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CUSTOMER'S VALUE PERCEPTION ON A DRUGSTORE

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ABSTRACT

Drugstore business in Taiwan encountered huge threats from both giant rivalries of conglomerates and ever-demanding consumers. Literature generally accepted that customer's value is core to retain customer loyalty; this paper proposes an innovative approach by using fuzzy logic to precisely identified patient's value directions, from which the drugstore management may adopt to foster customer satisfaction and loyalty, and the drugstore's core competences. Other than previous research, we adopt fuzzy logic in identifying the most expected value attributes in the mind of the customers. This research successfully distinguished some subtle differences in value-based customer satisfaction among three types of drugstore. Results are mostly consistent with previous research; however, this research shed more lights on the customer value perception toward drugstore. We suggest the drugstore management maintain a close monitoring on the changes of value levels the customer perceived, and accordingly timely respond to such changes.

KEYWORDS

fuzzy logic, perceived value, drugstore (pharmacy), loyalty, competitiveness.

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1. INTRODUCTION

Drugstores in Taiwan encounter multiple challenges that threaten survival. The utmost power is the threats from fast expansion of chained drugstores with affluent financial backup from the parent firms of conglomerate. The customers in the market are more knowledgeable and more demanding than ever because of handy information that accessible in the internet. Other sources of threats have also found have significant impacts on the drugstore's survival in terms of variety of customer demands and behavior. Consequently, hundreds of drugstores and clinics have reported loss, or been merged by others. In response to such challenges, some traditional drugstores conducted certain kinds of revolutions, such as store remodeling, service lines expansion, procurement allied, and intensive sales promotion among others.

Needs uncertainty plays a major source of uncertainty drugstore encountered. Changes of customer needs may not significantly deviate from organization's core competence (Christensen & Bower, 1996), as long as the firm's core competence was built and maintained based on customer value (Woodruff, 1997). Unfortunately, it is common to find that firms adopted novel approaches in response to the bandwagon effects (Leibenstein, 1950), and not to the customer's favors (Jarworski & Kohli, 1993). To gain competitive advantage, drugstores shall first identify what are the values that perceived by the target customers (Peterson & Wang, 2003), and such value perception will in turn result in customer satisfaction and loyalty (Dubrovski, 2001; Revilla-Camacho, Vega-Vázquez & Cossío-Silva, 2017).

There is a need in knowing what the customers need and want, yet conventional approach such as market survey seems fail to provide this valuable information. The impalpable nature of human mind is the key reason for the failure of this kind. It is almost impossible for drugstore to know exactly what customers want with drugstore visiting, partly because of the customers are typically unable to express what indeed they need for health. This paper addresses the importance of the customer value perception in the drugstore, and proposes a method that adopts the fuzzy logic in the process of understanding the customer's value perception toward a drugstore.

To our best knowledge, this research is the first study on the value perception of drugstore, and the first successfully applied fuzzy logic in Taiwan drugstore industry. The empirical study proved that fuzzy logic is able to identify effectively the subtle differences in value perception and consequently the satisfaction levels of competing drugstores.

2. PERCEIVED VALUE AND FUZZY LOGIC

2.1 Perceived value and customer satisfaction

Relationship marketing studies identified strong relationship exists between customer's satisfaction and repurchase behavior (e.g. Edvardson, Johnson, Gustafsson & Strandvik, 2000; Caruana, 2002). However, customer satisfaction alone may not result in customer loyalty (e.g. Ganesh, Arnold & Reynolds, 2000; Mittal, Ross & Baldasare, 1998; Oliver, 1999).

Customer loyalty or patronage to a store is something beyond satisfaction, that is the perceived value (Neal, 1999), which consists of functional, social, emotional, and even epistemic value components (Sheth, Newman & Gross, 1991). In other words, perceived value is the essential base for loyalty. The higher the perceived values, the stronger the customer's patronage to the businesses will be (Bowen & Chen, 2001). Recently, instead of paying attention to traditional customer satisfaction, researchers have already switched their interests to the value perception (e.g. Eggert & Ulaga, 2002). Value can be described as the proportion of the

benefits customers received and the sacrifices borne by customers (e.g. MacStravic, 1997). In healthcare services, perceived value is vital to the success of healthcare marketing in creating and retaining loyal customers (Peltier *et al.*, 2002).

2.3 Applying fuzzy logic to measure perceived value

Plenty of studies had applied fuzzy logic in exploring the consumer's behaviors. For example, Bitner *et al.* (1990) use critical incident technique to explore the reasons behind satisfaction and dissatisfaction. Not surprisingly judgment-based classification methods have been found in many services and marketing research. Fuzzy logic is superior to these classification techniques in making correct judgments in response to the fuzzy nature of real world. Dillon & Mulani (1984) classified items into categories that have higher probability estimations; Viswanathan & Childers (1999) adopted fuzzy set in categorizing products and innovatively propose the existence of hybrid-category products that having the membership across various categories. Fuzzy set application in the marketing increased our understanding on the reasons behind customer's buying behaviors.

Plenty research has applied fuzzy logic and found that such technique performs better in detecting the minor differences between alternatives. For example, evaluating airline service quality (Tsaur, Chang & Yen, 2002; Chang & Yeh, 2002), evaluating teacher performance (Kuo & Chen, 2002), predicting election results (Royes & Bastos, 2001), and grading service quality level (Chen, 2001). Although research generally accepted fuzzy logic to be appropriate in evaluating perceived quality level in response to the need of reflecting the ambiguous nature of human perception, few if any of the studies have attempted to adopt fuzzy logic in obtaining precise knowledge on customer perceived value, especially in drugstore business.

3. MEASURING PERCEIVED VALUES

3.1 Attributes of value

This research includes attributes and items of three different scales as a base in developing a measuring instrument. We put together fifty-eight items derived from these scales of Sweeny & Soutar (2001), Petrick (2002), and Shemwell & Yavas (1999) in one for further validation process. A questionnaire contains 20 items are used to examine the values of five dimensions: quality, emotion, price, reputation, and search, as proposed by MacStravic (1997).

TABLE 1: ATTRIBUTES AND SUB-ATTRIBUTES OF HEALTHCARE SERVICE EVALUATION

Attributes		Sub-attributes (criteria)
Quality	1	Acceptable service quality
	2	Service offered with consistent quality
	3	Services are reliable
	4	Services are dependable
	5	Speediness and correctness of drug dispensing
	6	Pharmacists competence
Emotion	7	Attractive for use
	8	Easy to use facilities
	9	Comfortable place
	10	Pleasant place
	11	Respect personal privacy
	12	High degree of personal care
Price	13	Value for money
	14	Flexible payment methods
Reputation	15	Drugstore has good reputation
	16	Drugstore is widely respected
Search	17	NHI ^a accredited
	18	Complete service (product) lines
	19	Sufficient personnel
	20	Modern facility

^a NHI, national health insurance is a compulsory insurance policy issued by Taiwan government. NHI covers the majority of healthcare services for Taiwan nationals and some residents as the law regulated.

4. ASSESSING LINGUISTIC EXPRESSIONS WITH FUZZY LOGIC

By recognizing a value perception is a function of multiple value components (Sheth *et al.* 1991) that shall be weighted individually (Neal, 1999), this research request the respondents to rate the importance and experienced performance they experienced with individual value components.

Beyond traditional measurements that grading respondent's psychological property by crisp values, linguistic assessment is ideal in targeting a real reflection of human language and feeling (Chen, 2001; Zadeh, 1965). This research applies fuzzy logic to represent linguistic variables. Questionnaire used to collect data in such survey is specifically designed from which can be easily converted into fuzzy numbers (Zimmermann, 1991).

4.1 Data collection

Fuzzy numbers in expressing linguistic variables is presented in the first part, followed by proposing a linguistic decision-making method to produce overall fuzzy ratings as well as the perceived service value level for each drugstore. A fuzzy number is a fuzzy subset in the universe of discourse X that is convex and normal.

The value of $\mu_{\tilde{A}}(x)$ is then termed as the degree of composition of particular membership of x in \tilde{A} (Zadeh, 1965), formulae are shown in appendix.

There are 130 responses in total, 32 for the conventional drugstore (A_1), 35 and 63 for the modern drugstore (A_2) and chained drugstores (A_3) respectively. Distribution of respondents is roughly in line with the market share of respective drugstores in terms of number of customers.

Instead of asking respondents to grade 1 to 5 as typical Likert-scale, respondents choose appropriate expressions that most reflecting their opinion of each item. Linguistic expressions are from 'extremely low' to 'extremely high' in terms of importance of a criterion, and from 'extremely disagree' to 'extremely agree' for the second part questions regarding those service values that they actually experienced and perceived.

5. RESULTS AND ANALYSIS

5.1 Customers expected Values

We convert the linguistics expressions on the importance weight of respective criteria into fuzzy trapezoidal numbers, as shown in table 2.

TABLE 2: CONVERSION OF VERBAL EXPRESSION INTO FUZZY TRAPEZOIDAL NUMBERS

Importance of linguistic assessment		Agreement of ratings	
Extremely low	(0, 0, 0, 0)	Extremely disagree	(0, 0, 0, 0)
Very low	(0, 0.1, 0.2, 0.3)	Highly disagree	(0, 1, 2, 3)
Lower than average	(0.2, 0.3, 0.4, 0.5)	Disagree	(2, 3, 4, 5)
Average	(0.4, 0.5, 0.5, 0.6)	No comments	(4, 5, 5, 6)
Higher than average	(0.5, 0.6, 0.7, 0.8)	Agree	(5, 6, 7, 8)
Very high	(0.7, 0.8, 0.9, 1.0)	Highly agree	(7, 8, 9, 10)
Extremely high	(1.0, 1.0, 1.0, 1.0)	Extremely agree	(10, 10, 10, 10)

Based on a method that is widely used to calculate an expected average for PERT (Program Evaluation and Review Technique) (Davis, Aquilano & Chase, 2002), we obtained the average weights of criteria of each attribute with the formula $AW = (A + 4B + C) / 6$. B is the most possible value for that item, A and C are pessimistic and optimistic values respectively.

In the expected values, speediness and accurate drug dispensing, and the pharmacist's competence received the most concern in quality dimension. Privacy is the most important component for emotional value; an accreditation from the National Health Insurance Bureau (NHIB) is the most important in the search value; whereas value for money to the price dimension, and good reputation to the reputation value respectively. Quality value remains the most important attribute followed by the values of emotion, search, price, and reputation, as shown in table 3. It is noteworthy that the reputation dimension receives the lowest grade.

TABLE 3: VALUE PERCEIVED BY CUSTOMERS IN TERMS OF RESPECTIVE ATTRIBUTES

Attributes	Quality	Emotion	Price	Reputation	Search
Importance in value	0.89	0.85	0.81	0.80	0.83

5.2 Customers perceived values

We use again the linguistic expression method to inquire the respondent's experiences with the values of each criterion. The conversion processes as has done earlier for weights of importance. The results of comparisons indicated that customers perceived better values of quality and price attributes for drugstore A_3 , emotional values for drugstore A_2 , reputation, and search values for drugstore A_1 , shown as table 4.

TABLE 4: ATTRIBUTE VALUE OF RESPECTIVE DRUGSTORES PERCEIVED BY CUSTOMERS

	Quality	Emotion	Price	Reputation	Search
A_1	0.73	0.60	0.62	0.68	0.49
A_2	0.69	0.69	0.58	0.56	0.47
A_3	0.78	0.66	0.68	0.66	0.48

Quality attribute is the common denominator of all these drugstores with an exception of A_2 that the quality value and emotion value are perceived equal. The search attribute that covers complete service and product lines, sufficient personnel, modern facilities, and NHI accredited receives low value from the respondents.

By taking the attribute values of each drugstore and mapping their respective membership of value levels, shown as table 5, we can reveal the relative strength each drugstore by each individual attribute, shown as table 6. For example, respondents generally perceive drugstore A_3 as the one that offers higher level of value at V_6 , but some part of its customers downgraded it to a lower level of V_5 . As a result, we may conclude that as far as the quality concern, A_3 is the best, and followed by A_1 and A_2 .

TABLE 5: VERBAL EXPRESSIONS USED FOR THE LEVELS OF VALUE (L)

L_1	Extremely low	(0, 0, 0, 0)
L_2	Very low	(0, 0.1, 0.2, 0.3)
L_3	Lower than average	(0.2, 0.3, 0.4, 0.5)
L_4	Average	(0.4, 0.5, 0.5, 0.6)
L_5	Higher than average	(0.5, 0.6, 0.7, 0.8)
L_6	Very high	(0.7, 0.8, 0.9, 1.0)
L_7	Extremely high value (the ideal level)	(1.0, 1.0, 1.0, 1.0)

TABLE 6: GRADING EXPERIENCE MEMBERSHIPS OF ATTRIBUTES

Drugstore attributes		Value levels						
		V_1	V_2	V_3	V_4	V_5	V_6	V_7
Quality	A_1					0.3	0.7	
	A_2					0.7	0.3	
	A_3					0.1	0.9	
Emotion	A_1					1.0		
	A_2					1.0		
	A_3					1.0		
Price	A_1				0.2	0.8		
	A_2				1.0			
	A_3				0.4	0.6		
Reputation	A_1					1.0		
	A_2				0.7	0.3		
	A_3					1.0		
Search	A_1			0.1	0.9			
	A_2			0.3	0.7			
	A_3			0.2	0.8			

The overall perceived value of each drugstore are then calculated as closeness index (CI) to see how the overall value of each drugstore far away from the perfect level. The overall closeness index can be as reliable index in revealing the comparative strengths of these drugstores. The closeness indices for each drugstore are $CI_1 = 0.67$ for drugstore A_1 , $CI_2 = 0.67$ for drugstore A_2 , and $CI_3 = 0.71$ for drugstore A_3 , shown as table 7. All types of drugstores are offering roughly similar level of value to customers. However, by examining the membership of each store, as shown in table 7, CI has 10 percent of membership in a higher level of V_6 for drugstore A_3 . This means A_3 is slightly better than its rivalries in terms of perceived value.

TABLE 7: GRADES OF MEMBERSHIP OF CI_i in V_j

	V_1	V_2	V_3	V_4	V_5	V_6	V_7
CI_1					1.0		
CI_2					1.0		
CI_3					0.9	0.1	

6. IMPLICATIONS AND CONCLUSION

6.1 Discussion and Managerial implication

This research applies fuzzy logic as a reliable approach to enquire the customer's subtle perception on the importance and experience of relevant service values of a drugstore. Quality is not surprisingly remains the most significant attribute of customer's perceived values.

Accurate dispensing service and pharmacist competence are the most significant single quality criteria pursued by customers. Similar to service business in other industries, providing service accurately and timely is typically a baseline for every business in service sector, and that apparently includes drugstore business. This research provide evidence that a fuzzy approach can reveal effectively the true values perceived by targeted customers, and thus can be a superior tool for drugstore to include the customer's value perception into its daily and strategic operations.

Today, customers to the pharmacy are far more demanding than ever for drugstore. It is not surprising that the unsung environment will further exacerbate customer's value perception toward drugstore. Value perception toward individual drugstore varies from one to another. Bear in mind that most powerful segmentation that result direct return is the one base on customer perceived benefits (values).

6.2 Conclusion

Blindly relied on intensive promotion, as a major marketing tool to compete for those consumers who need medication is not cost-effective, and may sometimes hurts positioning due to price wars. Although obtaining customer loyalty is not easy, fostering customer's value perception is nevertheless essential and thus the prime goal drugstores shall achieve. Methods that applied fuzzy logic in identifying the core attributes of customer's perceived value toward drugstore services would be highly target-oriented and cost-effective.

This research suggests that drugstores should focus their efforts in identifying those cases that require accurate and timely dispensing, and accordingly respond to what they need. Proof what the drugstore promised for the customer's health. Fuzzy logic has also helped this research in revealing important information for drugstore management.

Customer value is the core to survival. Again and to the last, a successful drugstore operation stems from precise responding to the customer values. The research result suggests applying the fuzzy approach to capture precisely the customers inside their minds.

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APPENDIX

SUMMARY ON THE FUZZY LOGIC AND FORMULAE

Definition for the α -cut of fuzzy number \tilde{n} is as

$$\tilde{n}^\alpha = \{x_i : \mu_{\tilde{n}}(x_i) \geq \alpha, x_i \in X\} \quad (1)$$

PTFN

Positive trapezoidal fuzzy number (PTFN) can be defined as composition of (n_1, n_2, n_3, n_4) and the membership function can be formulated as

$$\mu_{\tilde{n}}(x) = \left\{ \begin{array}{ll} 0, & x < n_1 \\ \frac{x-n_1}{n_2-n_1}, & n_1 \leq x \leq n_2 \\ 1, & n_2 \leq x \leq n_3 \\ \frac{x-n_4}{n_3-n_4}, & n_3 \leq x \leq n_4 \\ 0, & x > n_4 \end{array} \right\} \quad (2)$$

Calculations of fuzzy numbers

$$\tilde{m} \oplus \tilde{n} = [m_1 + n_1, m_2 + n_2, m_3 + n_3, m_4 + n_4] \quad (3)$$

$$\tilde{m} \cdot \tilde{n} = [m_1 \cdot n_4, m_2 \cdot n_3, m_3 \cdot n_2, m_4 \cdot n_1] \quad (4)$$

$$\tilde{m} \otimes r = [m_1 \cdot r, m_2 \cdot r, m_3 \cdot r, m_4 \cdot r] \quad (5)$$

$$\tilde{m} \otimes \tilde{n} = [m_1 \cdot n_1, m_2 \cdot n_2, m_3 \cdot n_3, m_4 \cdot n_4] \quad (6)$$

$$d(\tilde{m}, \tilde{n}) = \sqrt{\frac{1}{4} [(m_1 - n_1)^2 + (m_2 - n_2)^2 + (m_3 - n_3)^2 + (m_4 - n_4)^2]} \quad (7)$$

(i) A set of K customers is called $E = \{D_1, D_2, \dots, D_K\}$

(ii) A set of m alternatives for selection is called $A = \{A_1, A_2, \dots, A_m\}$

(iii) A set of n criteria that used to evaluate alternatives performance is called $C = \{C_1, C_2, \dots, C_n\}$

(iv) A set of performance ratings of alternative $A_i (i = 1, 2, 3, \dots, m)$ in terms of criteria $C_j (j = 1, 2, 3, \dots, n)$ is shown as

$$X = \{x_{ij}, i = 1, 2, \dots, m, j = 1, 2, \dots, n\}$$

Weights

$$x_{ij} = \frac{1}{K} \otimes [\tilde{x}_{ij}^1 \oplus \tilde{x}_{ij}^2 \oplus \dots \oplus \tilde{x}_{ij}^k] \quad (8)$$

$$\tilde{w}_j = \frac{1}{K} \otimes [\tilde{w}_j^1 \oplus \tilde{w}_j^2 \oplus \dots \oplus \tilde{w}_j^k] \quad (9)$$

A matrix format is adopted to express the GMCDM for service value perception problem as:

$$\tilde{D} = \begin{bmatrix} \tilde{x}_{11} & \tilde{x}_{12} & \dots & \tilde{x}_{1n} \\ \tilde{x}_{21} & \dots & \dots & \tilde{x}_{2n} \\ \dots & \dots & \dots & \dots \\ \tilde{x}_{m1} & \tilde{x}_{m2} & \dots & \tilde{x}_{mn} \end{bmatrix}$$

$$\tilde{W} = [\tilde{w}_1, \tilde{w}_2, \dots, \tilde{w}_n]$$

where \tilde{x}_{ij} and \tilde{w}_{ij} are approximated by positive trapezoidal fuzzy numbers as

$$\tilde{x}_{ij} \equiv (a_{ij} + b_{ij} + c_{ij} + d_{ij})$$

$$\tilde{w} \equiv (w_{j1}, w_{j2}, w_{j3}, w_{j4})_{i=1, 2, m, j=1, 2, n}$$

Normalization

Normalized figures on the fuzzy ratings are expressed as follow:

$$r_{ij} = \left(\frac{a_{ij}}{d_j^*}, \frac{b_{ij}}{d_j^*}, \frac{c_{ij}}{d_j^*}, \frac{d_{ij}}{d_j^*} \right), C \in B \quad (10)$$

$$\tilde{r}_{ij} = \left(\frac{a_j^-}{d_{ij}}, \frac{a_j^-}{c_{ij}}, \frac{a_j^-}{b_{ij}}, \frac{a_j^-}{a_{ij}} \right), C_j \in C \quad (11)$$

Maximum and Minimum

$$d_j^* = \max_i d_{ij}, \text{ if } C_{ij} \in B \quad (12)$$

$$a_j^- = \min_i a_{ij}, \text{ if } C_{ij} \in C \quad (13)$$

where B is benefit criteria and C is cost criteria respectively

Overall value

Thus, overall value perception toward certain alternative can be expressed as

$$\tilde{V}_i = \frac{1}{n} \otimes \{(\tilde{r}_{i1} \otimes \tilde{w}_1) \oplus (\tilde{r}_{i2} \otimes \tilde{w}_2) \oplus \dots \oplus (\tilde{r}_{in} \otimes \tilde{w}_n)\} \quad (14)$$

Using normalized trapezoidal fuzzy numbers in equation (14); the estimated overall fuzzy rating of all alternatives is approximately as

$$\tilde{V}_i \cong (v_{i1}, v_{i2}, v_{i3}, v_{i4}), i = 1, 2, \dots, m$$

The ideal level of value customers perceived and received is defined as $L_7 = (1.0, 1.0, 1.0, 1.0)$ that is produced by the average weights of each item.

Closeness index

A closeness index of respective $A_i (i = 1, 2, \dots, m)$ to the ideal level is then defined as

$$CI = 1 - d(\tilde{V}_i, L_7), i = 1, 2, m \quad (15)$$

where $CI (0 \leq CI_i \leq 1)$ is the closeness index of $A_i (i = 1, 2, \dots, m)$ to the ideal level, L_7 . And $d(\tilde{V}_i, L_7)$ is the distance between \tilde{V}_i and the ideal value level of L_7 . When $d(\tilde{V}_i, L_7) = 0$, value perceived and received by the customers is exactly the same as ideal value, $CI = 1$; when $d(\tilde{V}_i, L_7) = 1$, value perceived and received by the customers is zero, $CI = 0$. The higher the CI_i , the higher the customers perceived and received value with the alternative drugstore A_i .

Value level as membership

To illustrate value level of each drugstore in question and the relative status among them, a linguistic expression of value levels is assigned to compute the

maximum grade of membership of CI_i in V_j .

$$G(CI_i, V_j) = \max_j \mu_{S_j}(CI_i), j = 1, 2, \dots, 7$$

(16)

where $G(CI_i, V_j)$ is the maximum grade of membership of CI_i in V_j .

Overall value actually received from drugstores in question by the customers then can be expressed by using the j^{th} label of V_j . For those value levels fall into the same category, a comparison of closeness index of respective drugstores would be useful in clarifying the equivocal circumstances.

VOLATILITY INDEX, TIME-VARYING RISK PREMIUMS AND STOCK RETURNS

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This paper rewrites the Fama-French three-factor model as a panel smooth transition regression framework to investigate the non-linear dynamics of stock returns and the potential differentiated effects of a representative investor sentiment variable – the VIX – on the nexus of stock return and the three risk factors. The empirical results support that the stock returns display a non-linear path, depending on the change in VIX. The three risk premiums are time-varying, not constant obtained from the traditional FF model. In determining investment targets, there is a trade-off between small stocks and growth stocks. Even though, small/growth stocks still have higher risk premiums than large/value stocks at any level of VIX. In panic periods (high VIX), holding small/growth stocks has more size and negative value premiums.

KEYWORDS

Fama-French model, time-varying risk premium, panel smooth transition regression (PSTR) model, volatility index (VIX), transition variable.

JEL CODES

C23, G12, G32.

1. INTRODUCTION

The traditional capital asset pricing model (CAPM), developed by Sharpe (1964) and Lintner (1965), states that the risk premium of a financial asset is positively related to its exposure to market risk. However, the model was found to be insufficient in explaining the expected returns of stocks (e.g., Banz, 1981, Reinganum, 1981, Rosenberg et al., 1985). Fama and French (1993) develop a famous model to evaluate the asset return, named the Fama-French three-factor model (hereafter FF model), by adding the firm size and book-to-market factors into the standard CAPM. They find evidence that small capitalization stocks and high book-to-market stocks tend to have higher returns than those predicted by the CAPM. Since that time on, a substantial body of empirical work has investigated the validity of the FF model (e.g., Fama & French, 2006, Lawrence et al., 2007; Simpson & Ramchander, 2008).

While the FF model made a big improvement over the CAPM, it couldn't explain some major anomalies which lead to a low forecasting performance of asset returns (e.g., Daniel & Titman, 1997, Aleati et al., 2000, Faff, 2004). To resolve this problem, a branch of research adds new factors into the FF model. For example, Carhart (1997) augments the FF model using a fourth factor – momentum. By addressing one of the biggest anomalies, the momentum factor made a large contribution to the explanatory power of the factor model. Based on investment-based asset pricing, Hou et al., (2015) propose a new factor model that consists of the market factor, size factor, investment factor and return-on-equity factor to explain many of the anomalies that neither the FF model nor Carhart four-factor model can explain. Recently, Fama and French (2015) introduce a five-factor asset pricing model (beta, size, value, investment and profitability) to see if these new factors – profitability and investment – add explanatory power.

In addition to introducing new factors, specifying a more proper model is another method to improve the forecasting performance of the FF model (Simpson & Ramchander, 2008). In practice, structural changes in stock returns may occur as stock markets encounter obvious adjustments in the economic environment and public policy (Cifter, 2015, Turtle & Zhang, 2015). Fatal economic and non-economic events, such as the Subprime Mortgage Crisis in 2007 and the European sovereign debt crisis in 2008, have made stock prices display a non-linear dynamic process. However, the FF model is unable to capture this regime-switching process. To describe this characteristic, constructing a non-linear regime-switching model is necessary.

