is found that women are independent to take day to day financial decision of the family and also likely to invest their saving. They prefer contingent planning over other investment preference variable

viz. regular income, tax planning, capital appreciation and liquidity etc.

- They are lack in knowledge of diversification, impact of inflation on investment, Risk and return relationship, investment avenues, time value of money relevancy in investment and risk and return trade off relevancy.
- They have also not aware so much regarding low, medium and high risk instruments. Thus, it could be concluded that investors do consider different factors while making investment decisions and do rank it according to their investment need and in setting investment objectives give top most priority to comfortable living post retirement followed by contingency need.
- It was another important parameter considered for the evaluation of Financial Literacy. For this purpose awareness indicator like methods of opening bank account, types of bank account, utility services, internet banking, buying bank drafts etc.
- It has been identified that mostly all the working women are having good knowledge of types of bank accounts . Thus, it could be concluded that majority of women working for different sectors have significant knowledge regarding banking process and products.
- Among the various demographic and socio- economic variables Education( Ph.D. degree and Post Graduate Degree) is one of the important factors influencing the level of financial literacy among women. Thus, governments continue the policy of educating the girl child.
- Among the various sectors , It is observed that in reference to community and personal services women were not financially literate as compared to those who are working for Insurance followed by education, medical and banking sector possess higher level of financial literacy. Thus, our policy makers should focus on financial literacy campaign amongst female who are working for community and personal services.
- It is observed that respondents in the age group of 18-30 years possess medium level of financial literacy as compared to person have age group of 51-60 years .
- The knowledge regarding financial plan, how to initiate investment, risk and return trade off and time value of money is not same among the working women of different sectors.
- There is a different knowledge with respect to investment avenues of low, moderate and high risk between the working women of government and non –government sectors.

- Basic knowledge of finance increase, the investors become rational. The impact of financial knowledge is positive and very important for investor having best and rational decision-making.
- Banking ability increase the rationality in the behavior of investors also increase. It is very important to have good banking knowledge to behave rational while investing .
- Financial literacy has a positive impact on investment behavior. As the investors' financial literacy increases, investment decision is regarded as rational. They move in a same direction as literacy increase, rationality in decision making also increases.
- Investment constraints viz. liquidity, tax constraints, legal aspects, have very important and negative impact on investment behavior.

The study was observed that In Bundelkhand Region most of the working women in Banking sector are financially literate. The awareness campaigns are more required in other sectors so that they are also able to take their financial decision. Basics of Financial literacy subject should be made compulsory at the school and college level however they are knowledgeable about financial skills before. Although the working women are aware regarding day to day financial decision making but they lack in knowledge of diversification, risk return trade off as well as in low medium and high investment instruments so government and policy makers should focus on this area.

Generally working women in community and personal services are not too much educated so this sector required special attention by our financial regulators. SEBI and RBI need to launch massive literacy campaign to increase awareness level among working women in the region and focus on their knoledge, behavior,attitude, assessment skill,awareness,decision making regarding financial instruments. As young women are somewhat knowledgeable about financial literacy so More attention required towards high age group by our policy makers so that it will lead to more synchronized investment behavior and ultimately effective investment decision making.

Overall it is concluded that working women in Bundelkhand region of Uttar pradesh lacks financial literacy so financial literacy providers, Government, Banks, NABARD, SIDBI, and other financial Agencies should take continuously effective and initiative steps to improve the quality of financial literacy of working women.

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