To achieve this objective, this study uses the panel smooth transition regression (PSTR) model, recently developed by Fok et al. (2004) and González et al. (2005). A simple PSTR model consists of two linear parts linked by a non-linear transition function, and it allows the variable under investigation to move within two different regimes with a smooth transition process, depending on the value of a specific transition variable. The PSTR model is particularly useful for situations where the non-linear dynamics are driven by a common regime-switching component, but where the response to this component can be different across variables. For example, the stock returns may be affected by worldwide recessions, but some firms may enter into (or get out of) recessions earlier than others. To arrive at a parsimonious model, we assume a second-level model for the parameters in the regime-switching mechanism of the PSTR model, where these are then related to company-specific characteristics.

In a PSTR model, the transition variable plays a crucial role in influencing the marginal effects of regressors on the dependent variable. Thus, the selection of a proper transition variable is important. According to the time-varying risk premium theory, a positive volatility shock generally causes a higher future required rate of return, thus causing current prices to decline. The volatility index (VIX), developed by the Chicago Board Options Exchange in 1993, is a measure of the market expectations of stock return volatility over the next 30 calendar days, and is intended to provide a benchmark of expected short-term market volatility. The VIX index will increase when the stock index option price increases since the options price is positively related to volatility. Padungsaksawasdi and Daigler (2014) indicate that using VIX to examine the return-volatility nexus can eliminate statistical issues, including sampling errors and model specification errors, and can demonstrate the perception of risk by option traders in financial markets. Thus, the VIX is a proper candidate to serve a transition variable in the PSTR model.

In sum, the aim of this paper is to rewrite the FF model as a PSTR specification for investigating the non-linear dynamics of stock return and the potential differentiated effects of a representative investor sentiment variable – the VIX – on the nexus of stock return and the three determinants. In performing empirical estimation, we use 60 semiconductor firms listed on the Taiwan Security Exchange Corporation over the period 2005:1Q to 2013:2Q as sample objects.

This paper contributes to the existing literature in three distinct ways. First, we provide an econometric method in a non-linear and panel context for the estimation of stock return, which can simultaneously deal with the non-linearity and heterogeneity problems; we trace the dynamic non-linear relationship between stock return and its determinants (i.e., the three factors in the FF model); and we determine whether stock return demonstrates a smoothly regime-switching process. Second, using the typical proxy variable for investor sentiment – the VIX – as the transition variable (also can be considered as the fourth factor in this study) in PSTR model, one can prove whether the VIX non-linearly causes the change in stock return. Finally, estimating a PSTR model with the VIX as the transition variable, we specifically account for the differentiated marginal effects of the three factors on stock return. These traits are particularly important for allowing the investors to make and modify suitable security investment strategies.

The remainder of this paper is organized as follows. Section 2 briefly outlines the PSTR specification of the FF model, with the aim of accounting for potential differentiated effects of the three factors in the FF model on stock returns when the VIX is assigned as the transition variable and located in different regimes. Section 3 provides the procedures for estimating the PSTR specification of the FF model. Section 4 presents the data and empirical results, and the final section concludes.

2. THE MODEL

The FF model states that the expected return of a broadly diversified stock portfolio in excess of a risk-free rate is a function of that portfolio's exposure to three risk factors – the market (or equity) premium, size premium and value premium. Thus, the FF model can be expressed as follows:

$$R_{it} - R_{ft} = \theta_{0i} + \theta_1(R_{mt} - R_{ft}) + \theta_2 SMB_t + \theta_3 HML_t + \varepsilon_{it} \quad (1)$$

where $i = 1, 2, \dots, N$ is the number of stocks and $t = 1, 2, \dots, T$ is the number of periods. R_{it} is the return on stock i at time t . R_{mt} is the market return, measured by

the Taiwan Stock Exchange Capitalization Weighted Stock Index (TAIEX); R_{ft} is the risk-free rate, measured by the return on 1 month term deposit rate in Taiwan,

and $(R_{mt} - R_{ft})$ is the market premium. Log returns are used to measure returns. SMB_t is the size premium, measured by the difference between the

returns of a portfolio of small stocks and the returns of a portfolio of large stocks. HML_t is the value premium, measured by the difference between the returns

of a portfolio of high book-to-market (value) stocks and the returns of a portfolio of low book-to-market (growth) stocks. ε_{it} is a residual. In addition to the positive market premium stated in the CAPM, the underlying premise of this model is that small stocks and value stocks are riskier than large stocks and growth stocks and thus carry higher expected returns.

A basic PSTR model with two extreme regimes can be expressed as follows:

$$y_{it} = \mu_i + \beta'_0 x_{it} + \beta'_1 x_{it} W(q_{it}; \gamma, c) + \varepsilon_{it} \quad (2)$$

where $i = 1, 2, \dots, N$ is the number of cross-section units and $t = 1, 2, \dots, T$ is the number of periods. y_{it} is a dependent variable and x_{it} is a K-dimension vector

regressors. $W(q_{it}; \gamma, c)$ is the transition function with value in the interval [0,1] and is dependent on the transition or threshold variable q_{it} . van Dijk *et al.*

(2002) indicate that the transition variable can be an exogenous variable or a combination of the lagged endogenous one. γ is the transition parameter that

describes the transition speed between different regimes. c is the threshold value of the transition variable. μ_i is a time-invariant individual effect. Following Fouquau *et al.* (2008), the logistic specification can be used for the transition function:

$$W(q_{it}; \gamma, c) = 1 / \left[1 + \exp \left(-\gamma \prod_{j=1}^m (q_{it} - c_j) \right) \right] \quad (3)$$

where m is the number of location parameters and $c_1 \leq c_2 \leq \dots \leq c_m$. When $m = 1$ and $\gamma \rightarrow \infty$, the PSTR model reduces to a panel transition regression (PTR) model. In practice, it is usually sufficient to consider $m = 1$ or $m = 2$ to capture the non-linearities due to regime switching (González *et al.*, 2005). The case $m = 1$ corresponds to a logistic PSTR model, and $m = 2$ refers to a logistic quadratic PSTR specification (Fouquau *et al.*, 2008). In addition, it is easy to extend the PSTR model to more than two regimes:

$$y_{it} = \mu_i + \beta'_0 x_{it} + \sum_{j=1}^r \beta'_j x_{it} W_j(q_{it}; \gamma_j, c_j) + \varepsilon_{it} \quad (4)$$

where $r + 1$ is the number of regimes and $W_j(q_{it}; \gamma_j, c_j)$, $j = 1, \dots, r$, are the transition functions (see Eq. (3)). According to Eq. (4), we can rewrite the FF model (Eq. (1)) as a PSTR framework:

$$R_{it} - R_{ft} = \theta_{0i} + \theta_{10}(R_{mt} - R_{ft}) + \theta_{20} SMB_t + \theta_{30} HML_t + \sum_{j=1}^r (\theta_{1j}(R_{mt} - R_{ft}) + \theta_{2j} SMB_t + \theta_{3j} HML_t) \times W_j(VIX_t; \gamma_j, c_j) + \varepsilon_{it} \quad (5)$$

where VIX_t is the VIX at time t . For the quarterly data used in this study, VIX is measured by the value of the end of a specific quarter t . We will explain it in

more detail later on. For $r=1$, the marginal effect of $(R_{it} - R_{ft})$ with respect to the k -th regressor is equal to $\theta_{k0} + \theta_{k1} W_1(VIX_t; \gamma_1, c_1)$, $k=1, 2, 3$. A

positive (negative) value of θ_{k1} simply indicates an increase (decrease) in the effect with the value of the transition variable.

3. ESTIMATION AND SPECIFICATION TESTS

To estimate the PSTR model, two main problems of specification need to be resolved, namely the choice of transition variable and the determinant of the number of transition functions. Following Wu et al. (2013), we adopt a three-step procedure for estimating our constructed stock return model. First, we perform the linearity test to investigate whether stock return satisfies the linearity condition. Then, if linearity is rejected, we determine the number of transition functions. Finally, we remove individual-specific means and apply non-linear least squares to estimate the parameters of Eq. (5).

3.1 SELECTION OF TRANSITION VARIABLE

Whaley (2000) indicates that VIX is referred to as the investor fear gauge because high levels of VIX have coincided with high degrees of market turmoil in the US. Other studies document the ability of implied volatility to predict future excess market returns (Dennis et al., 2006; Giot & Laurent, 2007; Diavatopoulos et al., 2008; Durand et al., 2011). For example, Fleming et al. (1995) find evidence that VIX index and stock index return has negative contemporaneous relationship. Giot (2005) finds that extremely high levels of VIX may signal attractive buying opportunities. Thus, there is a positive relationship between volatility changes and future stock market returns. In addition, Ghosh (2009) finds that a VIX above 30 is considered to be high and outside the normal range and that a VIX below 30 reveals that the stock market is relatively stable. Thus, this study selects the VIX as the transition variable in Eq. (5).

In fact, VIX developed by the CBOE (CBOE volatility index) has the most complete data among all VIX's. While other countries also construct various kinds of volatility indices, these indices cover inadequate lengths of time. To perform the estimation of the PSTR model and get the threshold value of transition variable (i.e., the VIX in this paper), we need to have a sufficient length of time. Thus, CBOE volatility index is a good candidate. In addition, the US is the biggest financial center in the world; therefore, the changes in CBOE volatility index may influence financial markets all over the world. That is, the CBOE volatility index has spillover effects on financial markets of other countries. Wu et al. (2015) have empirically supported this postulation. Finally, our empirical result in Table 5 has verified the spillover effects through transition function and three risk factors.

3.2 LINEARITY AND NO REMAINING NON-LINEARITY TESTS

Following Fouquau et al. (2008), to test the linearity of Eq. (5), we replace the transition function $W_j(q_t; \gamma, c)$ with its first-order Taylor expansion around $\gamma = 0$. Then, we obtain the following auxiliary equation:

$$R_{it} - R_{ft} = \pi_i + \pi_{10}(R_{mt} - R_{ft}) + \pi_{20}SMB_t + \pi_{30}HML_t + (\pi_{11}(R_{mt} - R_{ft})VIX_t + \pi_{21}SMB_tVIX_t + \pi_{31}HML_tVIX_t) + \eta_{it} \quad (6)$$

The linearity test is performed on $H_0: \pi_{11} = \pi_{21} = \pi_{31} = 0$. Previous studies provided three test methods – the Fisher, Wald and likelihood ratio tests – to execute the linearity and no remaining non-linearity test (see, for example, Fouquau et al., 2008). However, van Dijk et al. (2002) suggest that the Fisher test statistics have better size properties in small samples than the other two tests. Thus, we use LM_F as the selection criterion for the number of transition functions. If we denote SSR_0 to be the panel sum of squared residuals under H_0 (i.e., the linear panel model with individual effects, $r=0$) and SSR_1 to be the panel sum of squared residuals under H_1 (i.e., the PSTR model with two regimes, $r=1$), the Fisher (LM_F) test can be written as:

$$LM_F = \left[\frac{(SSR_0 - SSR_1)/mK}{SSR_0/(TN - N - mK)} \right] \quad (7)$$

where K and m are the number of explanatory variables and the number of location parameters, respectively, and the LM_F statistic has an approximate $F[mK, TN - N - mK]$ distribution.

As linearity is rejected, a sequential approach is used to test the null hypothesis of no remaining non-linearity in the transition function. For instance, suppose that we want to test whether there is one transition function ($H_0: r = 1$) against there are at least two transition functions ($H_1: r = 2$). Thus, consider the model

$$R_{it} - R_{ft} = \theta_{0i} + \theta_{10}(R_{mt} - R_{ft}) + \theta_{20}SMB_t + \theta_{30}HML_t + (\theta_{11}(R_{mt} - R_{ft}) + \theta_{21}SMB_t + \theta_{31}HML_t) \times W_1(VIX_t; \gamma_1, c_1) + (\theta_{12}(R_{mt} - R_{ft}) + \theta_{22}SMB_t + \theta_{32}HML_t) \times W_2(VIX_t; \gamma_2, c_2) + \varepsilon_{it} \quad (8)$$

The null hypothesis of no remaining heterogeneity can be formulated as $\gamma^2 = 0$. As before, the test problem is solved by using a first-order Taylor approximation of $W_2(VIX_t; \gamma_2, c_2)$, which leads to the following auxiliary regression:

$$R_{it} - R_{ft} = \pi_i + \pi_{10}(R_{mt} - R_{ft}) + \pi_{20}SMB_t + \pi_{30}HML_t + (\pi_{11}(R_{mt} - R_{ft}) + \pi_{21}SMB_t + \pi_{31}HML_t) \times W_1(VIX_t; \gamma_1, c_1) + (\pi_{12}(R_{mt} - R_{ft})VIX_t + \pi_{22}SMB_tVIX_t + \pi_{32}HML_tVIX_t) + \eta_{it} \quad (9)$$

The null hypothesis of no remaining non-linearity can thus be defined as $H_0: \pi_{12} = \pi_{22} = \pi_{32} = 0$. The Fisher test can be computed as before. Then, we test the null hypothesis of no remaining non-linearity in this model. If it is rejected, estimate a three-regime model. The testing procedure continues until the first acceptance of the null hypothesis of no remaining heterogeneity. At each step of the sequential procedure, the significance level must be reduced by a factor $0 < \tau < 1$ to avoid excessively large models.

4. EMPIRICAL RESULTS

4.1 ESTIMATION RESULTS

In conducting the empirical estimation, this paper uses a panel data set of 60 semiconductor firms listed on TAIEX from 2005:1Q to 2013:2Q. Thus, there are 2040 (=60*34) observations. The VIX data is provided by the CBOE (<http://www.cboe.com/micro/vix/historical.aspx>), and the remaining data come from the *Taiwan Economic Journal databank* (<http://www.tej.com.tw/twsite/>). It is worth mentioning that the panel data approach—PSTR model—has several advantages. Hsiao (2003) indicates that in a panel data context, empirical estimations can resolve the problems of heterogeneity and endogeneity and improves the estimation efficiency. Thus, the estimation results are robust. However, using a panel data set to conduct empirical estimations will face a trade-off between the number of cross-sectional units (semiconductor stocks in this paper) and the length of time period due to the availability of data. The longer the length of time period is, the fewer the selected cross-sectional units would be.

The dominance of disaggregated data over aggregated data in performing empirical estimations is the main reason that we choose Taiwan's semiconductor industry as the sample object. Hsiao et al. (2005) indicate that there are at least four advantages of using the disaggregated data to perform relevant empirical estimations. First, there are more degrees of freedom, more sample variability, and less multicollinearity. Second, it allows more accurate estimate of dynamic adjustment

behavior even with a short time series. Third, it provides the possibility to control the impact of omitted variables. Fourth, it provides means to get around structural break tests which are based on large sample theory with dubious finite sample property.

Two extra reasons are used to strengthen the use of Taiwan's semiconductor industry. The first one is the role of Taiwan's semiconductor industry in the global semiconductor market. In 2014, Taiwan was the fourth largest country in the world by the output value of semiconductor industry. Taiwan Semiconductor Association represented approximately 73.4% of worldwide IC foundry revenue, around 62.5% of worldwide packaging and testing revenue, around 18.9% of worldwide design revenue. The second is the importance of the semiconductor industry of Taiwan in her capital markets. In 2015, Taiwan's semiconductor industry accounted for 26.74% of the total market values of overall 31 industries. Evidently, Taiwan's semiconductor industry plays a key role in the domestic economic growth and global semiconductor market.

As mentioned above, at a particular point in time, there is a trade-off between the choices of cross-sectional units and the length of time. To cover an adequate length of time for evaluating the probable regime-switching of stock returns, we choose 2005:Q1 as the start date and 2013:2Q as the end date. The 34 quarterly data represent a period of near nine years and have covered at least two complete business cycles in Taiwan to impact the changes and volatilities of stock returns and other financial variables.¹ Thus, the disturbance of financial crises has been embodied in the changes of VIX, which further disturb the three risk premiums.

In March 2005, 84 semiconductor firms were listed in the Taiwan Security Exchange Corporation (TWSE). Excluding the firms with incomplete data, 60 companies are chosen. The total market values of these chosen companies account for over 88.5% of total market values in the overall semiconductor industry, which can mostly exclude the disturbance of inter-industry effect. Thus, the industry and the chosen companies are representative.

Descriptive statistics and panel unit root test results for the variables used in this paper are displayed in Tables 1 and 2. To avoid the problem of spurious regression, this paper executes three standard panel unit root tests—the ADF-Fisher Chi-square test, the Levin *et al.* (2002) (LLC) test and the IPS test. The results of the tests show that all five variables satisfy the condition of stationarity.

TABLE 1: DESCRIPTIVE STATISTICS

Variable	Mean	Max.	Min.	Std. Dev.	Skewness	Kurtosis	J-B	P-value
$R_i - R_f$	-0.319	133.2	-65.75	16.30	1.150	8.603	9356	0.000
$R_m - R_f$	-1.207	14.16	-21.57	6.348	-0.286	3.773	236.0	0.000
<i>SMB</i>	-0.724	5.992	-12.97	3.330	-0.463	4.071	511.3	0.000
<i>HML</i>	-1.567	12.09	-18.21	4.042	-1.183	7.944	7660	0.000
<i>VIX</i>	21.12	59.89	10.42	9.615	1.699	6.211	5575	0.000

Note: $R_i - R_f$, $R_m - R_f$, *SMB*, *HML* and *VIX* are the excess return of equity *i*, market premium, size premium, value premium and volatility index, respectively.

TABLE 2: PANEL UNIT ROOT TEST

Variable	ADF-Fisher	P-value	LLC	P-value	IPS	P-value
$R_i - R_f$	-17.08	0.000	-30.46	0.000	-17.79	0.000
$R_m - R_f$	-17.10	0.000	-7.781	0.000	-17.68	0.000
<i>SMB</i>	-22.59	0.000	-31.65	0.000	-24.10	0.000
<i>HML</i>	-19.43	0.000	-21.23	0.000	-20.35	0.000
<i>VIX</i>	-8.961	0.000	-2.184	0.000	-2.595	0.000

Note: $R_i - R_f$, $R_m - R_f$, *SMB*, *HML* and *VIX* are the excess return of equity *i*, market premium, size premium, value premium and volatility index, respectively.

The test and estimation results for stock return using the FF model and PSTR models are reported in Tables 3 through 5. In Table 3, the linearity tests lead to a rejection of the null hypothesis of linearity for all PSTR specifications with different numbers of location parameters ($m=1,2$). Evidently, the stock returns of the 60 semiconductor firms display non-linear dynamic paths, and the relationships between stock return and individual determinants are non-linear. Thus, adopting a non-linear PSTR approach to model stock return is relevant, and a linear approach may hide information about the structural changes in financial policies and economic conditions.

TABLE 3: LINEARITY TEST

Null hypothesis	$r=0$	
Alternative hypothesis	$r=1$	
No. of location parameters (m)	m=1	m=2
Testing statistic		
<i>LM</i>	24.81	27.71
	[0.000]	[0.000]
<i>LMF</i>	8.219	4.589
	[0.000]	[0.000]
<i>LRT</i>	24.86	27.77
	[0.000]	[0.000]

Notes: *LM*, *LMF* and *LRT* denote the statistics of the Wald test, Fisher test and likelihood ratio test, respectively. The digits in brackets are the p-values. The significance level is specified at 5%. *r* denotes the number of transition functions.

Table 4 displays the results of the no remaining non-linearity tests and provides information about the optimal number of transition functions and location parameters. At 5% significance level, the PSTR model with $r=m=1$ and the PSTR model with $r=3$ and $m=2$ satisfy to be used as candidate models for estimating Eq. (4).

TABLE 4: TEST OF NO REMAINING NON-LINEARITY

Null hypothesis	$r=1$		$r=2$		$r=3$	
Alternative hypothesis	$r=2$		$r=3$		$r=4$	
No. of location parameters (m)	m=1	m=2	m=1	m=2	m=1	m=2
Testing statistic						
<i>LM</i>	6.876	51.05	—	32.47	—	5.204
	[0.076]	[0.000]	—	[0.000]	—	[0.132]
<i>LMF</i>	2.269	8.478	—	5.374	—	1.735
	[0.078]	[0.000]	—	[0.000]	—	[0.136]
<i>LRT</i>	6.879	51.26	—	32.56	—	5.205
	[0.076]	[0.000]	—	[0.000]	—	[0.131]

Notes: *LM*, *LMF* and *LRT* denote the statistics of the Wald test, Fisher test and likelihood ratio test, respectively. The digits in brackets are the p-values. The significance level is specified at 5%. *r* denotes the number of transition functions.

Table 5 reports the parameter estimates of the FF and PSTR models. In the FF model, the impacts of market risk, size and book-to-market on stock returns are all significant, i.e., 1.451, 0.242 and -0.452, respectively, and the market risk factor has the biggest effect on stock returns among the three factors. The market risk and size factors have positive effects on stock return, consistent with the results in most previous studies (e.g., Perez-Quiros & Timmermann, 2000). However, the value premium does not occur in our panel data set. That is, the growth semiconductor stocks catch more premium than the value semiconductor ones. This result

is different from that obtained in Fama and French (2006) by using the US stock market. Blazenko and Fu (2010) give a probable explanation that high profitability dividend paying stocks have low returns whereas high profitability non-dividend paying stocks have high returns. Since profitability and market values relate positively, dividend paying stocks have a value premium whereas non-dividend paying stocks have a negative value premium. In addition, the market risk factor has the biggest effect on stock returns among the three factors.

According to the test results in Table 4, both the PSTR model with $r=m=1$ and the PSTR model with $r=3$ and $m=2$ can pass the non-linear tests, and have at least one transition functions. To decide which one is the optimal model for evaluating the non-linear dynamics of stock return, we use the minimum AIC and BIC. In this situation, the PSTR model with one transition function ($r=1$) and one location parameter ($m=1$) is the optimal one for estimating Eq. (4). The estimation results are shown in Table 5.

For the PSTR model, the estimated threshold value C and transition parameter γ are 13.76 and 183.7, respectively. The market (or equity) premium on stock return is significantly positive ($2.287 - 0.891 * W(VIX_t; 183.713.7\theta) > 0$), depending on the value of VIX_t . The value of VIX_t varies in each period;

therefore, the effect changes with time. In two extreme cases, i.e., $W(VIX_t; 183.713.7\theta) = 0$ and $W(VIX_t; 183.713.7\theta) = 1$, the effects are 2.287 and 1.396, respectively. Evidently, the larger the VIX is, the smaller the market premium would be. The reason may be that as the VIX is greater than the threshold, investors expect the market will reverse, which leads to the decrease in the market premium. This result is quite different from the constant market premium obtained from the FF model in this paper and previous studies. In most cases, the linear FF model underestimates the market premium (see Table 5, 1.451 vs. 1.396~2.287).

The change in size premium (SMB_t) exerts an insignificantly positive effect on stock return, i.e., $0.077 + 0.247 * W(VIX_t; 183.713.7\theta) > 0$. The insignificant effect is similar to the finding of Brown and Cliff (2004) that investor sentiment has little predictive power for small stocks. In two extreme cases (i.e., $W(\cdot) = 0$ and $W(\cdot) = 1$), the effects are 0.077 and 0.324, respectively. Clearly, small semiconductor firms get more size premium as the degree of investor panic deepens. The probable reason is that in face of a more panic market sentiment, small semiconductor firms can adjust their operating strategies more motorized than large firms. Again, the effects vary with time, depending on the VIX under different regimes, and the non-linear impact of size premium on stock return is less investigated in previous studies.

Value factor (HML_t) has a significantly negative effect on stock return, i.e., $-0.778 + 0.326 * W(VIX_t; 183.713.7\theta) < 0$, depending on the value of time-varying VIX. In two extreme cases (i.e., $W(\cdot) = 0$ and $W(\cdot) = 1$), the effects are -0.778 and -0.452, respectively. While the negative effect is the same as those reported by previous studies (e.g., Krishnaswami et al., 1999, Blazenko & Fu, 2010) and the FF model in this paper, the effect here varies with time and is not permanently constant. In addition, the larger the VIX is, the smaller the negative effect would be. According to the result in Blazenko and Fu (2010), growth stocks with high profitability, high market/book and non-dividend paying have high returns. However, as investor sentiment (VIX) becomes more panic, the growth stocks gradually lose their value premium advantage.

TABLE 5: ESTIMATION RESULTS OF STOCK RETURNS

Model	Linear	PSTR-VIX
Parameter		$r=m=1$
θ_{0i}	0.900***	
$R_m - R_f$		
θ_1	1.451***	2.287***
θ'_1		-0.891***
SMB		
θ_2	0.243***	0.077
θ'_2		0.247
HML		
θ_3	-0.452***	-0.778***
θ'_3		0.326
C		13.76
γ		183.7
R^2	0.342	
AIC		5.153
BIC		5.126

Note: The PSTR-VIX model with $r=m=1$ is the optimal estimation due to its minimum AIC and BIC.

With the rise in VIX, the overall excess returns fall. For example, as $W(\cdot) = 0$ and 1, the overall excess returns are 1.586 and 1.268, respectively. This result supports the finding of Glosten et al. (1993) that there exists a negative relationship between conditional expected return and conditional variance of return. The evidence that VIX has asymmetric impacts on excess returns is also found in Campbell and Hentschel (1992). In addition, Theodossiou and Savva (2015) find evidence that the skewness and kurtosis in the distribution of portfolio excess return plays a crucial role in the risk-return relationship. The results in Tables 1 and 5 also support this outcome. In Table 1, the skewness of excess return ($R_t - R_f$) is positive (1.150), and the excess returns range from 1.268 to 1.586. Thus, we have positive skewness and positive excess return. In spite of this, in the present paper, the impacts of idiosyncratic risks on excess returns are nonlinearly disturbed through the aggregate volatility—VIX, which is ignored by the previous studies. While Ang et al. (2006) document that stocks with high sensitivities to innovations in aggregate volatility (proxied by VIX) have low average returns, and Ang et al. (2009) find evidence that stocks with high idiosyncratic volatility have low future returns in 23 developed markets, these results are based on sorting stocks into five quintiles and is linear. Thus, there is a lack of threshold for the returns to have the process of a smooth regime switching, and cannot integrate these two kinds of risks into an empirical model.

In the work of Jacobs (2015), the variation of investor sentiment has a powerful role in long-short anomalies. However, the predictive power of investor sentiment is mostly restricted to the short leg of strategy returns. In line with this result, the credibility of the estimated risk premiums in Table 5 is higher in the situation of high VIX's than low VIX's. Zaremba (2016) finds similar results that variation in market sentiment plays an important role in the returns on the cross-country value

strategies. That is, the change in market sentiment causes a spillover effect on cross-country stock returns. However, the influence in Zaremba is not time-varying and nonlinear.

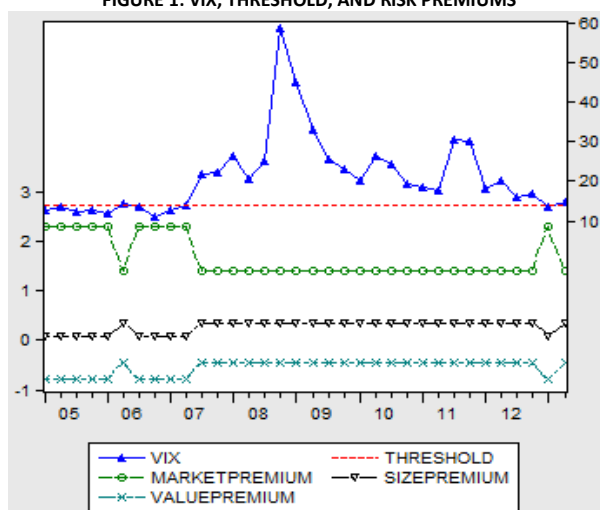
4.2 TIME-VARYING RISK PREMIUMS AND INVESTMENT STRATEGIES

Using the estimation results in Table 5, we can further analyze the dynamic paths of the three risk premiums. Fig. 1 illustrates the dynamic paths of risk premiums in terms of the three factors in the Eq. (5). According to the threshold value of VIX (13.76), we can divide the sample period into two sub-sample periods – 2005:1Q-2007:2Q and 2007:3Q-2013:2Q. In the former period, VIX is below its threshold, and in the latter period, VIX is above its threshold. In fact, the European sovereign debt crisis occurred in the latter period. That is, VIX rises very quickly to a high level as economy faces serious economic/financial crisis. In the latter period, the market premium and negative value premium decrease, and size premium increases. Clearly, in the panic periods, an increasing VIX strengthens the attraction of small stocks and weakens the value premium of growth stocks. In addition, all the three risk premiums have faced at least three switching points in their dynamic paths. Again, these results support the argument mentioned above that the risk premiums are non-linear and vary with time.

From the empirical results, we suggest the following investment strategies. First, in determining investment targets, there is a trade-off between small stocks and growth stocks, because low VIX causes size premium to decrease and negative value premium to enlarge, and high VIX causes size premium to increase and negative value premium to reduce. For example, at extremely low levels of VIX's, $W(.)=0$, the size premium is 0.077, and value premium is -0.778, which means that growth stocks have excess returns than value stocks and small stocks have excess returns than large stocks. Contrarily, at extremely high levels of VIX's, $W(.)=1$, the size premium is 0.324 ($=0.077+0.247$), and value premium is 0.452 ($= -0.778+0.326$), which means that value stocks have excess returns than growth stocks. Thus, with the rise in VIX, small stocks have more premiums; however, growth stocks have fewer premiums. Even though, small/growth stocks still have higher risk premiums than large/value stocks at any level of VIX. That is, holding small/growth stocks is relatively favorable. Second, in panic periods (high VIX), holding small/growth stocks has more size and negative value premiums. For example, the size and negative value premiums are 0.855 in low VIX regime ($0 < \text{VIX} < 13.76$) and are 0.776 in high VIX regime ($13.76 < \text{VIX}$). Third, market premium in high VIX regime is lower than low VIX regime.

Moskowitz and Grinblatt (1999) find evidence that industry momentum investment strategies get more profit than momentum investment strategies, even after controlling for size, book-to-market equity, and individual stock momentum. Thus, investors can use industry momentum investment strategies to choose specific industries as investment targets, and then employ the constructed model in this paper to evaluate three nonlinear and time-varying risk premiums.

FIGURE 1: VIX, THRESHOLD, AND RISK PREMIUMS



Note: VIX, THRESHOLD, MARKETPREMIUM, SIZEPREMIUM, and VALUEPREMIUM denote the volatility index, the threshold value of VIX, market premium, size premium, and value premium.

5. CONCLUSION

This paper re-estimates the three premiums in Fama-French (1993) model by reconstructing the model as a panel smooth transition regression (PSTR) framework. In estimating the PSTR model, we consider the representative investor sentiment variable – the VIX – as the transition variable, which can be considered as the fourth factor, can control for other factors associated with stock returns and can potentially explain the heterogeneity in time between stock returns and the three factors.

Our main results can be summed up as follows. First, the relationships between stock returns and its determinants, including the market (beta) factor, size factor and, value factor, are non-linear and change over time when VIX is introduced as a transition variable. Second, the market premium decreases with the rise of VIX, and the size and value premiums increases with the increase of VIX. Third, the size premium is statistically insignificant, and the value premium is negative. Fourth, the VIX non-linearly causes changes in stock returns.

Our results have the following implications of investment strategy. First, in determining investment targets, there is a trade-off between small stocks and growth stocks; however, small/growth stocks have higher risk premiums than large/value stocks at any level of VIX. Second, in panic periods (high VIX), holding small/growth stocks has more size and negative value premiums. Third, in measuring the premiums, it is crucial for investors to consider the VIX variable – the proxy for investor sentiment, otherwise they will misjudge the impacts of individual factors on stock returns.

NOTES

1. The periods of the twelfth, thirteenth, and fourteenth business cycle range from 2005:2M to 2009:2M, 2009:3M to 2012:1M, and 2012:2M to now, respectively.
2. Following the proposition of González et al. (2005) and the followers, this paper allows the number of location parameters (m) to be either one or two.
3. We only display the results from the optimal estimation model; however, the remaining estimation results are available upon request.

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ROLE OF SELF- HELP GROUPS IN EMPOWERMENT OF WOMEN OF KALAMBE TARF THANE VILLAGE IN KARVEER TALUKA: A CASE STUDY

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ABSTRACT

Women participation in Self Help Groups have obviously created tremendous impact upon the life pattern and style of poor women and have empowered them at various levels not only as individuals but also as members of the family members of the community and the society as whole. They come together for the purpose of solving their common problems through self-help and mutual help. The more attractive scheme with less effort is "Self Help Group" (SHGs). It is a tool to remove poverty and improve the women entrepreneurship and financial support in India. The present paper confines itself to study role of self- help groups in empowerment of women of kalambe tarf thane village in karveer taluka. The main objective of this paper is to study Role of Self Help Groups on Women Empowerment in Kalambe Tarf Thane Village. Out of 585 women, members of SHG 117 women members are randomly selected as sample. Empowerment of women is analyzed through structured questionnaire for women members of SHG. It is clarify from this study that there is an increase in income of women members of the SHG of Kalambe Tarf Thane Village after joining SHG. SHGs are helping for the empowerment of its members.

KEYWORDS

women, empowerment, self help, SHG- Self Help Group.

JEL CODES

C12, C81, C83, I3, O12, Y10.

INTRODUCTION

The movement of Self-help groups (SHGs) as the most effective tools for financial inclusion was started some thirty years ago with NGOs promoting self help groups. This has evolved into a national movement with the proactive role of the state governments gaining recognition from all the major stakeholders.

The concept of SHG services the principle, 'by the women, of the women and for the women'. Self-help groups are voluntary associations of people with common interests formed to achieve collective social and economic goals. Such groups are organized for mutual help and benefit. It is formed democratically without any political affiliations. They may comprise of 15–20 women and/or men, although they generally consist exclusively of women members. In India, more than 90 per cent groups are formed by women. is done at micro or group level. The initial operations of SHGs start with collecting savings from members. These groups inculcate the habit of thrift among the members. By collecting small saving huge amount can be raised. These groups advance loans to the needy members. The total funds owned by the group are thus circulated in the form of loan among the members.

The concept of empowerment has been the subject of much intellectual discourse and analysis. For the purposes of this discussion, the conceptual framework expounded by United Nations is a useful starting point (United Nations 2001). Empowerment is defined as the processes by which women take control and ownership of their lives through expansion of their choices. Thus, it is the process of acquiring the ability to make strategic life choices in a context where this ability has previously been denied. The core elements of empowerment have been defined as agency (the ability to define one's goals and act upon them), awareness of gendered power structures, self-esteem and self-confidence (Kabeer 2001). Empowerment can take place at a hierarchy of different levels – individual, household, community and societal – and is facilitated by providing encouraging factors (e.g., exposure to new activities, which can build capacities) and removing inhibiting factors (e.g., lack of resources and skills).

Mahatma Gandhi states that the position of women the society is an index of its civilization. "Train a man and you train an individual, Train a woman and you build a nation". The SHGs (Self Help Groups) are the major resource of inspiration for women's welfare. In an attempt to uplifting the women, the government has initiated Women Welfare Programmes through development centers, rural agencies, banks, NABARD etc.

Self-help groups (SHGs) is as an instrument to change the conditions of women socially and economically. Once socio-economic experiment is achieved it would have implication on the overall development of women. SHGs enable economic, social, political and psychological empowerment of women. According to many disciplines empowerment describes the freedom of a person in social, political and economic matters. Women empowerment is comprehensive and much debated issues, it's a dynamic and multidimensional process. Women in general are the most disadvantaged people in the rural regions of India. Even though the women largely participate in economic activities, mainly agriculture sector, and other sectors in the economy.

This study is undertaken by researcher to analyze the role of SHGs in empowerment of women with special reference to Kalambe Tarf Thane Village in Karveer Taluka.

LITERATURE REVIEW

The issue of empowerment of women became more significant as women constitute half of the population and unfortunately they been discriminated a lot. During the course of the study, the study of several authors was referred and it is imperative that an outline of the literature survey is put to note and the following references are worth mentioning.

Ariz Ahmed (1999) found that most unique feature of this thrift activity is involvement of all communities he observed that the involvement of women groups not only empowering them but also enabling to shape themselves as social activities by different schemes and in the system.

Madheswaran and Dharmadhikary (2001) in their study observed that the triumph of SHGs lending are attributable not only to peer monitoring but to other factors such as lending for non-productive purposes and inculcating saving among group members.

Narayana Reddy (2002) made an attempt on how Self-Help Groups promoted among women as a part of action Research leads to women empowerment. The study describes that thrift and credit was strategic entry point for the action research intervention in Ranga Reddy District of Andhra Pradesh. The study concluded that organization of Self-Help Groups and development of their institutional and managerial capacity is an imperative element in DRDA had come forward to

extend loans for income – generating activities. Women interacted with external agencies and professionals with confidence, which was evidence of improvement of most social skills and approachability.

Sunder Raj (2004) in his article on SHGs and women's empowerment has focused on the conceptual framework of the self help as a tool for empowerment. The observation that SHGs contributes significantly to the overall development of women in rural areas is strengthened and the various aspects of rural life where the empowered women can contribute are delineated.

Chandramani (2005) in his study on self-help groups for empowerment of rural women revealed that women's development is directly related to national development. The effective management and development of interest, skills, and other potentialities are of paramount importance. It could be well ascertained that women's development could be achieved by empowerment which there by enables women to be the agents of social change organizational behaviour is the key to women's empowerment. Women's organizations and groups provide them a platform to discuss helplessness in their own society. Involvement of women is essential in all stages of economic and social activities.

Abdul Raheem and Yasmeen Sultana (2007) in their study stated that the Self-Help Group (SHG) models, women are responsible citizens of the country achieving social and economic status. In all stages of economic and social activities, involvement of women has given added significance to them. Women led SHGs in many parts of country have achieved success in bringing the women to the mainstream of decision making. The Self-Help Group (SHG) in our country has become a source of inspiration for women's welfare. Now a days formation of SHG is a viable alternative to achieve the objectives of rural development and to get community participation in all rural development programmes. SHG is also available organized set up to disburse micro credit to the rural women and encouraging them to enter into entrepreneurial activities.

Ganesamurthy (2007) in his study stated that majority of the women continues to be confined to micro, small-scale enterprises in spite of efforts made toward economic empowerment of women.

S.Thangamani, S.Muthuselvi (2013) their study addresses women empowerment through self help groups in Mettupalayam district of Tamilnadu. The information required for the study has been collected from both the primary and secondary sources A Random sampling method has been followed. Average and percentage analysis was carried out to draw meaningful interpretation of the results. Chi – Square test used to find whether the two attributes are associated or not. Garret ranking technique was used to find the reasons for joining the Self help group. The results of the study revealed that the SHGs have had greater impact on both economic and social aspects of the beneficiaries.

Mrs. Eli kumari Das, Ms. Dharitri Baishya (2015) This paper highlights that micro finance through SHGs has a positive role in income, savings and investment of women in Rani Block of Kamrup District of Assam. The study is based on descriptive type of research. A structured interview scheduled is prepared and used for collecting data from women members of self help groups. From the study, it is found that micro finance through self-help group is helping the poor and upgrading women empowerment by making them financially strong. SHGs have increased their habit of savings and investment in some developmental activities. Thus it is universally accepted that SHGs and Bank linkage programme has profound influence on the economic status, decision making process and level of dependence of women in India.

R. Vishnuvarthini and A.M. Ayyothi (2016) this review article gives a complete picture of the success of SHG towards women empowerment. Almost all the study finds that the SHG members gain equality of status, women as participants, and decision makers in democratic, economic and social spheres of life. This article also, throws some of the measures to be taken for the effective implementation of SHG.

Thus, the above studies revealed that though there are failures in some areas, self-help groups are considered more worth for the empowerment of the women.

STATEMENT OF PROBLEM

The empowerment of women is one of the central issues in the process of development of countries all over the world. This study is undertaken to analyze the role of self- help groups in empowerment of women of kalambe tarf thane village in karveer taluka. The main objective of this paper is to study Role of Self Help Groups on Women Empowerment in Kalambe Tarf Thane Village.

OBJECTIVES OF THE STUDY

1. To study the role of self-help groups in women empowerment.
2. To analyze the economic empowerment of member of women's SHG.

HYPOTHESIS

There is significant difference in the economic position of women member of SHG's before joining SHG & afterwards.

RESEARCH METHODOLOGY

Primary data is collected through structured questionnaires for women members of SHG.

There are 33 SHG's of women in Kalambe Tarf Thane Village. The universe will be SHG's of women linked with Kalambe Tarf Thane Gram panchayat. There are total 585 women's SHG's members in Kalambe Tarf Thane Village. For this study all the 33 SHG's will be selected and out of 585 women members 20% members will be selected by following simple random sampling technique. Thus the total sample size for the study will be 117 women members.

TABLE 1: SAMPLE FRAME FOR STUDY

Area	Total No. of Population	Sample selected		
		Groups	Respondents	% of Sample
Kalambe Tarf Thane Village	585	33	117	20

(Source: Kalambe Tarf Thane Gram Panchayat)

Obtained data is analyzed by descriptive statistics by using SPSS. Hypothesis is tested by using Factor analysis.

Secondary data is collected from literature from various journals, books, internet and official records maintained by the gram panchayat of village.

DATA ANALYSIS AND INTERPRETATION

Obtained primary data analysis is divided into two aspects namely, analysis of role of SHG in women empowerment and hypothesis testing.

ROLE OF SHG IN ECONOMIC EMPOWERMENT

ASSESSMENT OF EMPOWERMENT

In this part the assessment of Empowerment of the SHG members are analyzed. It is difficult to measure empowerment and there is no single method to measure it. It is defined through indicators. Indicators of empowerment should encompass personal, social and economic change. The following few indicators of empowerment were referred to the respondents.

They are: Increase in self-confidence, improved decision making power, increased access for income, increase in communication skills, increased social awareness, increased support during crisis, increased recognition in community, participation in community activities, increased gender awareness, increased self-reliance of the SHG women members. The increase in self-confidence wise classification of the members are shown in table 2.

TABLE 2: INCREASE IN SELF-CONFIDENCE

Opinion	No. of respondents	Percentages
Disagree	1	.9
Neutral	1	.9
Agree	62	53.0
Strongly agree	53	45.3
Total	117	100.0

Source: Survey data

It is evident from the table that majority i.e. 53 percent respondents are agree that their self confidence is increased after joining SHG. While 45.3 percent respondents are strongly agree, 0.9 percent respondents are neutral and 0.9 percent respondents are disagree.

Table 3 shows improved decision making power of respondents.

TABLE 3: IMPROVED DECISION MAKING POWER

Opinion	No. of respondents	Percentages
Neutral	1	.9
Agree	64	54.7
Strongly agree	52	44.4
Total	117	100.0

Source: Survey data

Table 3 shows that majority of the respondents 54.7 percent are agree that their decision making power is improved after joining SHG. While 44.4 percent respondents are strongly agree and 0.9 percent respondents are neutral.

The table 4 shows increased access for income of the respondents.

TABLE 4: INCREASED ACCESS FOR INCOME

Opinion	No. of respondents	Percentages
Neutral	5	4.3
Agree	64	54.7
Strongly agree	48	41.0
Total	117	100.0

Source: Survey data

From the above table it is cleared that that majority of the respondents 54.7 percent are agree that joining SHG has resulted in increased access for income. While 41 percent respondents are strongly agree and 4.3 percent respondents are neutral.

The table 5 shows improved communication skill of the respondents.

TABLE 5: IMPROVED COMMUNICATION SKILLS

Opinion	No. of respondents	Percentages
Neutral	2	1.7
Agree	67	57.3
Strongly agree	48	41.0
Total	117	100.0

Source: Survey data

Table 5 shows that majority of the respondents 57.3 percent are agree that their communication skill is improved after joining SHG. While 41 percent respondents are strongly agree and 1.7 percent respondents are neutral.

The table 6 shows increased access for income of the respondents.

TABLE 6: INCREASED SOCIAL AWARENESS

Opinion	No. of respondents	Percentages
Neutral	38	32.5
Agree	59	50.4
Strongly agree	20	17.1
Total	117	100.0

Source: Survey data

From the above table it is cleared that that majority of the respondents 50.4 percent are agree that joining SHG has resulted in increased social awareness. While 32.5 percent respondents are neutral and 17.1 percent respondents are strongly agree.

The table 7 shows increased support during crisis of the respondents.

TABLE 7: INCREASED SUPPORT DURING CRISIS

Opinion	No. of respondents	Percentages
Disagree	4	3.4
Neutral	61	52.1
Agree	46	39.3
Strongly agree	6	5.1
Total	117	100.0

Source: Survey data

It is evident from the table that majority i.e. 52.1 percent respondents are neutral that joining SHG has resulted in increased support during crisis. While 39.3 percent respondents are agree, 5.1 percent respondents are strongly agree and 3.4 percent respondents are disagree.

Table 8 shows increased recognition in community of respondents.

TABLE 8: INCREASED RECOGNITION IN COMMUNITY

Opinion	No. of respondents	Percentages
Neutral	49	41.9
Agree	56	47.9
Strongly agree	12	10.3
Total	117	100.0

Source: Survey data

From the above table it is cleared that that majority of the respondents 47.9 percent are agree that joining SHG has resulted in increased recognition in community. While 41.9 percent respondents are neutral and 10.3 percent respondents are strongly agree. The table 9 shows participation in community activities of the respondents.

TABLE 9: PARTICIPATION IN COMMUNITY ACTIVITIES

Opinion	No. of respondents	Percentages
Neutral	44	37.6
Agree	57	48.7
Strongly agree	16	13.7
Total	117	100.0

Source: Survey data

Table 9 shows that majority of the respondents 48.7 percent are agree that they started participating in community activities after joining SHG. While 37.6 percent respondents are neutral and 13.7 percent respondents are strongly agree. The table 10 shows increased gender awareness of the respondents.

TABLE 10: INCREASED GENDER AWARENESS

Opinion	No. of respondents	Percentages
Disagree	2	1.7
Neutral	68	58.1
Agree	42	35.9
Strongly agree	5	4.3
Total	117	100.0

Source: Survey data

It is evident from the table that majority i.e. 58.1 percent respondents are neutral that joining SHG has resulted in increasing gender awareness. While 35.9 percent respondents are agree, 4.3 percent respondents are strongly agree and 1.7 percent respondents are disagree. Table 11 shows increased self-reliance of respondents.

TABLE 11: INCREASED SELF-RELIANCE

Opinion	No. of respondents	Percentages
Strongly Disagree	2	1.7
Neutral	8	6.8
Agree	64	54.7
Strongly agree	43	36.8
Total	117	100.0

Source: Survey data

It is evident from the table that majority i.e. 54.7 percent respondents are agree that joining SHG has resulted in increased self-reliance. While 36.8 percent respondents are strongly agree, 6.8 percent respondents are neutral and 1.7 percent respondents are strongly disagree.

ECONOMIC EMPOWERMENT OF WOMEN THROUGH SHG

The economic status of women is now accepted as an indicator of a society's stage of development. Women's empowerment and their full participation on the basis of equality in all spheres of society are fundamental for the achievement of gender equality and development and peace in every nation. So it is clear the social, economic and political empowerment of women is the need of the hour, as it is the only sure way of making them equal partners in development. SHG is a medium for the development of saving habit among the women. These self help groups come to the rescue of women and they enhance the status of women as participants, decision makers and beneficiaries in the democratic, economic, social and cultural spheres of life. Economic empowerment is the base of social and political strength of the society. Hence a study of the economic empowerment of women is considered important.

Table 12 shows the monthly income of the SHG members before and after joining the SHGs.

TABLE 12: MONTHLY INCOME OF THE SHG MEMBERS BEFORE AND AFTER JOINING SHG IN KALAMBE TART THANE VILLAGE

Sr. No.	Monthly Income	Before Joining SHG		After Joining SHG	
		No. of Respondents	Percentage	No. of Respondents	Percentage
1	Less than Rs. 3000	91	77.8	13	11.1
2	Rs.3001 to 5000	10	8.5	64	54.7
3	Rs.5001 to 7000	6	5.1	23	19.7
4	Rs.7001 to 9000	3	2.6	7	6.0
5	Above Rs.9000	7	6.0	10	8.5

Source: Survey data

Table 12 shows the monthly income of the SHG members before and after joining SHG in Kalambe Tart Thane Village.

HYPOTHESIS TESTING

H₀: There is no significant difference in the economic position of women member of SHG's before joining SHG & afterwards.

H₁: There is significant difference in the economic position of women member of SHG's before joining SHG & afterwards.

To test the above hypothesis, we use two sample t test. The results are shown in the following table.

TABLE 13: TWO SAMPLES t TEST

Monthly income	Mean	N	Std. Deviation	Std. Error Mean	T value	df	p value
Before joining SHG	2888.89	117	1218.742	112.673			
After joining SHG	5252.14	117	966.443	89.348	16.434	232	< 0.001

Source: Survey data, Significant at 1% level

From the above table, it is observed that the p value of two sample t test is far less than 1% level of significance. Hence, there is no evidence to accept H0 and we conclude that the economic empowerment of the women members after joining the SHG has increased significantly in respect of monthly income. The reason is that before joining the SHGs, the women always depended upon their family for anything and everything, however after joining the SHG, they were completely independent of family and they are also able to meet their economic requirements by and for themselves.

FINDINGS AND CONCLUSION

The empowerment of women is vital for the economic development of a nation and also plays a key role in building a base for societal change. To improve the socio-economic conditions of the population of any country, it has become a prerequisite to empower women by enhancing and making certain their role to the optimal level. The participation of women in SHGs has enriched their income, savings, and empowerment. Women empowerment is a process of acquiring power for women in order to understand her rights and to perform her responsibilities towards oneself and others in a most effective way. It gives the capacity or power to resist discrimination imposed by the male dominated society. The role of women in the development of nation is very important nowadays. So women should be respected both in the society as well as in the family. To increase the status of women, they must be empowered economically. Women's economic empowerment is a prerequisite for sustainable development and for achieving the Development Goals. Monthly income of the SHG members before joining SHG and after joining SHG was analyzed and Paired samples t test was conducted to find out the significance of difference. It was found that majority of the respondents Monthly Income after Joining SHG are higher than the Monthly Income before Joining SHG in Kalambe Tarf Thane Village. On the basis of the above analysis there is no evidence to accept H0 and we conclude that the economic empowerment of the women members after joining the SHG has increased significantly in respect of monthly income.

It is evident from the study that in Kalambe Tarf Thane Village the SHGs have been playing a vital role in the empowerment of women. This is an important institution for improving the life of women on various social, political and economic components. The number of women inclined towards SHG is increasing which implies that women are aspiring for empowerment. It was found that the SHGs are helping for the economic empowerment of its members. No doubt, the SHG movement in India has been moving in the right direction, but still a long way to go. It is necessary to empower the women more and more in social, cultural, economic, political and legal matters, for the interest of the family in particular and the nation in general.

SUGGESTIONS

On the basis of the findings of the study following suggestions have been made which would help to improve the functioning of the Self-Help Groups and the members and in turn would help the empowerment of women.

1. In order to strengthen the women empowerment, female literacy has to be promoted.
2. The members should undergo some sort of training in order to educate themselves about the utilization of money properly.
3. There should be aware of all government schemes and should make use of them for the development of women members of SHG.
4. More emphasis should be given on the training programmes so as to create awareness about the different types of activities like cattle breeding, computer education, yoga and meditation etc.

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SATISFACTION LEVEL OF INDIVIDUAL FINANCIAL ADVISORS IN RELIANCE MUTUAL FUND

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ABSTRACT

This project deals with the satisfaction level of Individual Financial Advisors (IFA) in the state of Tamilnadu. This is to analyze their perception about the fund and percentage of business, which they allocate to Reliance Mutual Fund (RMF). Studying the office operations helped the researcher gain an insight into the various processes that are set off once the investor invests his/her money. The project was immensely useful in understanding the basic concept of mutual fund like day to day terminology used while dealing with mutual fund by different departments, what type of complaints are received, how they are solved, how the sales support team works, where the application forms are sent, how the redemption and repurchase process takes place. For determining the satisfaction, level data were collected from the IFA's by a questionnaire sent through e-mail and post. The top IFA's from each place were taken into consideration based on their Asset under Management.

KEYWORDS

individual financial advisors, job satisfaction, schemes.

JEL CODE

J28.

INTRODUCTION

Job satisfaction refers to an employee's general attitude towards his job. Locke defines job satisfaction as a "pleasurable or positive emotional state resulting from the appraisal of one's job or job experience".

EVALUATING JOB SATISFACTION

Before management can develop policies and practices to increase employee's satisfaction or maintain existing levels if they are found to be acceptable, information must be obtained from the organization work force. Management can informally acquire some insight into satisfaction level based on impression obtained from employees. Sometimes information gathered in this way may be misleading. Employees are often reluctant to tell supervisors negative things about their job.

An accurate assessment of employee's satisfaction ordinarily requires a more formal procedure. Satisfaction surveys are often conducted to get systematic information from employees. Satisfaction survey can provide information regarding how employees feel about their jobs and the organization. However surveys are not completely neutral information-gathering devices. Employees' expectation may be raised simply because employees are asked to participate in the survey process. Failure to follow up on the survey with appropriate managerial action may result in decreased employee satisfaction.

OBJECTIVES OF THE STUDY

1. To find out the satisfaction level's of IFA's
2. To find the percentage of business they allocate to reliance mutual fund.
3. To learn the basic concepts and the types of mutual fund schemes.
4. To know the impact that Reliance mutual fund would create in distributor's income.

REVIEW OF LITERATURE

Alexander, G.J., J.D.Jones, and P.J.Nigro Financial advisors are used by a majority of mutual fund investors and can be a tremendous asset in the investment decision. We find that the financial advisors we surveyed use a more sophisticated decision process than individual investors. The use of independent research sources and the consideration of a more objective set of fund characteristics demonstrate the advisors tend to improve the decision making process for investors. Although advisors do not consider fund expense ratios as important as most academics would prefer, they clearly provide value to clients. Not surprisingly, advisors who display the greatest knowledge and use the most objective information available appear to generate the greatest level of satisfaction.

John Schaefer President & Chief Executive Officer, Individual investor group satisfaction survey shows that the clients place a high value on trusting relationships with their financial advisors, the organization should focus on specific client segments, which would allow them better solutions to their needs. Building on trusting relationships, tailoring solutions and meeting the needs of the advisors would improve their satisfaction.

Adrian Thompson(2002) have done an exploratory investigation to identify the customer satisfaction and they reveal the following, encourage Face-to-face dealings, respond to messages promptly and keep your clients informed, be friendly and approachable, have a clearly-defined customer service policy, attention to detail (also known as the 'The Little Niceties'). Anticipate your client's needs and go out of your way to help them out, honor your promises.

Charles Schade, senior director of research at J.D. power and Associates Having a clear, formally written financial plan in place is not only beneficial to the investors, but also to the investment firm, as it gives them a much better idea of the expectations and financial goals of their customers".

Rahul Seksaria (1999) Index funds Advisors, Inc. (IFA) was incorporated in March 1999 and placed its first independent client investments in early 2000. IFA did not offer the index portfolio until November 1999. prior to 1999, IFA did not manage client assets. The IFA indexing investment strategy is based on the principles of the modern Portfolio Theory and the Fama and French Three Factor Model for Equities and Two Factor Model for fixed income. Index portfolios are designed to provide substantial global diversification(approximately 15,000 companies in 35 countries) in order to reduce investment concentration and the resulting increased risk caused by the volatility of individual companies, indexes, or assets classes. Client portfolios are monitored and rebalanced, taking into consideration risk exposure consistency, transaction costs, and tax ramifications to maintain target asset allocations as shown in the twenty index Portfolios.

William Arruda in his research article says that innovative business organizations are waking up to the fact that successful brands are built by people. By creative employees, not robots. By loyal customers, not CRM systems. By committed partnerships, not relationships du jour. By visionary leaders, not those with a short-term focus.

METHODOLOGY

Methodology is defined as "a body of methods, rules and postulates employed by a discipline", "a particular procedure or set of procedures" or "the analysis of the principles or procedures of inquiry in a particular field". In this research, descriptive research design is used to analyze satisfaction level of individual financial advisors. The primary data was collected through a questionnaire. The secondary data was collected from the company journals, reports, magazines and materials obtained from the mutual fund product head in regional office. Universe of this research is the people who are the customers in the state of Tamilnadu namely

SATISFACTION LEVEL OF INDIVIDUAL FINANCIAL ADVISORS

TABLE 1: FACTORS MOTIVATING IFA's TO RECOMMEND RMF TO INVESTORS

S.No	Particulars	No of respondents	Percentage
1.	Brokerage	4	5
2.	Performance of the schemes	62	81
3.	To earn investors goodwill	11	15
Total		77	100

Source: Primary data

Interpretation: From the above table it can be inferred that majority of the respondents recommend RMF to the investors as the scheme are performing well.

FIG. 1

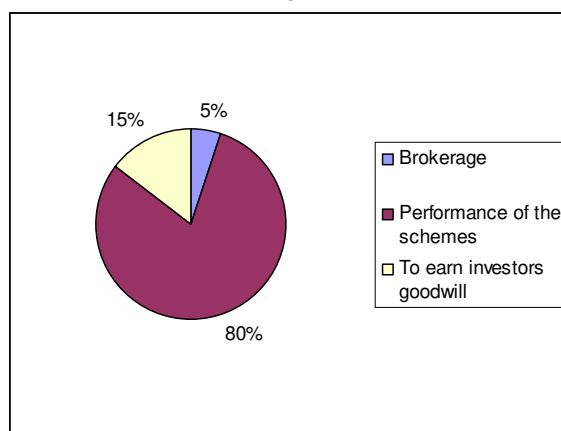


TABLE 2: SUCCESS RATE OF THE IFA's

S.No	Particular	No of respondents	Percentage
1.	Highly successful	28	36
2.	Successful	27	35
3.	Moderately successful	19	25
4.	Unsuccessful	2	3
5.	Not sure	1	1
Total		77	100

Source: Primary data

Interpretation: From the above table it can be inferred that majority of the respondents are highly successful.

FIG. 2

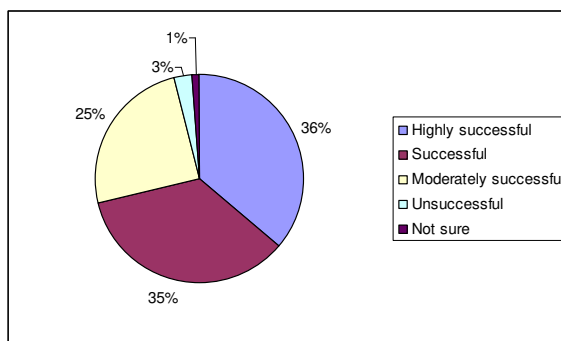


TABLE 3: IFA's ALLOCATION OF BUSINESS TO RMF

S.No	Particulars	No of respondents	Percentage
1.	Less than 50%	29	38
2.	50%-60%	33	43
3.	60%-70%	9	12
4.	70%-80%	1	1
5.	More than 80%	5	6
Total		77	100

Source: Primary data

Interpretation: From the above table it can be inferred that 43% of the respondents would like to allocate 50%-60% of their business to RMF.

FIG. 3

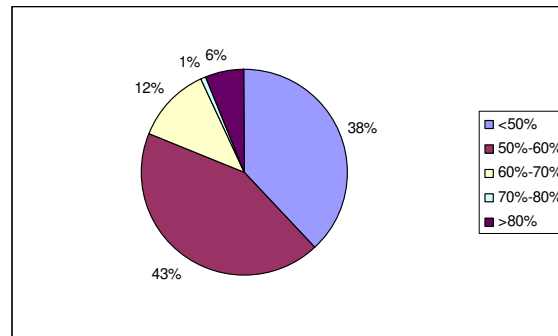


TABLE 4: THE BRAND NAME "RELIANCE" HELPED THE IFA's IN A SALE

S.No	Particulars	No of respondents	Percentage
1.	Very much easy	32	41
2.	Easy	37	49
3.	Not easy	8	10
Total		77	100

Source: Primary data

Interpretation: From the above table it can be inferred that 49% of the respondents feel that the brand name reliance has made their sale easier.

FIG. 4

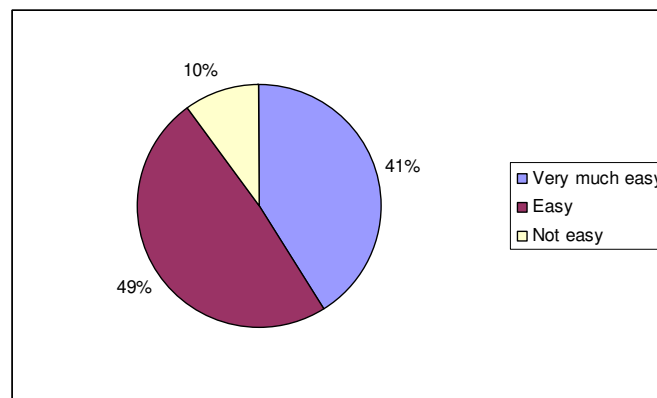


TABLE 5: PERCEPTION OF IFA's FUTURE WITH RMF

S.No	Particulars	No of respondents	Percentage
1.	Strongly agree	30	39
2.	Agree	40	52
3.	Not sure	4	5
4.	Disagree	0	0
5.	Strongly disagree	3	4
Total		77	100

Source: Primary data

Interpretation: From the above table it can be inferred that 52% of the respondents agree that their future is bright and promising with RMF.

FIG. 5

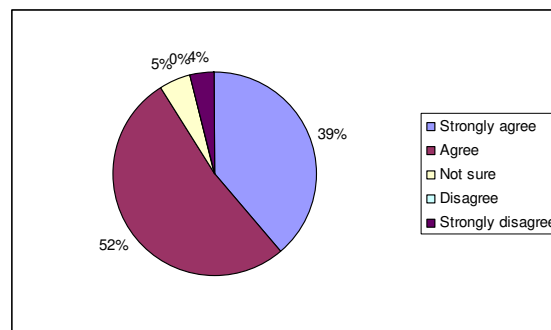


TABLE 6: IMPACT OF RMF IN PROVIDING IFA'S WITH SUFFICIENT KNOWLEDGE, EXPERIENCE AND TRAINING

S.No	Particulars	No of respondents	Percentage
1.	Strongly agree	11	14
2.	Agree	43	56
3.	Not sure	14	18
4.	Disagree	7	9
5.	Strongly disagree	2	3
Total		77	100

Source: Primary data

Interpretation: From the above table it can be inferred that 56% of the respondents agree that their RMF is providing sufficient knowledge, experience and training.

FIG. 6

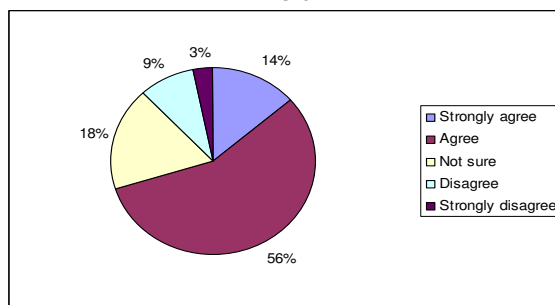


TABLE 7: STABILITY IN IFA'S INCOME FROM RMF

S.No	Particulars	No of respondents	Percentage
1.	Strongly agree	18	23
2.	Agree	39	51
3.	Not sure	14	18
4.	Disagree	2	3
5.	Strongly disagree	4	5
Total		77	100

Source: Primary data

Interpretation: From the above table it is inferred that 51% of the respondents agree that their income is stable with RMF.

FIG. 7

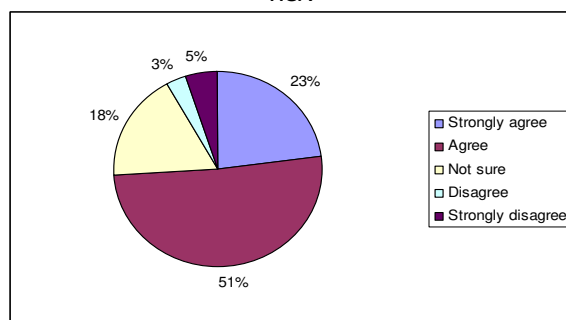


TABLE 8: IFA'S SATISFACTION ON THE PERFORMANCE OF THE SCHEMES

S.No	Particulars	No of respondents	Percentage
1.	Strongly agree	21	27
2.	Agree	49	64
3.	Not sure	6	8
4.	Disagree	1	1
5.	Strongly disagree	0	0
Total		77	100

Source: Primary data

Interpretation: From the above table it can be inferred that most of the respondents agree that they are satisfied with the performance of the schemes.

FIG. 8

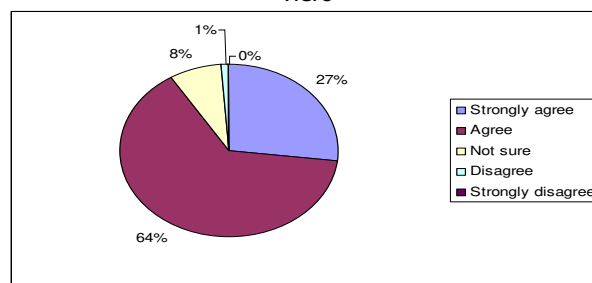


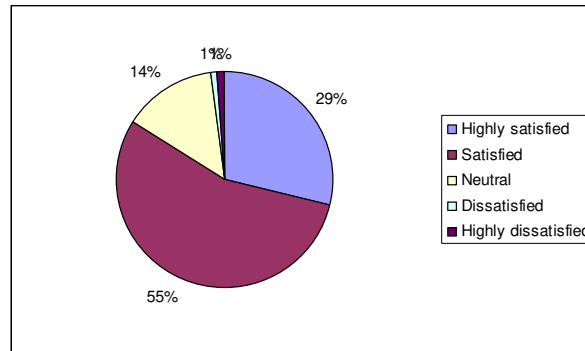
TABLE 9: SATISFACTION LEVEL OF IFA's

S.No	Particulars	No of respondents	Percentage
1.	Highly satisfied	22	29
2.	Satisfied	42	55
3.	Neutral	11	14
4.	Dissatisfied	1	1
5.	Highly dissatisfied	1	1
Total		77	100

Source: Primary data

Interpretation: From the above table it can be inferred that most of the respondents are satisfied with the services provided by RMF.

FIG. 9



FINDINGS

- 81% of the respondents recommend RMF to the investors because the schemes have been performing well.
- 36% of the respondents are highly successful in the current position.
- 43% of the respondents would like to allocate 50%-60% of their business to RMF
- 49% of the respondents feel that the brand name reliance has made their sale easier
- 52% of the respondents agree that their future is bright and promising with RMF.
- 56% of the respondents agree that their RMF is providing sufficient knowledge, experience and training.
- 51% of the respondents agree that their income is stable with RMF.
- Most of the respondents agree that they are satisfied with the performance of the schemes
- More than 50% of the respondents are satisfied with the services provided by RMF.

SUGGESTIONS

- Training could be given to the IFA's on the usage of other mutual funds.
- RMF could assist the IFA's through sign boards and collaterals
- RMF could improve on the aspects of knowledge sharing.
- RMF could improve on the aspects of giving appropriate market updates.

CONCLUSION

From the overall study, it was evident that RMF has created a positive impact on the wealth of the IFA's. IFA's were also satisfied on the performance of the schemes and they were recognized for their performance and they also felt that they do not suffer any difficulties while making a sale and the brand name has helped them and made their sale much easier.

RMF believes that one's vocation should feel like a vacation that means they enjoy what they do, with honesty, integrity, involvement, dedication, and self sacrifice. Their creative ideas make them stand out of the crowd. Today reliance group stands as a testimony to the fact that success is not just a sprint, but a marathon.

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GLOBALISATION - ITS IMPACT ON INDIAN EMPLOYMENT SCENARIO – A CONCEPTUAL STUDY

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ABSTRACT

In India, the employment scenario is not very promising as there is acute unemployment and underemployment. Unemployment problem is recognised to be a major challenge to development-planning in India because unemployment problem is considered to be the problem of poverty. Migration to urban area is the outcome of a high rate of unemployment in rural area and is likely to increase the pressure on limited infrastructure. At the same time, to create jobs for people in general or even for certain vulnerable sections of population is extremely limited in the present climate of economic liberalisation. The strategy towards achieving inclusive growth is to generate a productive and gainful employment on a sufficient scale to absorb our labour force. Past records in this aspect, is not encouraging. The problem is heightened by the fact that the relatively higher rate of growth achieved during the last decade has not generated sufficient volume of good quality employment. The impact of globalisation on employment, the nature and extent of unemployment in India and the policy measures are sought after towards increasing employment opportunities and reduce the unemployment proportion. In this context, the researcher makes an humble attempt to expose the impact of globalisation on the employment aspect in Indian economy.

KEYWORDS

globalisation, employment, unemployment, underemployment, inclusive-growth.

JEL CODE

F66.

1. INTRODUCTION

Economic development of any country consists in the optimum utilisation of human resources in-productive directions, which leads to the reduction of unemployment and boost the income of the society. When an individual, even after his best possible efforts, does not get work on the existing wage-rate or even a low wage-rate to earn his means of subsistence, he is termed as "unemployed". It is now fully recognised that declining man-land ratio, small and fragmented holdings, highly and distribution structure agriculture alone cannot provide the ultimate solution for rural unemployment and under-employment. The rural work force is gradually shifting to a diverse variety of non-farm jobs, partly located in rural areas themselves and partly through migrating to urban work place. By the close of eighties, nearly one-fourth of rural male and about one-sixth of rural female workers were engaged in different types of non-agricultural activities. The quality of job is important for the long term development of rural India, hence, emphasis should be given for productive and sustainable employment which to the economic growth contributions to exports. Unemployment eradication has been a major concern of Indian planning. Provision of gainful employment is recognised as a key instrument in poverty-alleviation, reduction of unemployment and sector transformation. In order to operate this strategy many programmes have been launched by the Govt of India which can be categorised into (1) wage-employment programmes (2) self-employment programmes. Notwithstanding, globalisation and liberalisation also have brought about effects on employment in India.

2. REVIEW OF LITERATURE

Globalization is the subject of attraction for a long time. The wave of globalization appeared on India's shores only in 1991, much after China's and some other Southeast Asian countries. The various research centres, trade committees, economist and media are giving importance to globalization and its impact on Indian economy continuously. The researcher includes some significant studies for the purpose of literature review that are most relevant for this exercise. **SINGH (2012)** in his paper "Globalization and Its Impact on Indian Economy" examines the reform history in Indian economy starting from the pre-British era to present stage of Liberalization, Privatization and Economic Affairs: Vol. 59 Special Issue: 797-803: 2014 **AGRAWAL** Economic Affairs Print ISSN: 0424-2513 Online ISSN: 0976-4666 798 Globalization. In his paper he found that India needs to launch a 'second generation' of economic reforms, with a more human face, the reforms must be based on the long-term vision of transforming India into a global economic power in the next twenty to twenty-five years. **SHARMA (2009)** in his book "China and India in the Age of globalization" explored how the interplay of socio, historical, political and economic forces has transformed, India and China, once poor agrarian societies into economic Power house. In this book he examined the challenges that both countries face and what each must do to strike the balance between reaping opportunities and mitigating risks. **PILLANIA (2008)** in his study "An Exploratory study of Indian Foreign Trade" studies various aspects of Indian foreign trade since 1949. He found that Indian foreign trade has progressed a lot over the last sixty years since independence and India lost its market share to other countries in 1950s and 1960s. The situation improved in 1970s and exports have finally picked up in post liberalization era in general and after 2002 in particular. **Singh (2007)** in his study "Globalisation, Industrial Revolutions in India and China and Labour Markets in Advanced Countries: Implications for National and International Economic Policy" examines the impact on labour markets in advanced countries of the integration of the fast - growing countries, China and India. After his study he suggests that globalisation has a small overall effect on output and employment in advanced countries. The paper concludes that current globalisation cannot meet these twin objectives and that coordination and cooperation between nation states under alternative globalisation are much the better way, if not the only way of realising these objectives. **GOYAL (2006)** in his paper "Impact of Globalization on developing Countries (with special reference to India)" explores the contours of the on-going process of globalization Liberalization and privatization. Throughout this paper, there is an underlying focus on the impact of globalisation on Indian employment. Various studies have been made to analyse different aspects of employment and unemployment, but little has been done to study the impact of globalization on Indian employment. Hence, present study proposes to study the effect of globalization, on Indian employment with clear-cut objectives

3. OBJECTIVES OF THE STUDY

This study has the following objectives:

1. To understand the conceptual framework of globalisation
2. To study the nature and extent of employment in India
3. To exhibit the Indian employment scenario
4. To highlight the impact of globalisation on Indian employment scenario
5. To suggest strategic measures for employment generation in India

4. CONCEPTUAL FRAMEWORK OF GLOBALISATION

Globalization means the coming together of different societies and economies via cross border flow of ideas, finances, capital, information, technologies, goods and services. The cross border assimilation can be social, economic, cultural, or political. But most of the people fear cultural and social assimilation as they believe this would have a negative impact on the existing culture of their society. Globalization therefore has mostly narrowed down to economic integration and this mainly happens through three channels; flow of finance, trade of goods and services and capital movement. Globalization is a term that includes a wide range of social and economic variations. It encompasses topics like the cultural changes, economics, finance trends, and global market expansion. There are positive and negative effects of globalization - it all comes as a package. Globalization helps in creating new markets and wealth, at the same time it is responsible for extensive suffering, disorder, and unrest. The great financial crisis that just happened is the biggest example of how negative globalization can turn. It clearly reveals the dangers of an unstable, deregulated, global economy. At the same time, this gave rise to important global initiatives, striving towards betterment. Globalization is a factor responsible for both repression and the social boom. Today India is regarded as being the one of the fastest developing countries just after China. Globalization has also played a major role in generating employment opportunities in India. After liberalization in the 1990s, the scenario of employment in India has witnessed a phenomenal change. Cities like Bangalore, Delhi, Mumbai and Chennai provide employment to a chunk of the Indian population since it is in these cities only

5. NATURE AND EXTENT OF EMPLOYMENT IN INDIA

5.1 INDIA EMPLOYED PERSONS

In India, the number of employed persons refers to the number of employed in public and organised private sectors. This page provides - India Employed Persons - actual values, historical data, forecast, chart, statistics, economic calendar and news. India Employed Persons - actual data, historical chart and calendar of releases - was last updated on November of 2017.

TABLE 5.1: INDIAN EMPLOYED PERSONS

Actual	Previous	Highest	Lowest	Dates	Unit	Frequency	
29650.00	28999.00	29650.00	17491.00	1971 - 2012	Thousand	Yearly	Volume, SA

Source: tradingeconomics.com international labour organisation

5.2 INDIA UNEMPLOYED PERSONS

In India, the number of unemployed persons refers to number of persons on the live register. Live Register is the systematic arrangement of Index Cards pertaining to applicants who are in need of employment assistance. This page provides - India Unemployed Persons - actual values, historical data, forecast, chart, statistics, economic calendar and news. India Unemployed Persons - actual data, historical chart and calendar of releases - was last updated on November of 2017.

TABLE 5.2: INDIA UNEMPLOYED PERSONS

Actual	Previous	Highest	Lowest	Dates	Unit	Frequency	
44.85	48.26	48.26	5.10	1971 - 2016	Million	Yearly	NSA

Source: tradingeconomics.com – international labour organisation

5.3 INDIA LABOUR FORCE PARTICIPATION

The labour force participation rates is the number of persons who are employed and unemployed but looking for a job divided by the total working-age population. This page provides - India Labour Force Participation Rate - actual values, historical data, forecast, chart, statistics, economic calendar and news. India Labour Force Participation Rate - actual data, historical chart and calendar of releases - was last updated on November of 2017.

TABLE 5.3: INDIA LABOUR FORCE PARTICIPATION RATE

Actual	Previous	Highest	Lowest	Dates	Unit	Frequency
52.50	50.90	52.90	50.90	2011 - 2013	percent	Yearly

Source: tradingeconomics.com – international labour organisation

5.4 INDIA POPULATION

The population of India represents 17.99 percent of the world's total population which arguably means that one person in every 6 people on the planet is a resident of India. This page provides - India Population - actual values, historical data, forecast, chart, statistics, economic calendar and news. India Population - actual data, historical chart and calendar of releases - was last updated on November of 2017.

TABLE 5.4: INDIA POPULATION

Actual	Previous	Highest	Lowest	Dates	Unit	Frequency
1299.00	1283.00	1299.00	359.00	1950 - 2016	Million	Yearly

Source: tradingeconomics.com – international labour organisation

5.5 INDIA RETIREMENT AGE - WOMEN

This page provides - India Retirement Age Women - actual values, historical data, forecast, chart, statistics, economic calendar and news. India Retirement Age - Women - actual data, historical chart and calendar of releases - was last updated on November of 2017.

TABLE 5.5: INDIA RETIREMENT AGE - WOMEN

Actual	Previous	Highest	Lowest	Dates	Unit	Frequency
60.00	60.00	60.00	60.00	2009 - 2017		Yearly

Source: tradingeconomics.com – international labour organisation

5.6 INDIA RETIREMENT AGE - MEN

This page provides - India Retirement Age Men - actual values, historical data, forecast, chart, statistics, economic calendar and news. India Retirement Age - Men - actual data, historical chart and calendar of releases - was last updated on November of 2017.

TABLE 5.6: INDIA RETIREMENT AGE - MEN

Actual	Previous	Highest	Lowest	Dates	Unit	Frequency
60.00	60.00	60.00	60.00	2009 - 2017		Yearly

Source: tradingeconomics.com – international labour organisation

5.7 INDIA LIVING WAGE -FAMILY

Living Wage computations are based on the cost of living for a predefined food basket derived from the FAO database distinguishing 50 food groups with national food consumption patterns in per capita units, for housing and for transportation, with a margin for unexpected expenses. The data about prices of these items is collected through an online survey. Living Wage for a typical family refers to the family composition most common in the country at stake, calculated on the respective fertility rates. India Living Wage Family - actual data, historical chart and calendar of releases - was last updated on November of 2017.

TABLE 5.7: INDIA LIVING WAGE - FAMILY

Actual	Previous	Highest	Lowest	Dates	Unit	Frequency
17400.00	17500.00	17500.00	17300.00	2014 - 2017	INR/Month	yearly

Source: tradingeconomics.com – international labour organisation

5.8 INDIA LIVING WAGE – INDIVIDUAL

Living Wage computations are based on the cost of living for a predefined food basket derived from the FAO database distinguishing 50 food groups with national food consumption patterns in per capita units, for housing and for transportation, with a margin for unexpected expenses. The data about prices of these items is collected through an online survey. India Living Wage Individual - actual data, historical chart and calendar of releases - was last updated on November of 2017.

TABLE 5.8: INDIA LIVING WAGE INDIVIDUAL

Actual	Previous	Highest	Lowest	Dates	Unit	Frequency
11000.00	11000.00	11000.00	10300.00	2014 - 2017	INR/Month	yearly

Source: tradingeconomics.com – international labour organisation

5.9 INDIA AVERAGE DAILY WAGE RATE

In India, the Average Daily Wage Rate refers to the overall average wage that a worker gets per day in the manufacturing, mining and plantation sectors. Initially, Wage Rate Index Numbers were compiled for twelve selected manufacturing industries. However, during 1976, nine more industries were added to the list of industries for the compilation of index numbers. This page provides the latest reported value for - India Average Daily Real Wage Rate - plus previous releases, historical high and low, short-term forecast and long-term prediction, economic calendar, survey consensus and news. India Average Daily Wage Rate - actual data, historical chart and calendar of releases - was last updated on November of 2017.

TABLE 5.9: INDIA AVERAGE DAILY WAGE RATE

Actual	Previous	Highest	Lowest	Dates	Unit	Frequency
272.19	255.65	272.19	3.87	1965 - 2014	INR/Day	Yearly

Source: tradingeconomics.com – international labour organisation

5.10 INDIA WAGES HIGH SKILLED

High Skilled Wages refer to highest estimate of wage of workers doing high-skilled jobs, calculated from sample of wages collected by **WageIndicator** surveys. India Wages High Skilled - actual data, historical chart and calendar of releases - was last updated on November of 2017.

TABLE 5.10: INDIA WAGES HIGH SKILLED

Actual	Previous	Highest	Lowest	Dates	Unit	Frequency
44000.00	48100.00	48100.00	44000.00	2014 - 2017	INR/Month	yearly

Source: tradingeconomics.com –international labour organisation

5.11 INDIA WAGES LOW SKILLED

Low Skilled Wages refer to highest estimate of wage of workers doing low-skilled jobs, calculated from sample of wages collected by **WageIndicator** surveys. India Wages Low Skilled - actual data, historical chart and calendar of releases - was last updated on November of 2017.

TABLE 5.11: INDIA WAGES LOW SKILLED

Actual	Previous	Highest	Lowest	Dates	Unit	Frequency
10300.00	11900.00	13300.00	10300.00	2014 - 2017	INR/Month	yearly

Source: tradingeconomics.com –international labour organisation

6. EXHIBIT OF INDIAN EMPLOYMENT SCENARIO

The Indian employment scenario can be well understood from the exhibit presented in the study

TABLE 6.1: THE EXHIBIT OF INDIAN EMPLOYMENT SCENARIO

India Labour	Last	Previous	Highest	Lowest	Unit
Unemployment Rate	3.46	3.49	8.30	3.46	percent
Employed Persons	29650.00	28999.00	29650.00	17491.00	Thousand
Unemployed Persons	44.85	48.26	48.26	5.10	Million
Labour Force Participation Rate	52.50	50.90	52.90	50.90	percent
Population	1299.00	1283.00	1299.00	359.00	Million
Retirement Age Women	60.00	60.00	60.00	60.00	
Retirement Age Men	60.00	60.00	60.00	60.00	
Living Wage Family	17400.00	17500.00	17500.00	17300.00	INR/Month
Living Wage Individual	11000.00	11000.00	11000.00	10300.00	INR/Month
Wages	272.19	255.65	272.19	3.87	INR/Day
Wages High Skilled	44000.00	48100.00	48100.00	44000.00	INR/Month
Wages In Manufacturing	347.30	322.07	347.30	4.86	INR/Day
Wages Low Skilled	10300.00	11900.00	13300.00	10300.00	INR/Month
Youth Unemployment Rate	12.90	18.10	18.10	12.90	percent

Source: tradingeconomics.com –international labour organisation

6.1 UNEMPLOYMENT RATE IN INDIA

Unemployment Rate in India decreased to 3.46 percent in 2016 from 3.49 percent in 2015. Unemployment Rate in India averaged 4.08 percent from 1983 until 2016, reaching an all time high of 8.30 percent in 1983 and a record low of 3.46 percent in 2016.

CHART 6.1

Source: tradingeconomics.com –international labour organisation

6.2 EMPLOYED PERSONS

The number of employed persons in India increased to 29650 Thousand in 2012 from 28999 Thousand in 2011. Employed Persons in India averaged 25169.51 Thousand from 1971 until 2012, reaching an all time high of 29650 Thousand in 2012 and a record low of 17491 Thousand in 1971.

CHART 6.2

Source: tradingeconomics.com –international labour organisation

6.3 INDIA UNEMPLOYED PERSONS

The number of unemployed persons in India decreased to 44.85 Million in 2016 from 48.26 Million in 2014. Unemployed Persons in India averaged 30.60 Million from 1971 until 2016, reaching an all time high of 48.26 Million in 2014 and a record low of 5.10 Million in 1971.

CHART 6.3

Source: tradingeconomics.com –international labour organisation

6.4 LABOUR FORCE PARTICIPATION RATE

Labour Force Participation Rate in India increased to 52.50 percent in 2013 from 50.90 percent in 2012. Labour Force Participation Rate in India averaged 52.10 percent from 2011 until 2013, reaching an all time high of 52.90 percent in 2011 and a record low of 50.90 percent in 2012.

CHART 6.4

Source: tradingeconomics.com –international labour organisation

6.5 POPULATION

The total population in India was estimated at 1299.0 million people in 2016, according to the latest census figures. Looking back, in the year of 1950, India had a population of 359.0 million people.

CHART 6.5

Source: tradingeconomics.com –international labour organisation

6.6 RETIREMENT AGE WOMEN

Retirement Age Women in India remained unchanged at 60 in 2017 from 60 in 2016.

CHART 6.6

Source tradingeconomics.com –international labour organisation

6.7 RETIREMENT AGE MEN

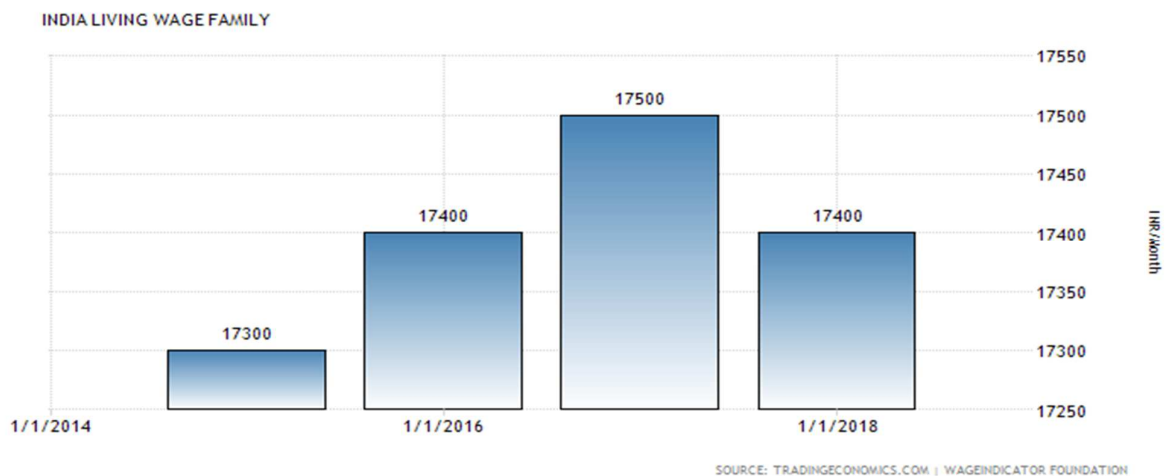
Retirement Age Men in India remained unchanged at 60 in 2017 from 60 in 2016.

CHART 6.7

Source: tradingeconomics.com –international labour organisation

6.8 LIVING WAGE FAMILY

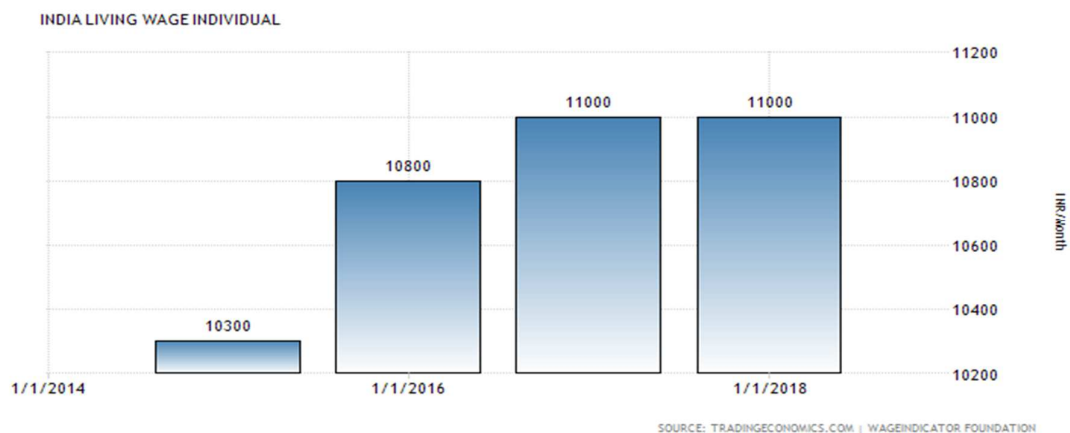
Living Wage Family in India decreased to 17400 INR/Month in 2017 from 17500 INR/Month in 2016. Living Wage Family in India averaged 17400 INR/Month from 2014 until 2017, reaching an all time high of 17500 INR/Month in 2016 and a record low of 17300 INR/Month in 2014.

CHART 6.8

Source: tradingeconomics.com –international labour organisation

6.9 LIVING WAGE INDIVIDUAL

Living Wage Individual in India remained unchanged at 11000 INR/Month in 2017 from 11000 INR/Month in 2016. Living Wage Individual in India averaged 10775 INR/Month from 2014 until 2017, reaching an all time high of 11000 INR/Month in 2016 and a record low of 10300 INR/Month in 2014.

CHART 6.9

Source: tradingeconomics.com –international labour organisation

6.10 WAGES

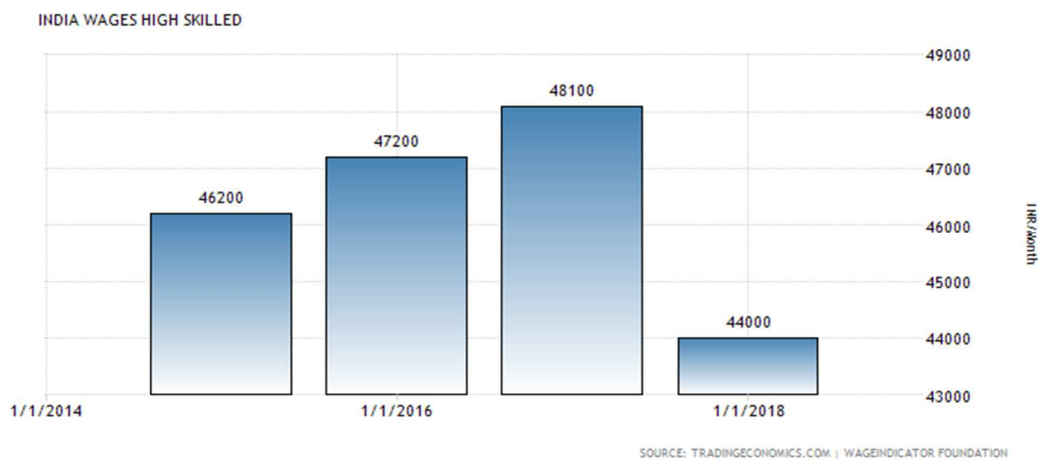
Wages in India increased to 272.19 INR/Day in 2014 from 255.65 INR/Day in 2013. Wages in India averaged 146.00 INR/Day from 1965 until 2014, reaching an all time high of 272.19 INR/Day in 2014 and a record low of 3.87 INR/Day in 1965.

CHART 6.10

Source: tradingeconomics.com –international labour organisation

6.11 WAGES HIGH SKILLED

Wages High Skilled in India decreased to 44000 INR/Month in 2017 from 48100 INR/Month in 2016. Wages High Skilled in India averaged 46375 INR/Month from 2014 until 2017, reaching an all time high of 48100 INR/Month in 2016 and a record low of 44000 INR/Month in 2017.

CHART 6.11

Source: tradingeconomics.com –international labour organisation

6.12 WAGES IN MANUFACTURING

Wages In Manufacturing in India increased to 347.30 INR/Day in 2014 from 322.07 INR/Day in 2013. Wages In Manufacturing in India averaged 183.78 INR/Day from 1965 until 2014, reaching an all time high of 347.30 INR/Day in 2014 and a record low of 4.86 INR/Day in 1965.

CHART 6.12

Source: tradingeconomics.com –international labour organisation

6.13 WAGES LOW SKILLED

Wages Low Skilled in India decreased to 10300 INR/Month in 2017 from 11900 INR/Month in 2016. Wages Low Skilled in India averaged 11625 INR/Month from 2014 until 2017, reaching an all time high of 13300 INR/Month in 2014 and a record low of 10300 INR/Month in 2017.

6.14 YOUTH EMPLOYMENT RATE

Youth Unemployment Rate in India decreased to 12.90 percent in 2013 from 18.10 percent in 2012. Youth Unemployment Rate in India averaged 15.50 percent from 2012 until 2013, reaching an all time high of 18.10 percent in 2012 and a record low of 12.90 percent in 2013.

FIG. 6.13



Source: tradingeconomics.com –international labour organisation

7. IMPACT OF GLOBALISATION ON INDIAN EMPLOYMENT SCENARIO

Globalization has had a huge impact on Indian economy. Globalization affected the Indian economy both positively and negatively.

India's economy opened up during the early nineties. The policy measures on the domestic front demanded that there was a requirement of multinational organizations to set up their offices here. The market became more open and the economy started responding to the external (global) market. The direct impact of globalization was directly seen on the GDP of the country, which increased significantly. The liberalization of the Indian economy along with globalization helped the country to step up its GDP growth rate considerably. The GDP growth rate picked up instantly from 5.6 percent in 1990-91 to 77.8 percent in 1996-97. Since then the growth rate did slump down due to drought and other factors but the country still managed to survive in the rat race and maintained a GDP growth of about 5 to 6 percent.

The globalisation and the liberalisation process brought about impact on employment in India, which are featured in this study as under:

- **Decline in the growth of employment** and increase in the unemployment rate. This is because of the neglect of agriculture and shedding of excess employment in the public sector and not filling up vacancies created out of retirement or by imposing ban on recruitment of public sector employees
- **Insufficient increase in employment in non-agriculture sector** to compensate the fall in employment in agriculture
- **Changes in workforce in category of employment.** An important feature is the sharp increase in the number of jobs created at regular salaried wage, having a direct effect of the expansion of manufacturing and service sectors. It also gave rise to self-employment opportunities.
- **Increase in employment opportunities in new industries** such as outsourcing industries. The other categories of jobs include accounting, mortgage collections, advisory services for mutual funds, marketing of products including health care and insurance
- **Globalisation has also encouraged the inflow of foreign direct investments** in various sectors in India which has considerably increased employment opportunities in India
- **Decline in employment growth in organised sector.** The reason for this is the decline in employment in public sector units. While the employment in the private sector increased at a higher rate, it was insufficient to offset the decline in employment in the public sector which had an impact on the employment growth in the organised sector.
- **The process of globalisation has accelerated the process of exploitation of labour.** The problems of unemployment, casual labour, lower-wages, part-time jobs and lesser job security have manifested themselves at a greater degree in the recent years.
- Downsizing of employment- Because of global competition, many companies have tried to cut down the cost by resorting to downsizing employees by introducing voluntary retirement scheme (VRS).
- Further the new economic policy led to the closure of many Indian companies both in the organised and unorganised sector.

8. STRATEGIC MEASURES FOR EMPLOYMENT GENERATION IN INDIA

The government shall adopt certain strategic measures to generate employment thereby reducing the unemployment rate like

- Creating more employment opportunities to absorb the net addition of the labour force.
- Improving the quality of existing employment in several sectors so that real wages rise through improved productivity
- Organising supplementary programmes towards providing employment, particularly to poor people who do not possess the necessary skills
- Special schemes operation flood, fishery project, block-level planning shall be introduced which will help in generating large employment opportunities
- Measures shall be taken to identify gaps in the supply of labour for providing training to make available the skills that are in short supply.
- Vocational training has lost much of its focus and therefore efforts must be taken to increase the vocational centres of education
- India's labour laws are widely regarded too rigid and hence labour reforms should be in such a way it does not go against interest of labour. At the same time, firms need to be given larger flexibility in dealing with labour. Such reforms in Labour laws can generate more employment and higher earnings per employee
- Promotion of self-employment for the rural poor is an important element in the overall employment strategy in addition to the existing programmes like AWAHAR GRAM SAMRIDHI YOJANA (JGSY), National Old Age Pension Scheme (NOAPS), National Family Benefit Scheme (NFBS) National Maternity Benefit Scheme. ANNAPURNA. Integrated Rural Development Program (IRDP) PRADHAN MANTRI GRAMIN AWAS Yojana. National Rural Employment Guarantee Act (NREGA)
- By encouraging import-substitution in the domestic market
- By focussing on the criterion of high-productivity-high-wage-jobs
- succeed in "Make in India" campaign by manufacturing for global markets

9. CONCLUSION

From the above discussion, the researcher concludes that there is a need to shift resources from programmes perceived to be less effective to those perceived more effective. Further, it is only through a massive effort at employment criterion and decent conditions of work for all sections of population and at all locations that a fair redistribution of benefits from growth can be achieved. However, this is quite difficult a task measures have to be taken to create employment on a sustainable basis

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STABILIZING FARM INCOME AND EMPLOYMENT IN DRYLAND AGRICULTURE: AN ANALYSIS OF HYDERABAD KARNATAKA REGION

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ABSTRACT

India continues to be an agricultural economy even after the long spell of development for past sixty years or more. There is no significant change in occupational structure as 65 per cent of population still seeks its livelihood from agriculture. Its contribution to national income though has declined still has significant. The decline in sectoral share has not brought about any significant changes in employment. The knowledge of resources and their availability, economic constraints in the efficient allocation of such resources, adoption of generated agricultural technology in the increase of production, employment and income stabilization in agriculture sector is exceedingly pertinent. Therefore, the present study made an attempt to analyse the cost structure, farm income and employment situation in agriculture in general and dryland agriculture in particular.

JEL CODE

J43.

KEYWORDS

dryland, employment, farm income, generation, stabilisation.

1. INTRODUCTION

India continues to be an agricultural economy even after the long spell of development for past sixty years or more. There is no significant change in occupational structure as 65 per cent of population still seeks its livelihood from agriculture. Its contribution to national income though has declined still has significant. The decline in sectoral share has not brought about any significant changes in employment. Therefore, the importance of this sector has continued over the time period so such as that if Indian agriculture goes wrong nothing else has a chance to go right. Most of the India's agriculture is dryland (Rain fed) as the area under irrigation is only 37 per cent. Large sections of India's poor consisting of small and marginal farmers as well as the landless reside and depend on agriculture and related activities in the dry regions for their livelihood.

The development and prosperity of the dry regions thus hold the key to the economic development and prosperity of the country as a whole. The knowledge of resources and their availability, economic constraints in the efficient allocation of such resources, adoption of generated agricultural technology in the increase of production, employment and income stabilization in agriculture sector is exceedingly pertinent. Therefore, in this study made an attempt to analyse the cost structure, farm income and employment situation in agriculture in general and dryland agriculture in particular.

2. OBJECTIVES

The major objectives of the present study are:

1. To analyse the cost structure, income and employment in the study area.
2. To suggest the suitable recommendations in creation of employment opportunities in agriculture and allied activities and also to stabilize the farm income.

3. METHODS AND TOOLS

The required primary data were collected through interview by sample dryland farmers in the study area in the agriculture year of 2016. To analyse the cost of cultivation, income and employment in the dryland the analytical tools such as 't'-test, Pearson's chi-square test and correlation has been utilized.

The following 't' test formula was employed

$$t = \frac{M_1 - M_2}{\sqrt{\frac{(N_1 - 1)S_1^2 + (N_2 - 1)S_2^2}{N_1 + N_2 - 2} \left[\frac{1}{N_1} + \frac{1}{N_2} \right]}}$$

χ^2 test is a basic test for determining whether what is observed differs from what is expected by chance at a particular level of significance, so the following formula has been utilized to calculate the Chi value.

A two-stage stratified random sampling method was used to draw a sample, with village as a primary unit and operational holding as the ultimate unit. The study region consist of five districts among those the two districts namely Gulbarga and Koppal have been selected those having more dryland and Three taluks from each district have been chosen for the study. The samples are as follows:

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

Districts	Taluku	Village
Gulbarga	Chincholi	Ainapur, Ainoli, Bedagpalli, Burugpalli, Chandrapalli, Dastapur, Gangnapalli, Halcher, Iragpalli, Jilwarsha
	Aland	Annur, Bableswha, Bhusnoor, Chalgera, Dhannur, Kadganchi, Lengthi, Mamdapur, Narona, Nirgudi
	Afzalpura	Badnalli, Batgera, Chinmalla, Dannur, Ghatgera, Gudur, Haliyal, Karajagi, Mannur, Umerga
Koppal	Kushtagi	Advibhavi, Balutagi, Banhatti, Chalgera, Develapur, Gumgeri, Habalkatti, Hagaldhal, Hanamsagar, Idlapur
	Koppal	Achalapur, Agalkera, Alwandi, Bandiharlapur, Basapur, Betgera, Bevinhalli, Budugumpa, Chandragiri, Hiresindogi
	Yalaburga	Baligeri, Bandi, Bannikoppa, Chikkamyageri, Gaddigeri, Kallur, Mandalageri, Talakal, Rajoor, Sanganaah

4. RESULTS AND DISCUSSION

This section provides a diagnostic analysis of the dryland agriculture in the Hyderabad-Karnataka region, specifically, it seeks to estimate the cost of cultivation and employment generation in the dryland region of Karnataka in general and study area in particular.

a) COST STRUCTURE

TABLE 1: COST OF CULTIVATION IN THE DRYLAND AGRICULTURE (Rs. Per acre)

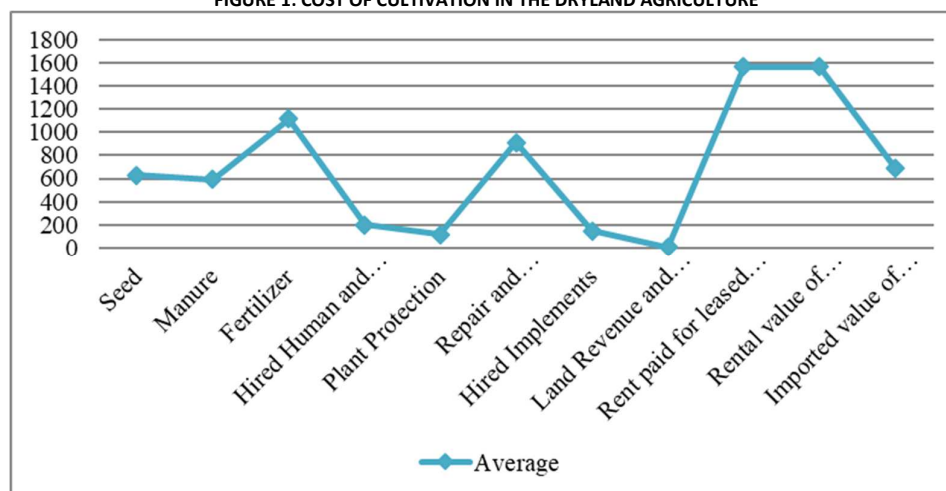
Particulars	Total Cost	Average	Chi-Square	Likelihood Ratio	Correlation	't' Test
Seed	157510	630.04	14.931	15.174	-.117	-2.720
Manure	147445	589.78	14.724	15.096	-.206	-5.485
Fertilizer	279219	1116.88	62.500(b)	66.725	-.500	-2.603
Hired Human and Animal Labour	50050	200.2	15.156(b)	15.517	-.246	5.106
Plant Protection	29000	116.0	13.752(b)	13.917	-.271	-0.824
Repair and Maintenance Charge	227450	909.8	32.533(b)	33.292	-.361	-0.613
Hired Implements	37100	148.4	14.124(b)	14.269	-.267	-4.273
Land Revenue and other taxes	1155	5.0	-	-	-	-107.184
Rent paid for leased land	391100	1564.4	31.612(a)	33.724	-.298	-8.071
Rental value of owned land	391180	1564.4	31.612(a)	33.724	-.298	-8.071
Imported value of family labour	171129	684.52	-	-	-	-
Total	1882335	7529.00	47.564(a)	50.414	-.436	-9.295

Source: Field Survey

Note: Have expected count less than 5.

The costs incurred by the farmers for cultivation of dryland crops on various components per acre has been shown in the table 1. Farmers incurred a cost on seed is Rs. 630.04 per acre, chi-square value of is 14.931 and 't' value is 2.720, on manure Rs. 589.78 per acre, chi-value is 14.724 and 't' value is -5.485. Cost incurred on a hired human and animal labour is Rs. 200.2 per acre, chi-value is 15.156 and 't' value is -5.105. Cost incurred on plant protection is Rs. 116.0 per acre, chi-value is 13.752, and 't' value is -0.824. Cost incurred on fertilizer is Rs. 1116.88 per acre, chi-value of this 62.50, and 't' value is -2.603. Cost incurred by the farmers on repair and maintenance is Rs. 909.8 per acre, chi-value is 32.533 and 't' value is -0.613. Cost incurred on hired implements is Rs. 148.4 per acre, chi-value is 14.124 and 't' value is -4.273. Cost incurred on land revenue and other taxes is Rs. 5.0 per area. Cost on rent paid for leased land is Rs. 1564 per area, chi-value is 31.612 and 't' value is -8.071. Cost on rental value of owned land is Rs. 1564.4 per area chi-value is 31.612 and 't' value is -8.071. Total cost incurred by the farmers for cultivation per acre is Rs. 7529.00, chi-value is 47.564 and 't' value is -9.295.

FIGURE 1: COST OF CULTIVATION IN THE DRYLAND AGRICULTURE



b) EMPLOYMENT SITUATION

TABLE 2: EMPLOYMENT SITUATION IN DRYLAND AGRICULTURE

Labours	Khariff				Rabbi			
	Average	Chi-Square	Correlation	't' Test	Average	Chi-Square	Correlation	't' Test
Men	19.30	32.518(a)	-0.361	34.38	17.55	3.038(a)	-0.106	42.39
Women	26.89	10.601(a)	-0.202	54.17	24.09	29.56(a)	-0.338	43.71
Total	46.06	38.676(a)	0.368	70.55	41.41	8.682(a)	-0.181	37.68
Bullock	19.14	23.012(b)	-0.303	37.59	16.61	11.34(a)	-0.213	37.17
Hired	23.56	67.415(a)	-0.390	34.63	20.30	22.73(a)	-0.272	23.27
Family	22.66	18.046(a)	0.238	34.94	21.27	4.633(a)	0.105	32.01

Source: Field Survey

Note: Have expected count less than 5.

FIGURE 2: EMPLOYMENT SITUATION IN DRYLAND AGRICULTURE (in Man Days)

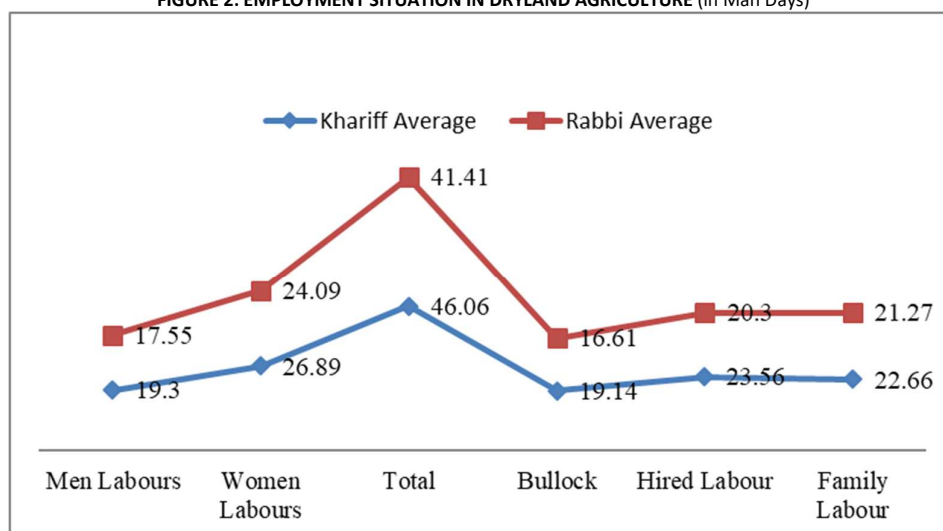


Table 2 presents the information on situation in the Hyderabad Karnataka Region. Total 19.30 days of men labour is using per acre of cultivation chi-value is 32.518 and 't' value is 34.38 in khariff and 17.55 days of men labour, chi-value is 3.038 and 't' value is 42.39 is used in the rabbi season in the study area. 26.89 days of women labours, chi-value is 10.601 and 't' value is 54.17 is used in the study area. 19.14 pair days of bullock labour is used in the khariff season chi and 't' values of these are 23.012 and 37.59 and in the rabbi season 16.16 pair days of bullock labours is using, chi and 't' values are 11.34 and 37.17. In the khariff season 23.56 days of hired labours is used for acre of cultivation, chi and 't' values are 67.415 and 34.63 and in the rabbi season 20.30 days of labours is using, chi and 't' values are 22.73 and 23.27. In the khariff season 22.66 days of family labours is using, chi and 't' values are 18.046 and 34.94 and in rabbi season 21.27 days of family labours is using, chi and 't' values are 4.633 and 32.01.

5. CONCLUSION

The prosperity of an economy depends upon the efficient utilization of land as well as the conservation and exploitation of free gift of natural resources. It is an era of technology. Though production and employment depend on the so many factors, but the most dominating factors among them are the risk-taking capacity and adoption of modern methods of cultivation which depends upon the size of land holdings of the farmers. Dryland farming is a risky enterprise at best. Although a major constraint to dryland agriculture is deficient water, hazards such as insects, diseases, hail, high winds and intensive rain can destroy crops in a matter of minutes or days. The key to improving the sustainability of dryland farming systems is to halt any further deterioration of the natural resources base, that is, agricultural land, and the associated loss of soil productivity. This can be achieved largely by implementing sound soil and water management practices. Achieving long term sustained growth in the productive capacity of dryland agriculture will require sound decisions and cooperative efforts by national governments and donor organizations based on accurate assessments of problems and potentials of the natural resources.

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TREND ANALYSIS OF PROFITABILITY UNDER BASEL NORMS - WITH REFERENCE TO INDIAN COMMERCIAL BANKS

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ABSTRACT

Declining return on assets of SBI group and nationalized banks shows negative effect on profitability whereas private banks reports increasing trend of return on assets, which shows good profitability. Globally, adoption of Basel III successfully achieved its main objectives by strengthening the solvency of banks hence improving stability. But frequent revisions in its approach related to risk weighted capital framework has extended its scope. Looking at the rising non-performing assets, capital crunch, fragile global economy and country's economic scenario, complying with Basel III will be difficult for Indian banks. Thus, infusion of capital in nationalized banks by Indian government will be beneficial step.

KEYWORDS

Indian commercial banks, profitability analysis.

JEL CODE

G21.

INTRODUCTION

To assess the impact of Basel III framework on banks at international grounds, Basel Committee for Banking Supervision (BCBS) undertakes a monitoring exercise on a representative sample on institutions (divided in 2 groups: Group 1 includes 101 international active banks and Group 2 includes 129 other banks) in each country and summarize the aggregate results in its monitoring reports. As per monitoring report of 2016 (BCBS, 2016) all large internationally active banks meet Basel III minimum and CET1 target capital requirement. However, group 1 reports no shortfall of capital whereas group 2 reports capital shortfall of 7.2 billion due to additional tier-1 capital and leverage ratio requirements.

As per the Regulatory Consistency Assessment Program (RCAP) assessment, Indian banks are implementing Basel III with adequate success. Capital adequacy ratio is adequate; however, no Indian bank has received approval to use the advanced Basel approaches for reporting regulatory capital (RCAP, 2015). The Reserve Bank has already started phasing in implementation of the Liquidity Coverage Ratio (LCR) from January 2015 and is committed to the scheduled implementation of NSFR from January 1, 2018 for banks in India (RBI press release, 2015). The Reserve Bank proposes to issue draft guidelines on Net Stable Funding Ratio (NSFR) by May 15, 2015. Guidelines for countercyclical capital buffers are also issued by RBI on February 5, 2015. This buffer will help in contraction of credit and stabilizing GDP. For this, Credit to GDP gap is the main indicator. Also, final guidelines for Large Exposures Framework was issued on April, 2014 which is to be implemented by March 31, 2019. These standards propose to objectively define a group of connected counterparties on the basis of Control criteria and lower the exposure ceiling to such groups (RBI reports, 2016).

All the banks in India irrespective of their ownership have adequate capital adequacy ratio ranging from 9.63% to 16.50% as on March 31st, 2015. However, if we talk about the financial position of banks, then it is stable yet challenging. Stable, because of good capital position and challenging because of unstable domestic economic environment. Low investment growth, deteriorating asset quality, declining returns and elevated credit costs are posing challenges for the banks on the road of success. From year 2003 to 2015, banks have reported declining return on assets and increasing non-performing assets. Banks, particularly nationalized banks are facing significant shortfall of capital. To overcome the problems posed by challenging environment of India, banks need to infuse large capital over the next few years to be Basel III compliant. As per the announcements made by Indian government, the government has infused Rs 6990 crore in banks during FY 2015-16. Till last fiscal year, the Indian government has infused Rs 80,000 crore in nationalized banks. The government has aimed to capitalize nationalized banks with Rs 70,000 crores for 4 years up to FY 2018-19 but as per the current scenario it may go up a little. Banks find difficulty in raising capital from market. Thus, this capital infusion is necessary and may beneficial for banks.

LITERATURE REVIEW

Barua et al. (2016) analyses the performance of scheduled commercial banks under Basel II. They also studied whether global financial crisis had any impact on the performance of scheduled commercial banks in India. Study found that the profitability of scheduled commercial banks, measured through return on assets, improved post crisis. Bank category wise, return on assets of private banks and foreign banks were significantly different in the two periods, while the difference was not that significant in case of public banks. Nieuwkerk, B. V. and Vries, B. D. (2015) discuss the possibilities for improving the combination of regulation, supervision and market discipline. The authors support the direction of higher buffers, which make banks more secure. The authors argue for an integrated approach, in which requirements are seen from a holistic point of view and regulation and supervision will be fine-tuned where necessary. They argue that the capital regulations have become extremely complex and therefore less transparent Dawood, U. (2014) evaluates the profitability of the 23 commercial banks operating in Pakistan for the period of 2009 to 2012. Study undertakes the only internal factors that impact on the profitability of the commercial banks in Pakistan. This study used the ordinary least square (OLS) method to look into the impact of cost efficiency, liquidity, capital adequacy, deposits and size of the bank on the profitability (return on assets) of the commercial banks. The results reflect that high cost efficiency leads lower profitability. Liquidity and profitability of the commercial banks develop the negative relationship. Capital adequacy and deposits both formulate the positive relationship with the profitability of commercial banks. Roy, S. (2013) discusses the impact of Basel III on banks. The author states that banks in India may able to comply with the higher capital requirements. But if the government holds the existing shareholding, this will widen the fiscal deficit, inflation, lower economic growth, credit offtake and thereby bank's profitability. Apart from government support banks have to raise capital from the market which will push the interest rate up and cost of capital will rise, while return on equity (ROE) will come down.

RESEARCH FRAMEWORK

Good decision making becomes the foundation of any successful industry whether it is banking or any other. Good decisions are the outcome of efficient planning process and forecasts are the inputs into the financial planning process. Forecasting is a process which revolves around future expectations. Based on previous time period's data, one can predict future which help banks to plan accordingly and to assess whether conditions are adverse or favorable. Thus, the objective of this paper is to analyze the trend of profitability of Indian commercial banks with reference to different Basel accord namely Basel I, Basel II and Basel III. In this paper, profitability is measured with the help of return on assets. It is calculated by dividing net income by average of total assets. It indicates how profitable one bank is as compare to its total assets. Also, an attempt is made to analyze the future impact by making forecast. Reviewing forecast will help banks to take necessary actions or plan their actions accordingly.

Future impact is analyzed with the help of forecasting techniques. Broadly, forecasting techniques can be classified as quantitatively and qualitatively. Qualitative techniques involve no statistical data but it is based on expert's opinion and experience. Whereas, quantitative techniques are based on historical data and is analyzed with the help of statistical techniques. In this study, both quantitative and qualitative methods have been used. Opinions of various experts on this subject are analyzed through published report. Annual data for the time of 13 years i.e. March 2003 to March 2015 is taken into consideration and forecasting is made for the year ending 2016. The data is secondary in nature and is retrieved from website of Reserve Bank of India.

ANALYSIS AND RESULTS

Under this section, trend analysis of return on assets is made separately for each type of ownership i.e. SBI (State Bank of India and its Associates), Nationalized Banks and Private Sector Banks.

RETURN ON ASSETS

Return on Assets (SBI)

FIGURE 1: TREND ANALYSIS OF RETURN ON ASSETS OF SBI AND ITS ASSOCIATES

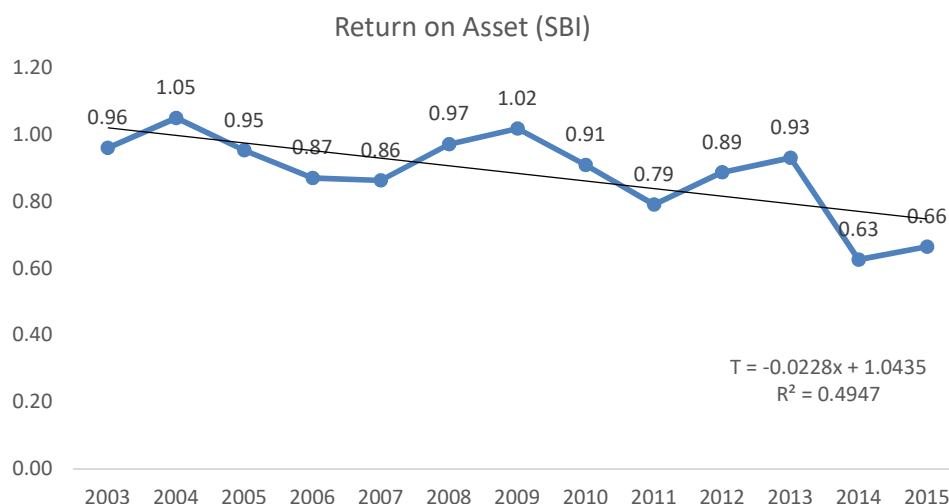


Figure 1, shows a decreasing trend when it comes to ratio for return on asset at SBI. During 2003 the return on asset was 0.96 and it ended at 0.66 in 2015. It represents that ROA is falling with the implementation of Basel accord. In 2003, with Basel I ROA is much higher as compare to ROA with Basel III in year 2015. Though the cyclic trend was there but overall decreasing trend is observed. Trend is contributing 49.47% towards the return on assets ratio as described by R^2 .

Now, to forecast return on assets ratio we apply univariate multiplicative time series model. Following equation shows the trend;

$$T = b_1 \times t + b_0 \dots (1)$$

Where, b_0 represents the intercept and b_1 represents the slope of the trend line. After calculating values of b_0 and b_1 , the classical trend equation modifies to;

$$T = -0.0228 \times t + 1.0435 \dots (2)$$

Irregularities are ruled out by using multiplicative mode as;

$$y = T \times C \times I \times S \dots (3)$$

Where, C represents cyclic component, T represents secular trend, I represent irregularity, and S represents seasonal trend.

Since there are no seasonal components included in the data hence the model reduces to

$$y = T \times C \times I \dots (4)$$

And

$$I = \frac{y}{TC} \dots (5)$$

Irregularities of the data are smoothened out as per equation (5)

TABLE 1: CALCULATIONS FOR FORECASTING OF RETURN ON ASSETS FOR SBI AND ITS ASSOCIATES

Year	T (Time)	Return on Asset (y)	T	I (Irregularity)
2003	1	0.96	1.02	0.94
2004	2	1.05	1.00	1.05
2005	3	0.95	0.98	0.98
2006	4	0.87	0.95	0.91
2007	5	0.86	0.93	0.93
2008	6	0.97	0.91	1.07
2009	7	1.02	0.88	1.15
2010	8	0.91	0.86	1.06
2011	9	0.79	0.84	0.94
2012	10	0.89	0.82	1.09
2013	11	0.93	0.79	1.17
2014	12	0.63	0.77	0.81
2015	13	0.66	0.75	0.89

Source: Self Calculations

The prediction equation for return on assets ratio by using time series is given by

$$y_t = (-0.0228 \times t + 1.0435) \times \bar{I} \dots (6)$$

Therefore, the return on assets for 2016 is given by;

$$y_{2016} = (-0.0228 \times 14 + 1.0435) \times 0.999 = 0.725 \dots (7)$$

Similarly, the ratios can be calculated for subsequent years.

Return on Assets (Nationalized Banks)

FIGURE 2: TREND ANALYSIS OF RETURN ON ASSETS OF NATIONALIZED BANKS

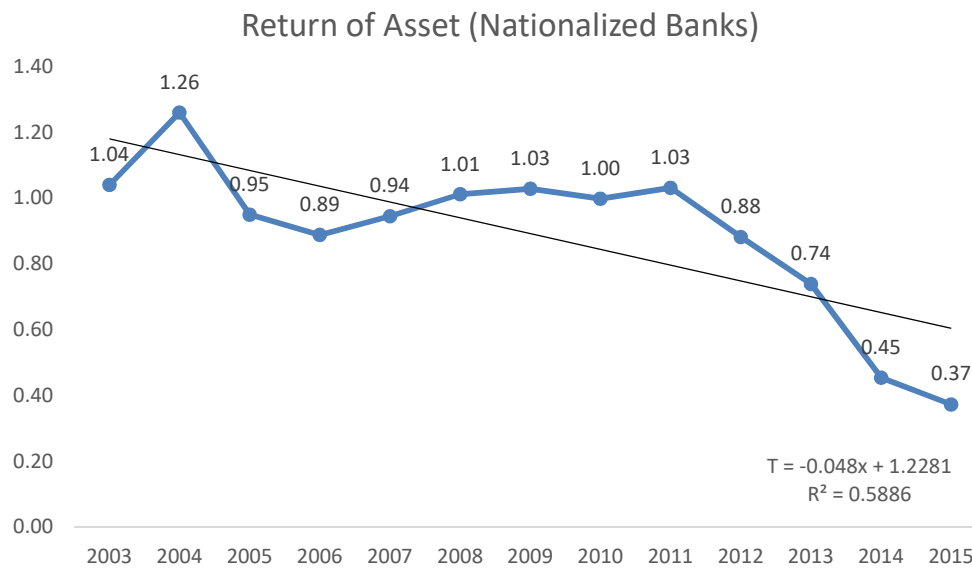


Figure 2, shows a highly decreasing trend when it comes to ratio for return on assets at nationalized banks. During year 2003 the return on asset was 1.04 and it tappers at 0.37 in 2015. Though the cyclic trend was there but overall decreasing trend is observed. Trend is contributing 58.86% towards the net interest margin rate ratio as described by R^2 .

Now, to forecast return on assets ratio we apply univariate multiplicative time series model. After calculating values of b_0 and b_1 . The classical trend equation modifies to;

$$T = -0.048 \times t + 1.2281 \dots (8)$$

Irregularities of the data are smoothened out as per equation (5)

TABLE 2: CALCULATIONS FOR FORECASTING OF RETURN ON ASSETS FOR NATIONALIZED BANKS

Year	t (Time)	Return on Asset (y)	T	I (Irregularity)
2003	1	1.04	1.18	0.88
2004	2	1.26	1.13	1.11
2005	3	0.95	1.08	0.88
2006	4	0.89	1.04	0.86
2007	5	0.94	0.99	0.96
2008	6	1.01	0.94	1.08
2009	7	1.03	0.89	1.15
2010	8	1.00	0.84	1.18
2011	9	1.03	0.80	1.29
2012	10	0.88	0.75	1.18
2013	11	0.74	0.70	1.05
2014	12	0.45	0.65	0.70
2015	13	0.37	0.60	0.62

Source: Self calculations

The prediction equation for return on assets ratio by using time series is given by

$$y_t = (-0.048 \times t + 1.2281) \times \bar{I} \dots (9)$$

Therefore, the Return on assets for 2016 is given by;

$$y_{2016} = (-0.048 \times 14 + 1.2281) \times 0.995 = 0.554 \dots (10)$$

Similarly, the ratios can be calculated for subsequent years.

FIGURE 3: TREND ANALYSIS OF RETURN ON ASSETS OF PRIVATE SECTOR BANKS

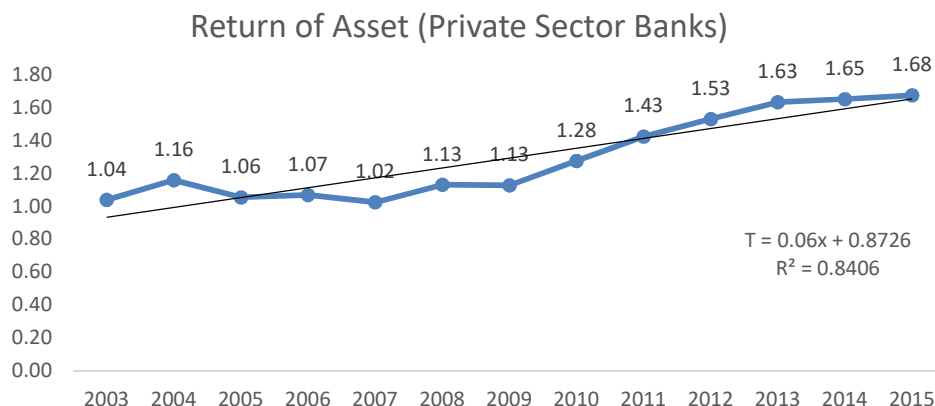


Figure 3, shows an increasing trend against SBI and Nationalized banks, when it comes to ratio for return on assets at private banks. During 2003 with Basel I, the return on asset was 1.04 and it grows to 1.68 in 2015 when banks are implementing Basel III. Though the long cyclic trend was there but overall increasing trend is observed. Trend is contributing 84.06% towards the return on asset ratio as described by R^2 .

Now, to forecast return on assets ratio we apply univariate multiplicative time series model. After calculating values of b_0 and b_1 . The classical trend equation modifies to;

$$T = 0.06 \times t + 0.8726 \dots (11)$$

Irregularities of the data are smoothened out as per equation (5)

TABLE 3: CALCULATIONS FOR FORECASTING OF RETURN ON ASSETS FOR PRIVATE SECTOR BANKS

Year	t (Time)	Return on Asset (y)	T	I (Irregularity)
2003	1	1.04	0.93	1.12
2004	2	1.16	0.99	1.17
2005	3	1.06	1.05	1.00
2006	4	1.07	1.11	0.96
2007	5	1.02	1.17	0.87
2008	6	1.13	1.23	0.92
2009	7	1.13	1.29	0.87
2010	8	1.28	1.35	0.94
2011	9	1.43	1.41	1.01
2012	10	1.53	1.47	1.04
2013	11	1.63	1.53	1.07
2014	12	1.65	1.59	1.04
2015	13	1.68	1.65	1.01

Source: Self calculations

The prediction equation for Return on Assets deposit ratio by using time series is given by

$$y_t = (0.06 \times t + 0.8726) \times \bar{I} \dots (12)$$

Therefore, the Return on assets for 2016 is given by;

$$y_{2016} = (0.06 \times 14 + 0.8726) \times 1.001 = 1.716 \dots (13)$$

Similarly, the ratios can be calculated for subsequent years.

The above analysis shows that return on asset is highest in case of private banks and lowest in case of nationalized banks which shows more profitability in case of private banks. Nationalized banks are at third position in case of other ratios as well which depicts poor financial condition and opens scope for improvement as compare to other banks.

CONCLUSION

Declining return on assets of SBI group and nationalized banks shows negative effect on profitability whereas private banks reports increasing trend of return on assets which shows good profitability. Globally, adoption of Basel III successfully achieved its main objectives by strengthening the solvency of banks hence improving stability. But frequent revisions in its approach related to risk weighted capital framework has extended its scope. Looking at the rising non-performing assets, capital crunch, fragile global economy and country's economic scenario, complying with Basel III will be difficult for Indian banks. Thus, infusion of capital in nationalized banks by Indian government will be beneficial step.

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PERFORMANCE APPRAISAL: A TOOL FOR ENHANCING PERFORMANCE**D.BABJOHN****ASST. PROFESSOR****DEPARTMENT OF MANAGEMENT STUDIES****GATES INSTITUTE OF TECHNOLOGY****GOOTY****R.PARIMALA****PG STUDENT****DEPARTMENT OF MANAGEMENT STUDIES****GATES INSTITUTE OF TECHNOLOGY****GOOTY****R.THEJANJALI****PG STUDENT****DEPARTMENT OF MANAGEMENT STUDIES****GATES INSTITUTE OF TECHNOLOGY****GOOTY****ABSTRACT**

Business performance is the major concern of managers as it indicates success and progress of success of the organization. Rapid change and developments as well as increasing communications and dramatic developments in knowledge management, have made the existence of effective organizational performance evaluation system for the organizations inevitable an organization that wants to be successful should achieve a high level of business performance. Employee's contribution should be aligned with organizational objectives and strategy. Employees are required to generate a total commitment to desired standards of job performance and improved job performance for nourishing profitable growth for the organization and long-term value creation for the customers. PA measures how well and how far employees are performing their jobs within the period being considered for enhancing human performance and business performance of the organization. PA is necessary to understand each employee's abilities, competencies & relative merit & worth for the organization. PA rates the employees in terms of their performance. One of the basic and major needs in any organization is to assess its employees performance continuously to find out whether they improve or not and know their situation in organization. Different models have been provided by the management experts for the performance estimation so that organizations use them according to their type of organization, mission, arrangement and manpower.

KEYWORDS

performance appraisal, performance management, organization, employees, business.

JEL CODES

M50, M5.

INTRODUCTION

Socio-economic development of India heavily depends on success and progress of success of organizations, and Human Resource Management (HRM), which is one of the most important functional fields of Organizational Management, Performance Appraisal (PA) is one of the most important functions of HRM and the term 'Performance Appraisal' is concerned with identifying, measuring, influencing and developing job performance of employees in the organization in relation to the set norms and standards for a particular period of time in order to achieve various purposes (Opatha, 2009). Employees are required to generate a total commitment to desired standards of job performance and improved job performance for sustaining profitable growth for the organization and long-term value creation for the customers. PA measures how well and how far employees are performing their jobs within the period being considered for enhancing human performance and business performance of the organization.

Business performance is the major concern of managers as it indicates success and progress of the organization. An organization that wants to be successful should achieve a high level of business performance. There are many functions to be carried out in order to achieve expected or higher (compared with previous year or the past) business performance of an organization and, one important function of HRM is PA.

Globally, organizations whether service or manufacturing do everything possible to ensure that all employees are adequately committed to their specialized work in order to attain organizational goals. PA exposes the strength and the weakness of the staff on the job especially in developed world. PA practice is done without the appraisers attaching themselves to the exercise. For every organization to constantly realized its set goals, it is important that PA must become a regular exercise and must occupy central role/or function of the organization. The unbiased practiced of PA will make all organizations to face keen competitions and challenges at local, national and international levels.

PA is necessary to understand each employee's abilities, competencies & relative merit & worth for the organization. PA rates the employees in terms of their performance. One of the basic and major needs in any organization is to evaluate its employees performance continuously to find out whether they advanced or not and know their situation in organization.

PA is vital for the effectual supervision and costing of staff. Appraisal help to enlarge individuals, perk up secretarial routine, and nourish into dealing development. Ceremonial performance judgment is commonly conducted per annum for each and every one workforce in the organization everyone is appraised by their line supervisor. Performance appraisals are also essential for career and succession development. Performance review designed for workforce inspiration, position and conduct improvement, converse directorial aims, along with nurturing optimistic associations between supervision and workforce. Performance appraisals offer's a recognized, recorded, customary assessment of an individual's routine, and a sketch for potential enlargement. In diminutive, performance and career judgment are crucial for administration the performance of natives and organizations.

RESEARCH METHODOLOGY

This study is based on the secondary data which has been taken from textbooks, journals, and websites.

OBJECTIVES OF THE STUDY

1. To evaluate the components and process of performance appraisal.
2. Distinguish between performance management and performance appraisal.
3. To analyze the importance and limitations of performance appraisal.
4. To know how performance appraisal acts as a tool for enhancing performance.

REVIEW OF LITERATURE

PA is a process within the overall performance management process (Dowling et al., 1999), and is defined as “the evaluation of an individual’s work performance in order to arrive at objective personnel decisions, (Robbins et al., 2000) PA has been defined as the process of identifying, evaluating in the organization, so that the organizational goals and objectives are more effectively achieved, while at the same time benefiting workers in terms of recognition, getting feedback, catering for work needs and offering career guidance (Lansbury, 1988). Carroll and scheider (1982) described performance appraisal as the process of identifying, observing, measuring, and developing human performance in organization. “The definition is very important, because it comprises all important components needed for the well-performed appraisal process. Identification criteria orientate the appraisal process to the determination of what has to be examined-performance related criteria and not so much performance irrelevant characteristics. Denhardt (1991) defines performance appraisal as an exact valuation with respect to an individual’s progress in carrying out specified tasks. Devries et al. (1981) defines performance appraisal as a process by which an organization measures and evaluates in individual employee’s behavior and accomplishments for a finite period. Moulder (2001) states that performance appraisals are valued for defining chance and measuring the extent to which expectations are met. She goes on to state that having winner and where they need to improve performance. Moulder indicates that appraisal are cooperative in setting goals and in fostering improved communications among work groups and between employees and supervisors. Appraisal involves some divergent stages as identified by Ubeku (1984), Cuming (1994), and Lussier (1997). These divergent stages are job description and job specification by the incumbent’s immediate supervisor; setting of objectives by the job incumbent and his or her supervisor; completion of the appraisal form and finally the appraisal interview. Grobler et al. (2005) are of the view that a variety of appraisal techniques are available to measure employee Performance. In creating and implementing an appraisal system, administrators must first establish what the performance appraisal will be used for, and decide which process to adapt. These decisions are just as important as how the appraisal is conducted or the actual content of the appraisal. From the literature, performance appraisal system is invariably a process. It is systemic and has a criterion that must be measured and communicated to those being evaluated.

CONCEPT

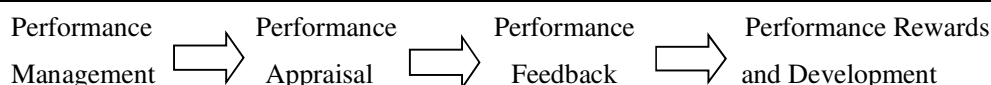
What is a “Performance Appraisal?”

An annual review of an employee’s overall contributions to the company by his/ her manager. PA, also called annual review, evaluate an employee’s skills, achievements and growth, or lack thereof. Companies use PA to give employees big-picture on their work and to justify pay increase and bonuses, as well as termination decisions. PA is a process of measuring qualitatively & quantitatively expected role performance the of about his potential for an organization. Evaluation of the performance and personality his immediate superior or some other person trained in the techniques various rating technique for comparing individual employee in a group in terms of personal group are deficiency are of their respective job. PA is a tool which is used to evaluate employee’s performance at the workplace. This is generally includes qualitative and quantitative dimensions of employees job performance. Performance is defined as level of work achievement. It generally represents how successfully an individual satisfies the job requirements. Performance is constantly evaluated on the basis of outcomes.

Randall S. Schuler, PA is format, structured system of measuring and evaluating an employee’s job, related behavior and outcomes to discover how and why the employee is presently performing on the job and how the employee can perform more effectively in the future so that the employee, organization, and society all benefit. PA is the process of assessing employee performance by way of comparing present performance with already established standards which have been already communicated to employee, subsequently providing feedback to employees about their performance level for the purpose of improving their performance as needed by the organization. Heyel, PA is a process of evaluating the performance and qualifications of the employees in terms of the requirements of the job for which he is employed, for purposes of administration including placement, selection for promotions, providing financial rewards and other actions which require differential treatment among the members of a group as distinguished from actions affecting all members equally.

DIFFERENCE BETWEEN PERFORMANCE MANAGEMENT AND PERFORMANCE APPRAISAL PERFORMANCE

PERFORMANCE MANAGEMENT	PERFORMANCE APPRAISAL
Processes used to identify, encourage, measure, evaluate, improve and reward employee performance.	The process of evaluating how employees perform their jobs and communicating that information to the employees.



IMPORTANCE OF PERFORMANCE APPRAISAL

- The supervisors measuring the pay of employees and compare it with targets and plans.
- The supervisor analyses the factors behind work performances of employees.
- The employers are in position to guide the employees for a better performance.

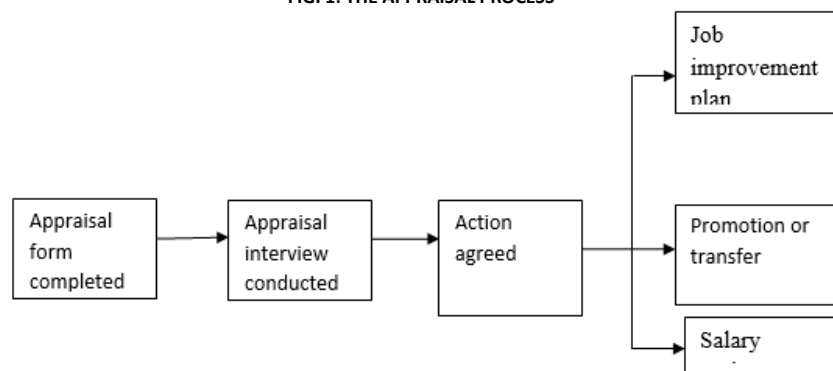
COMPONENTS OF PERFORMANCE APPRAISAL

Any effective performance management system includes the following component

- Performance planning is the first crucial component of any performance management process which forms the basis performance appraisal. Performance planning is jointly done by the appraisal in the beginning of a performance session.
- Feedback and counseling is given a lot of importance in the performance management process.
- The employee receives an open and a very transparent feedback and along with this the training and development needs of employee is also identified.
- This is a very vital component, as it will determine the work motivation of an employee. During this stage, an employee is publicly recognized for good performance and is rewarded.
- Potential appraisal provides crucial inputs for succession planning and job rotation.

PROCESS OF PERFORMANCE APPRAISAL

FIG. 1: THE APPRAISAL PROCESS



Source: Cole (2007)

The appraisal process in terms of assessing individual performance against targets set by the organization as depicted in Figure 1 explains that any systematic approach to performance appraisal will commence with the completion of an appropriate appraisal form. The preparatory stage is followed by an interview during that stage the manager discusses progress with the member of staff. The result of the interview may be some form of agreed action, either by the employee alone or jointly with his/her manager. The action generally materializes in the shape of a job improvement plan, a promotion or transfer to another job or a salary increase (Cole, 2007).

METHODS OF PERFORMANCE APPRAISAL

TRADITIONAL METHODS	MODERN METHODS
Paired comparison Graphic rating Scale Forced Choice Description Method Forced Distribution Method Checklist Method Free Essay Method Critical Incidents Group Appraisal Field Review Method Confidential Method Ranking Method	Assessment Center Appraisal by Results or Management by Objectives Human Asset Accounting Behaviourally Anchored Rating Scale

TRADITIONAL/PAST-ORIENTED METHOD OF APPRAISAL

- Paired Comparison Method:** In this method, one particular trait is considered to evaluate the employees. Based on this trait, each employee is compared with other on one to one basis in pairs. The possible number of pairs is calculated by the formula: $N(N-1)/2$. N is the number of employees to be evaluated.
- Graphic Rating Scales:** It is a popular traditional method of performance appraisal. In this method, a rating scale is created to evaluate the performance of employees against certain parameters. These parameters usually include his attitude, attendance, punctuality & interpersonal skills. The rating scale used in this method ranges from 1 to 10. Low score indicate negative feedback & high score indicate positive feedback.
- Forced Choice Description Method:** This method has an objective of rectifying the biasness of the rater to assign constantly high or low ratings to every employee. It utilizes some sets of combined phrases or statements, where two can be positive and can be negative.
- Forced Distribution Method:** This method was popular in big organizations. It is based on the fact that the performance of employee's varies greatly in an organization. Some would be more productive.
- Check lists Method:** In this method, a check list is prepared. It is comprise of colorful statements related to behavior of the employee. Each statement has two options, yes & no or true or false.
- Free essay method:** In this method, the rater writes a description about the behavior and performance of the employee.
- Critical Incident Method:** Critical incident method gives emphasis on critical behaviors of employees. Such as the reaction of employee to a certain situation. So in this method, the performance is evaluated against a list of critical behaviors.
- Group Appraisal Method:** It is usually seen that some appraisers use very high level of standards for appraising their subordinates. However, it is not necessary to asses them as per such high standards it is generally seen that where the appraiser himself is excellent, he anticipates his subordinates also to be at the same level. To overcome this problem, a group appraisal method is developed.
- Field Review Method:** This method is based on supervisor's opinion on the performance, behavior & skills of the employee. The HR specialist asks seniors to answer questions related to employee's emplacement & appraises the employee on this basis of feedback related from the supervisors.
- Confidential method:** This method is mostly used in government organizations to make decisions regarding promotion and transfer of the employees. The senior prepares the confidential report on the performance, performance and other traits of the employee. The report is supposed not to be revealed to anyone. It is sent in a sealed cover to the concerned officials who appraise the employee on the basis of this report and take decisions consequently.
- Straight Ranking Method:** This is the most traditional and easiest method of performance appraisal. By this method, every employee is provided with a rank starting from 'best' to 'worst' considering their overall performance.

MODERN/FUTURE-ORIENTED METHOD OF APPRAISAL

- Assessmentcenter's:** Assessment centres are mainly used for the assessment of managerial or administrative capability.
- Management by objectives (MOB):** concept of MOB was first given by peter F. Drucker. It is an individual appraisal method which determines task-related results than behavior or activities.
- Human resource accounting:** This method adds up some monetary value to the workforce of an organization. This process included the assessment of goodwill value of an organization.
- Behaviorally anchored rating scales (BARS):** BARS are often known as behavioral expectation scale.

USING APPRAISAL TO ENHANCE PERFORMANCE

Rather than being a means of accurately measuring employee performance, the main benefit of performance appraisal may well lie in using it as a medium for occasional guidance. Some of the roots of the difficulties surrounding the conduct and use of appraisal include:

- An appraiser's tendency to base their judgment of the beliefs about what has been going on, rather than their experience and observation. That is, they work at the belief level and set aside the evidence.
- It is often perceived by appraisees as being primarily about evaluation when, ideally, appraisal should be about change and development.
- It should be about engaging commitment to change on the part of the appraisee among others, not about forcing compliance.
- It should be focused on job performance rather than completing forms.

Appraisal is supposed to be about reviewing work performance and giving feedback in order to facilitate improved performance. The feedback given should include:

- A balanced review of performance, covering both positive and negative aspects.
- Any one interview should involve discussion of not more than two limitations of the appraisee (otherwise self-efficiency may be at risk).
- An opportunity for the appraisee to put across their own views.
- Good communication between the involved parties outside the appraisal situation as well as inside it.

CHARACTERISTICS OF PERFORMANCE APPRAISAL

- PA is a link between organizations strategy and results
- Appraisal can be beneficial for the organization, the employee and the manager
- Providing an employee with feedback can enhance his performance
- Appraisal all category of employee is a common practice among organizations
- Managers, employees or a combination of raters can conduct appraisal. Employees can also carry out self-assessment.

ADVANTAGES OF PERFORMANCE APPRAISAL

- It will be useful in improving employee job performance by pinpointing the area or aspects that need improvement.
- PA viewed as a necessary vehicle for assessing management potential.
- PA helps the employee to overcome his weakness and improve his strength and thus enable him to improve his performance.
- It can be used as a basis of sound personnel policy in relation to transfers and promotion; otherwise he may be transferred to another job.
- They can motivate employees if supported by a good merit increase and compensation system.

DISADVANTAGES OF PERFORMANCE APPRAISAL

- It is very much difficult to compile an appraisal form, which can only and completely assess any employee.
- Merit rating can be subject to many errors. When a rater is positively lenient, an individual's performance is rated higher actual.
- PA is very time consuming and can be overwhelming to managers with many employees.
- They can create a very stressful environment for everyone involved.

DRAWBACKS OF PERFORMANCE APPRAISAL

- Business use performance appraisal as tool to determine how effectively employee achieve goals, grow in job scope and communicate with others.
- Evaluators must use these tools properly and fairly to avoid the pitfalls and possible push-back from employees.
- Traditional performance review tools involve only the manager's view of his subordinator's performance.
- The conflict arises because subordinates want the largest pay increase possible, but managers often have limited funds for these increases.

LIMITATIONS OF PERFORMANCE APPRAISAL

- Bias of appraiser:** The presence of 'Halo Effect' in evaluation of employees is the biggest weakness of this method.
- Ambiguity in standards:** If the standards are not clear, the supervisors may follow different standards for different employees.
- Insufficient evidence:** An employee who can impress the boss may get a positive evaluation though his impression in his own department may be very poor. In such cases, the performance appraisal will be superfluous.
- Several qualities remain without appraisal:** Through performance appraisal, only few qualities of employees can be measured. All individuals differ from each other in terms of background, values and behavior.

CONCLUSION

Performance appraisal has a beneficial effect on both the persons doing the appraisal and being appraised. The appraisal brings prominently to the attention of supervisors or executives the importance of knowing their subordinates as human resource. The success of an organization depends largely on the performance of its human resources and how they design effective appraisal program. Effective performance system evaluates accomplishment and initiates plan for development, goals and objectives. It is not an end in itself, but rather the means to impact performance. It is an important issue both for companies and for workers with careful design and appropriate use; performance evaluations can support productivity and fair allocation of rewards. Industrial organizational psychologists specialize in making sure that performance evaluations are designed correctly.

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INFLUENCE OF SIBLING CONFLICTS ON THE CARE OF AGEING PARENTS IN KEROKA TOWNSHIP LOCATION, NYAMIRA COUNTY - KENYA

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ABSTRACT

This study sought to investigate the influence of sibling conflicts on the care of ageing parents in Kenya. To achieve this, it employed descriptive survey design. The target population of this study was residents of Keroka Township Location, Nyamira County - Kenya. To arrive at the study sample, the researcher used cluster and stratified sampling technique. The study targeted 1200 subjects from which a sample of 93 people was selected using proportionate random sampling guide by Nassiuma (2000) formula. Questionnaires were pre-tested in Kisii Township and found to be both reliable and valid followed by the actual data collection. Data collected was coded, edited, organized and cleaned. 5 local administrators and 12 elderly persons were interviewed by the researcher to gather more information. The findings were analyzed both quantitatively and qualitatively. The influence of sibling conflicts on the care of ageing parents was tested through the statistical package for social science (SPSS). The findings were analyzed both quantitatively and qualitatively using SPSS. The quantitative data were analyzed using descriptive statistics methods which included frequencies, percentages and statistical tabulations while inferential statistics was applied using cross tabulation, correlations and Chi-square. The data were presented using frequency tables, percentages tables and pie charts. The study results indicated that Sibling conflicts influenced parental care negatively among the ageing population. The study recommends rolling out of a study on parental care in all the 47 counties to understand the demographical differences and the impact of sibling conflicts on parental care in Kenya.

KEYWORDS

sibling conflicts, parental care, ageing parents.

JEL CODE

M14.

INTRODUCTION

The cases of sibling conflicts have been on the increase in the recent past due to many global societal changes. Conflict in a family refers to a situation whereby the smooth interaction and relation among members of a family is disrupted because of one thing or another (Hinde and Kilner (2007). Conflicts in a family can be as a result of lack of trust, drunkenness, lack of dialogue, lack of respect, joblessness, and idleness (Tolkacheva, Groenou, & Tilburg, 2010). It comes in form of fights, quarrels, and parental abuses. According to Emery, Sbarra, and Grover, (2005) ageing parents are the one who are mostly affected by the cases of sibling strife. In most cases, sibling conflicts may lead to increased cases of physical, financial, emotional, and verbal abuse among the ageing population. Furthermore, the ageing parents face the challenges of coping with physical issues of ageing, frustration, and social isolation due to sibling rivalry or engagement.

Tolkacheva et al. (2010) argues that the problems aging parents tend to increase in families where conflicts persist. They found out that parental negligence can increase the cases of physical abuse, sexual abuse, psychological abuse, financial abuse, and neglect or failure to provide adequate care for the elderly. In Kenya, Hinde and Kilner (2007) found out that ageing parents tend to experience suffering in cases where there is sibling rivalry. They further found out that in some households, lack of proper care among the elderly has been rampant since some members believe that spending money on the elderly is a waste of time as it is better to spend money on the young. According to Matagaro (2005), ageing parents from conflict backgrounds tend to have distress, sadness, fear, uncertainty, and anxiety. Therefore, this study aims at investigating the effects of sibling conflicts on the care of ageing parents in Keroka township location- Nyamira County – Kenya.

IMPORTANCE OF THE STUDY

This research will assist scholars for it will serve as a source of data and literature for providing a deeper understanding on the effect of sibling conflicts on the care of ageing parents in Kenya. Second, the study will enable the government to come up with good policies that will help in the institutionalization of parental care. Also, the study will help to formulate a critical legal and policy framework that can form the basis for advising the government on key intervention measures necessary for ensuring that Kenyans respect and provide adequate care for the aging. The study will also help in formulation of policies that can help in tackling challenges, such as changing social context and weakened family protections structures in the modern world. Equally, this study will assist the government and the local authorities to make informed decisions and take corrective measures to mitigate the neglect of ageing parents. Ageing parents will benefit from this study by receiving improved care from the immediate family/children and the government by extension. Finally, the findings of this study will give insight to members of the community on the effect of family conflicts on the care of ageing parents in Kenya thus also help in reducing sibling conflicts in the community.

STATEMENT OF THE PROBLEM

In the modern world, the mainstream media is awash with cases of family conflicts. It is often reported that a parent or a child or both have been hospitalized or killed as a result of family conflicts. Furthermore, cases of parental negligence are also common due to rural urban migration, poverty, or disputes. In the modern days, most families experience problems, such as quarrels and fights, a scenario that can interfere with traditional family structure. According to Rosen, (2013),

the problem of sibling rivalry has been existing in the world since time immemorial. Emery *et al.*, (2005) argue that sibling rivalry is a matter of concern because it can lead to negligence of ageing parents who are estimated to be around 1.2 million in Kenya (Cicerelli, 2013). Thus, as a population is ageing, a number of older people in need of care are expected to increase. In modern Kenya, more than 68% of the ageing population are aged between 65 and 75 years (Hogstel, Curry, & Walker, 2005). In this case, children become an important source of care to the ageing parents. However, Cicerelli (2013) notes that if relationships among the siblings are poor, parental needs may not be realized effectively. In such a scenario, questions on who should provide care arise. Despite the fact that siblings may compete to care for ageing parents, quarrels over the best care arrangement, arguments about the number of visits or phone calls or level of assistance that is given to a parent. Preliminary research in Keroka township location in Nyamira County Kenya indicates that a number of ageing parents are neglected due to conflicts between their children. It is against this background that this research study seeks to investigate the effects of sibling conflicts on the care of ageing parents in Kenya.

OBJECTIVE OF THE STUDY

The broad objective of the study was to investigate the effects of sibling conflicts on parental care among the ageing in Keroka Township Location, Nyamira County-Kenya.

SPECIFIC OBJECTIVES

1. To investigate the causes of sibling conflicts in Keroka township location.
2. To determine the effect of sibling conflicts on parental care among the ageing population in Keroka township location.

HYPOTHESES

HO1: There are no known causes of sibling conflicts in Keroka township location.

HO2: There is no significant effect of sibling conflicts on parental care among the ageing population in Keroka township location.

HO3: There is no significant strategy that can aid in reducing sibling conflicts and neglect of ageing parents in Keroka township location.

RESEARCH METHODOLOGY

This study used a descriptive survey research design. According to Mugenda and Mugenda (1999), a descriptive survey is appropriate because it can help in gathering information about the characteristics, actions or opinions of a large group of people with the aim of obtaining information from large samples of the population.

TARGET POPULATION

A population entails the object of study that comprises of individuals, objects, events, and products (Orodho & Okombo, 2002). The target population for this study were the residents of Keroka township location as shown in Table 1.

TABLE 1 TARGET POPULATION AND SAMPLING MATRIX

Respondents	Male	Female	Total	Sample size	Sampling Technique	Research Instrument
Teachers	90	90	180	15	Clusters/stratified	Questionnaire
Civil servants	20	20	40	10	Clusters/stratified	Questionnaire
Medics/nurses	10	10	20	8	Clusters/stratified	Questionnaire
Local administrator	6	4	10	5	Clusters/stratified	Interview
Businessman/woman	150	150	300	25	Clusters/stratified	Questionnaire
The elderly	150	220	370	12	Clusters/stratified	Interview
Boda boda rider	90	90	180	15	Clusters/stratified	Questionnaire
Casual labourers	80	80	160	3	Clusters/stratified	Questionnaire
TOTAL	596	664	1260	93		

Source: Researcher (2017)

STUDY SAMPLE AND SAMPLING TECHNIQUES

To select the sample size, the researcher applied Nasiuma (2000). Nasiuma (2000) asserts that the sample size can be determined by;

$$n = \frac{Nc^2}{\{c^2 + (N-1)e^2\}}$$

Equation (1)

Where: n is the target population (1260), N= is the total population, c, is the coefficient of variation, e- Tolerance at the desired level of confidence, at 95% confidence level (Take 0.05). Thus:

$$= \frac{1260 \times 0.5^2}{\{0.5^2 + (1260-1)0.05^2\}}$$

$$= 92.715$$

$$= 93 \text{ participants}$$

Cluster and stratified sampling technique was employed to sample the participants.

DATA COLLECTION INSTRUMENTS

The study used a self-administered questionnaire to collect primary quantitative data. The questionnaires were administered through drop and pick method. The questionnaire included both close-ended and multiple response open-ended questions. To gather specific information from the elderly and from the local administration, the researcher used an interview schedule.

ADMINISTRATION OF INSTRUMENTS

The researcher obtained an official letter from the university college for legal and administrative reasons. The questionnaires were distributed to respondents through drop and pick method. The respondents were then requested to fill the questionnaire and hand them in to the research assistant upon completion. The questionnaires were picked once the participant had finished filling it. Five local administrators and twelve elderly persons were interviewed by the researcher to gather information. The data obtained were then be recorded and analyzed.

VALIDITY OF INSTRUMENTS

The content validity of the items in the questionnaires and the interview schedule were discussed with the supervisors. They carried out verification of the items in the questionnaire to determine if these items were consistent with the objectives of the research. Where items were found to be unsuitable, they were discarded or changed appropriately and additional items were included.

RELIABILITY

Reliability is a measure of the degree to which a research instrument yields consistent results or data after repeated trials (Mugenda & Mugenda, 2003). It refers to the consistency that an instrument demonstrates when applied repeatedly under similar situations (Kerlinger, 1983). The Cronbach Reliability coefficient was used to test for reliability. The questionnaires were self-administered to confirm the consistence level of the results.

DATA ANALYSIS AND PRESENTATION

The questionnaires were checked for completeness and consistency. The researcher then sorted, edited, coded, and analysed primary data. Coding was done to help classify answers of the research questions into meaningful categories so as to bring out their essential patterns. Then the study tabulated quantitative data for each research question. Data analysis was done and the findings reported in chapter four both quantitatively and qualitatively. Descriptive statistics (i.e.

frequency analysis) was computed. Chi-square and cross tabulations were used as statistical measures to assist in understanding the relationship between the influences of sibling conflicts and care of the aged in the society.

RESULTS AND DISCUSSION

CROSS TABULATION OF GENDER AND CAUSES OF SIBLING CONFLICTS IN KEROKA TOWNSHIP LOCATION

The analysis of cross tabulation of gender and the variable causes was carried out and the result was presented in Table 2. From the investigations carried out, it was established that 20 male and 7 female participants strongly agreed that comparison and favouritism caused conflicts among siblings while 43 male as opposed to 9 female agreed that comparison and favouritism brings conflicts among the siblings in the family. This implies that majority of the respondents (86.25%) accepted that families that practice comparison and favouritism stand a higher chance of conflicts among the siblings as shown in in Table 2.

On the issue of handling of inheritance, 26.25% of the both male and female respondents strongly agreed that issues of inheritance resulted to conflicts among siblings in families. This was supported by 61.25% who agreed that inheritance was major issue in families and that due to this siblings were in constant conflicts of sharing the property of their parents as indicated in Table 2. These findings were also supported by the findings from the respondents of the interviews where a majority (10 out of 14) that agreed that conflicts among siblings came as result of unequal distribution of land among children which in return contributed to neglect of elderly parents in many families.

Table 2 also reveals that 67.5% of the participants strongly agreed that lack of mutual communication in families led to sibling conflicts. This implies that, if the families are not able to sit and share their issues in a friendly manner, there are high chances of these problems resulting to conflicts among siblings. Interestingly, 32.5 % of the participants believed that lack of communication was not the reason that caused conflicts among the siblings while 32.5% of the respondents also remained unaware of the problem of sibling conflicts in families. From the interviews conducted, it was also established that good communication is the foundation of strong family relationships. As a result, practicing mindful communication, to change age-old family mistakes can be hard but it is worth the effort to improve and save family relationships. Also, a majority of the participants (73.25%) confirmed that unrealistic expectations among the siblings can also lead to the problem of sibling conflicts which can result to the aged being neglected by their children as indicated in Table 2.

TABLE 2: CAUSES OF SIBLING CONFLICTS IN KEROKA TOWNSHIP LOCATION

		Cross Tabulation of Comparison and Favoritism					Total
		Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	
Gender	Male	10	43	3	1	2	58
	Female	7	9	3	1	2	22
	Total	17	52	6	2	4	80
	Percentages	21.25	65	7.5	2.5	5	100
	Inheritance Issues						
	Male	12	39	5	2	0	58
	Female	9	10	1	2	0	22
	Total	21	49	6	4	0	80
	Percentages	26.25	61.25	7.5	5	0	100
	Lack of Communication						
	Male	17	20	21	21	0	58
	Female	8	9	5	5	0	22
	Total	25	29	26	26	0	80
	Percentages	31.25	36.25	32.5	32.5	0	100
	Unrealistic Expectations						
	Male	12	37	8	1	0	58
	Female	7	7	6	2	0	22
	Total	19	44	14	3	0	80
	Percentages	23.25	55	17.5	7.25	0	100
	Differential Treatment						
	Male	13	19	22	3	1	58
	Female	10	10	1	0	1	22
	Total	23	29	23	3	2	80
	Percentages	28.25	36.25	28.75	7.25	2.0	100

EXTENT TO WHICH CAUSES OF SIBLING CONFLICTS AFFECT THE CARE OF AGEING PARENTS

Table 3 indicated that majority of the participants (71.3%) accepted that ageing parents were seriously affected in the families that had sibling conflicts.

TABLE 3: EFFECTS OF CAUSES OF SIBLING CONFLICTS ON INFLUENCING THE CARE OF AGEING PARENTS

	Frequency	Percentages
Very High	10	12.5
High	47	58.8
Average	23	28.7
Total	80	100.0

CROSS TABULATION OF EFFECTS OF SIBLING CONFLICTS ON PARENTAL CARE AMONG AGEING POPULATION IN KEROKA TOWNSHIP LOCATION

Table 4 conducted a cross tabulation between gender and effects that occurred as result of sibling conflicts. The analysis conducted established that sibling conflicts resulted to strained relationship between the parents and the children in the families. Table 4 shows that 91.25% of the participants agreed and strongly agreed that sibling conflict was a major issue among siblings because it affects their relationship and that of the parents. The interviews that were conducted also indicated that most of the parents were left sick and bedridden without any support, poor, sometimes they would go without meals as their children eat and in some cases it led to killings in the family, where the elderly would be eliminated because of being suspected being a 'witch.'

Table 4 also revealed that majority (75%) of the respondents agreed that sibling conflicts resulted to change in psychological behaviours while 20% strongly agreed that the outcome of psychological behaviours are associated with sibling conflicts.

Improper care of ageing parents was one of the issues that the study endeavored to establish from the participants. Table 4 established that (93.75%) of the participants strongly agreed and agreed that sibling conflicts is a major problem in care giving to the elderly and society in general. The study agrees with views of the interviews conducted among 14 elderly people that some of the older people have been injured; exploited, and mistreated by someone on whom they depend for care and protection.

TABLE 4: EFFECTS OF SIBLING CONFLICTS ON PARENTAL CARE AMONG AGEING POPULATION

Cross tabulation of Sibling Conflict Brings Strained Child Parent Relationship						Total
Gender	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	
Male	11	43	3	1	0	58
Female	8	11	1	2	0	22
Total	19	54	4	3	0	80
Percentages	23.75	67.5	5	3.75	0	100
Sibling Conflicts Causes Change in Psychological Behaviors						Total
Gender	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	
Male	9	47	2	0	0	58
Female	7	13	1	1	0	22
Total	16	60	3	1	0	80
Percentages	20	75	3.75	1.25	0	100
Sibling Conflicts Leads to Lack of Proper Care of Ageing Parents						Total
Gender	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	
Male	12	43	3	0	0	58
Female	8	12	1	1	0	22
Total	20	55	4	1	0	80
Percentages	25	68.75	5	1.25	0	100

CORRELATIONS OF THE CAUSES OF THE SIBLING CONFLICTS

The causes of sibling conflicts formed the first category of the independent variable. The study wanted to learn if there was a significant relationship among the causes of sibling conflicts factors and which one(s) had great association on influencing the causes of sibling conflicts and care of the aged in the society especially in Keroka Township Location (dependent variable). Therefore, Pearson correlation was conducted to establish their relationship. Results from the Pearson correlation are indicated in Table 6 as they relate with the variables in Table 5.

TABLE 6: CORRELATIONS RESULTS OF THE CAUSES OF SIBLING CONFLICTS

Correlations		Comparison and Favoritism	Inheritance Issues	Lack of Communication	Unrealistic Expectations	Differential Treatment
Comparison and Favoritism	Pearson Correlation	1	.572	.786	.405	.107
	Sig. (2-tailed)		.015	.007	.010	.003
Inheritance Issues	Pearson Correlation	.572	1	.358	.467	.108
	Sig. (2-tailed)	.015		.018	.037	.001
Lack of Communication	Pearson Correlation	.786	.358	1	.104	.371
	Sig. (2-tailed)	.007	.018		.018	.001
Unrealistic Expectations	Pearson Correlation	.405	.467	.104	1	.653
	Sig. (2-tailed)	.010	.037	.018		.002
Differential Treatment	Pearson Correlation	.107	.108	.371	.653	1
	Sig. (2-tailed)	.003	.001	.001	.002	

*. Correlation is significant at the 0.05 level (2-tailed).

Analysis of the causes of sibling conflicts exposes strong positive association between comparison and favoritism with lack of Communication at $r = .786$ and P value of 0.007 which is significant positive association. This means that poor communication and comparison accompanied with favoritism in the family will greatly affect how the old age population is handled. Unrealistic expectations and differential treatment disclosed another important association with a strong positive association. Inheritance issues and comparison and favoritism also revealed strong positive association which has a significant relationship of ($r = 0.572$ and $P < .015$) as indicated in table 6. This implied that the four variables had great influence on the welfare of the aged in society.

HYPOTHESIS TESTING ON THE RELATIONSHIP BETWEEN INFLUENCES OF CAUSES OF SIBLING CONFLICTS ON THE CARE OF THE AGEING PARENTS

The first null hypothesis was to establish if there was a significant relationship between influences of the causes of sibling conflicts on the care of ageing parents. The null hypothesis was tested by the Chi-Square inferential statistic technique.

H1₀: There is no significant relationship between influences of the causes of sibling conflicts on the care of ageing parents in Keroka Township.

TABLE 7: CHI-SQUARE TESTS FOR THE INFLUENCES OF CAUSES OF SIBLING CONFLICTS ON THE CARE OF THE AGEING IN FAMILIES

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	18.901 ^a	8	.015
Likelihood Ratio	22.042	8	.005
Linear-by-Linear Association	.538	1	.023
N of Valid Cases	80		

*. Correlation is significant at the 0.05 level (2-tailed).

The findings from Table 7 indicate that comparison and favoritism, inheritance issues, lack of communication, unrealistic expectations, and differential treatment have significant relationship with influences of the causes of sibling conflicts on the care of ageing parents since their p -values (0.015) are less than $P < .05$.

DECISION RULE

Because $P < \alpha$, we fail to accept the null hypothesis 1, therefore we accept alternative hypothesis that comparison and favoritism, inheritance issues, lack of communication, unrealistic expectations and differential treatment were among the causes of sibling conflicts families hence, they had significant relationship with influences of sibling conflicts on the care of ageing parents in Keroka Township Location.

CORRELATIONS OF THE EFFECTS OF SIBLING CONFLICTS ON PARENTAL CARE AMONG AGEING POPULATION IN KEROKA TOWNSHIP LOCATION

The study sought to learn if there was a significant relationship among the effects of sibling conflicts factors and which one(s) had great association on influencing sibling conflicts and care of the ageing parents (dependent variable). Therefore, Pearson correlation was conducted to establish their relationship. Results from the Pearson correlation are shown in Table 8 as they relate with the variables in table 7.

TABLE 8: CORRELATIONS OF EFFECTS OF SIBLING CONFLICTS ON PARENTAL CARE AMONG THE AGEING

Correlations		Strained Child Parent Relationship	Psychological Behaviors	Lack of Proper Care of Aging Parents
Strained Child Parent Relationship	Pearson Correlation	1	.710	.513
	Sig. (2-tailed)		.000	.008
Psychological Behaviors	Pearson Correlation	.710	1	.649
	Sig. (2-tailed)	.000		.001
Lack of Proper Care of Aging Parents	Pearson Correlation	.513	.649	1
	Sig. (2-tailed)	.008	.001	

*. Correlation is significant at the 0.05 level (2-tailed).

Analysis of the effects of sibling conflicts depicts strong positive association between strained child parent relationship and psychological behaviors at $r = .710$ and P value (0.000) which is significant positive association. It revealed strong positive association which has a significant relationship of ($r = 0.649$ and P value (.001) as indicated in table 8. This implied that the three variables had great influence on the welfare of the ageing in society.

HYPOTHESIS TESTING ON THE RELATIONSHIP BETWEEN THE INFLUENCES OF THE EFFECTS OF SIBLING CONFLICTS ON THE CARE OF THE AGEING IN FAMILIES

The second null hypothesis was to find out if there was a significant relationship between influences of effects of sibling conflicts on the care of ageing parents. The null hypothesis was tested by the Chi-Square inferential statistic technique.

H2₀: There is no significant relationship between influences of effects of sibling conflicts on the care of ageing parents in Keroka Township Location.

TABLE 9: CHI-SQUARE TESTS FOR THE INFLUENCES OF EFFECTS OF SIBLING CONFLICTS ON THE CARE OF THE AGEING IN FAMILIES

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	19.498 ^a	6	.003
Likelihood Ratio	19.489	6	.003
Linear-by-Linear Association	.298	1	.015
N of Valid Cases	80		

*. Correlation is significant at the 0.05 level (2-tailed).

The findings from Table 9 signpost that strained child parent relationship, psychological behaviors and lack of proper care of ageing parents have a significant relationship with influences of effects of sibling conflicts on the care of ageing parents since their p -values (0.003) are less than $P < .05$.

DECISION RULE

Because $P < \alpha$, we fail to accept the null hypothesis 2, therefore we accept alternative hypothesis that strained child parent relationship, psychological behaviors and lack of proper care of ageing parents were among the effects of sibling conflicts in families hence, they had significant relationship with influences of sibling conflicts on the care of ageing parents in Keroka Township Location.

SUMMARY OF THE FINDINGS

CAUSES OF SIBLING CONFLICTS IN KEROKA TOWNSHIP LOCATION

From the research, it was established that those who strongly agreed that comparison and favouritism caused conflicts among siblings were 20 among men and 7 among female participants while those who agreed were 43 men and 9 female that indeed comparison and favouritism brings conflicts among the siblings in the family. Majority of the respondents (86.25%) accepted that families that practice comparison and favouritism stand a chance of conflicts among the siblings as shown in Table 2. The other cause of sibling conflicts was the inheritance. 26.25% of both male and female gender strongly agreed that issues of inheritance resulted to conflicts among siblings in families. This was supported by 61.25% who agreed that inheritance was a major issue in families. This was supported by the findings from the respondents of the interviews where a majority (10 out of 14) agreed that conflicts among siblings came as a result of unequal distribution of land among children.

Also, Table 2 reveals that 67.5 % of the participants strongly agreed that lack of mutual communication in families led to sibling conflicts. Interestingly though, 32.5 % of the participants believed that lack of communication is not the reason that causes conflicts among the siblings while 32.5% remained unaware of the problem of sibling conflicts in families. From the interviews conducted, it became apparent that good communication is the foundation of strong family relationships. It was also revealed that majority of the participants (73.25%) confirmed that unrealistic expectations among the siblings can cause the problem of sibling conflicts which can result to the ageing being neglected by their children.

THE EFFECT OF SIBLING CONFLICTS ON PARENTAL CARE AMONG THE AGEING POPULATION IN KEROKA TOWNSHIP LOCATION

Table 3 indicated that majority of the participants (71.3%) accepted that ageing parents were seriously affected in families where sibling conflicts was rife. Cross tabulation of effects of sibling conflicts on parental care among ageing population established that sibling conflicts resulted to strained relationship between the parents and the children. Table 4 shows that 91.25% of the participants both agreed and strongly agreed that sibling conflict was a major issue among siblings because it affects their relationship and that of the parents. The interviews that were conducted also indicated that most of the parents were left sick and bedridden without any support, poor, sometimes they would go without meals as their children eat and in some cases it led to 'killings' in the family, where the elderly would be eliminated.

Table 4 further reveals that majority (75%) of the respondents agreed that sibling conflicts resulted to change in psychological behaviours while 20% strongly agreed that the outcome of psychological behaviours are associated with sibling conflicts. Table 4 also established that (93.75%) of the participants strongly agreed and agreed that sibling conflicts is major problem in care giving to the ageing. This concurs with the views of the interviews conducted among 14 elderly people from Keroka Township Location.

CONCLUSION

In conclusion, the study found out that sibling conflicts affect the care of ageing parents. The Chi-square tests performed on all the effects showed that significant influence exists between sibling conflicts and parental care. This implies that the null hypotheses developed were rejected and consequently the alternative hypotheses accepted.

SCOPE FOR FURTHER RESEARCH

The current study established significant influence of sibling conflicts on the care of ageing parents in Keroka Township Location, Nyamira County – Kenya. The findings are however not exhaustive on the subject of parental care. The following recommendations are made for further research:

1. A study on the nature of sibling conflicts among family members in Kenya.
2. Studies to understand the impact of sibling conflicts on parental care in Kenya.
3. A study on strategies that can aid in reducing sibling conflicts and neglect of ageing parents in Kenya.
4. A study on parental care across the Kenyan population to understand the demographical differences.
5. An investigation other variables that are related to the care of ageing parents in Kenya today.

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PERFORMANCE & SUSTAINABILITY OF QUALITY CULTURE: PHARMACEUTICAL INDUSTRY

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ABSTRACT

For decades, pharmaceutical industry rollout several initiatives for increase quality of the drug product and to exceed internal and external customer satisfaction. All pharmaceutical companies managed its business by focusing most of its resources on the next blockbuster drug and regulatory filings. The sea changes in regulations brought a shift toward developing quality drug products and compliance. Hence pharmaceutical industry started to refocus and address to improve performance and sustainability of quality culture. Performance means being able to grow rapidly while still maintaining quality. Sustainability is important because we want to touch the lives of 7+ billion people and it is very important because we want to be able to meet unmet needs for generations to come. So, we need to find ways to position our pharmaceutical industry for improving performance and sustainability of quality culture in pharmaceutical industry. Building and implementing quality culture in pharmaceutical industry effectively is essential, the best way to proceed is for us to increase performance is the degree to which we connect, collaborate and communicate to internal and external customers. Quality culture challenges continue to be visible in external failures such as non-compliances to written approved procedures, data integrity, adulteration, deviations, out of specifications, out of trends, recalls, manual errors, warning letters, 483's and import alerts. Recent trends are alarming i.e. lack of quality culture in pharmaceutical industry, which attracted attention resulting erosion of trust by regulatory bodies and investors. Why quality culture is a challenge in pharmaceutical industry? Empirical research findings found certain human behaviors in our business and regulatory practices needs improve. Additionally, quality culture concept and procedure after this study shall be useful to pharmaceutical industry progress and sustainability.

KEYWORDS

performance, pharmaceutical industry, quality culture, sustainability.

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INTRODUCTION

No pharmaceutical regulatory guideline or procedure is available/adequate to quantify or qualitative analysis of quality culture. Of the 42 warning letters sent out by its office of manufacturing quality in 2016, around one-fifth were addressed to Indian facilities (1). There is a mandate to better utilize science and research to advance public health by improving access to safe, effective, and high-quality drugs. From the product quality perspective, the FDA needs science and research to keep pace with rapid advances in technology and increasing complexity of FDA-regulated products (2). The existing quality culture in pharmaceutical industry focus on meeting organization business objectives and believe everything is fair in business to meet growth without patient centric approach and knowing the importance of 'Quality Culture' approach.

Why are we doing this? - in quality culture, quality is everybody responsibility, quality starts with you, to advance quality along with evolving quality science, quality best practices and regulatory expectations.

How are we going to execute? - by systematically driving initiatives that advance pharmaceutical quality processes through a plan of quality initiatives and deliverables, with clear expectations and accountabilities, throughout the organization.

What do we hope to accomplish? - continue to ensure pharmaceutical industry cater 7+ billion people needs to high quality drug products.

LITERATURE REVIEW

The research by Pradeep Y Sarode (2017) focuses on the change in quality concepts. The study reveals that quality departments should move away from their old "policeman" role of inspection and should play a more integrated role in the design, process improver and quality promoter (3). A research by Ashwin Srinivasan and Bryan Kurey (2014) found and defined a "true culture of quality" as an environment in which employees not only follow quality guidelines but also consistently see others taking quality-focused actions, hear others talking about quality, and feel quality all around them (4). The research by Hoffman, Richard C (2007) on The Strategic Planning Process & Performance Relationship: Does Culture Matter? study found that the general planning-performance model is relevant across the cultures sampled. While there appears to be little direct relationship between culture and planning, culture did moderate the planning-performance relationship (5). An article by Harry Kraemer (2015), How Ford CEO Alan Mullaly turned a broken company into the industry's comeback kid found five bests, leaders and their organizations can put values-based leadership into action. These same steps to building a world-class enterprise also help restore what has become broken, putting it back on track as a values-based organization (6). A research by Schein, E. H. (1992) on Organizational culture and leadership found culture as a tool and demonstrates the crucial role leaders play in successfully applying the principles of culture to increase organization effectiveness (7).

NEED FOR THIS STUDY

This study proposes the strategies for enabling performance and sustainability of quality culture so interested pharmaceutical organizations can make informed decisions regarding implementation. Quality culture directly and indirectly connect-communicate-collaborate process/procedures/people/resources/ towards one quality standard throughout the organization and enables what is right and not what is easy. In nut shell encourages pharmaceutical organizations shall implement quality culture and assure in-place and in-use described in this paper expected to maintain the process in a state of control over the life of the process, even as materials, equipment, production environment, personnel, and manufacturing procedures change.

OBJECTIVES

1. To find out the strategies for enabling pharmaceutical industry quality culture performance and sustainability
2. To find out benefits of quality culture and impact on overall performance of pharmaceutical industry.

RESEARCH METHODOLOGY

The guidelines issued by various countries drug regulatory bodies, related literature and scientific search engines such as Science Direct, Elsevier, Goggle. Searching through databases was done with different keywords: pharmaceutical, quality culture, performance, sustainability. The result studies and meeting abstracts were screened at 4 steps and exclusion process was based on consensus of both the authors.

Strategies for Enabling Performance and Sustainability of Quality Culture:

DISCUSSION**1. USING QUALITY METRICS TO INCREASE PERFORMANCE AND SUSTAINABILITY OF QUALITY CULTURE**

To survive and prosper in today's economic times, companies can no longer manage using financial measures alone. Businesses have to track non-financial measures such as performance and sustainability of quality culture. Quality metrics are a company's measurable goals, typically tied to an organization's quality culture, as revealed through performance management tools such as the Balanced Scorecard. Most goals are achieved not through the efforts of a single person, but by multiple people in a variety of departments across an organization. Performance management experts agree that cascading and aligning goals across multiple owners creates a "shared accountability" that is vital to a company's success. The company then uses its quality metrics as the foundation to analyses and track performance and base key strategic decisions regarding quality culture. Implementing the quality metrics indicators of a balanced scorecard typically includes four processes:

1. The company translates its quality culture into measurable operational goals that are communicated to employees.
2. These goals are linked to individual performance goals which are assessed on an established periodic basis.
3. Internal processes are established to meet and / or exceed the strategic goals and customer expectations.
4. Finally, quality metrics indicators are analyses to evaluate and make recommendations to improve future quality culture.

Here are some of the benefits of using quality metrics Indicators through the Balanced Scorecard methodology as a measurement of a company's success:

1. Pharmaceutical industry can focus & measure the quality metrics that can help to reach an extra mile.
2. Employees and managers see the overall quality culture goal plan—and understand how their individual goals fit into the company's quality culture objectives creating a situation in which employees feel energized and engaged in the success of the company.
3. Create shared employee responsibility—by cascading his or her goals with others in the company.
4. Managers more easily stay in touch with employees' progress—during every phase of goal completion, and offer immediate reinforcement or coaching to keep performance and deadlines on track.
5. Creating an open and communicative environment including quality feedback regarding goals and progress

Cascading your quality culture strategy in organization:

Cascading quality culture goals throughout the organization lets you align your entire workforce to the overall strategy. This ensures that everyone is focused on your key quality culture objectives. Translating high-level strategic goals into clear objectives for every business unit and every employee creates a clear line-of-sight - from top down and bottom up—so everyone understands how their day-to-day actions are contributing to overall company success. This also allows employees to develop goals that link to the organization objectives, driving understanding of strategy, generating commitment and instilling personal accountability.

2. BUILDING HIGH PERFORMING LEARNING ORGANIZATION

To build high perform learning organization every employee had to empower to reach higher, achieve more and inspire others to change the world for the better.

- Learning – learning constantly transform success and failures as opportunities.
- Teaching – investing the time to share learnings and help others around me grow, effectively multiplying our collective results.
- Leading – having the courage to step out of my comfort zone, take ownership and challenge the status quo.
- Performing – demonstrating disciplined execution every day while consistently setting and exceeding new standards.

3. SUNSHINE PURIFIES

Managing quality issues before they become chronic problems. Collaborate with others to understand root causes, generate solutions and implement solutions and implement them quickly.

4. QUALITY IS EVERYONE'S RESPONSIBILITY

In Pharmaceutical industry, quality is not a department or a function, instead it's a mindset and way of life for every person who works to improve health of 7 Billion people. Be proud of what you do and give your best every day-hour-minute.

5. SPEAK UP AND LISTEN UP

If you see anything non-compliance or quality issue that isn't right or if you are unsure about something bring the issue to your manager or to another leader. You have an obligation to speak up and the right to be heard.

Top leaders had to change mindset because generally they listen and prepared what they want to listen. So, they always ready to listen when small or shop floor people speak and unpleasant or bad news to understand the quality issues.

6. INTEGRITY

Setting high standards from which organizations should never back down. This uncompromising ethical stance helps to keep pharmaceutical products pure and high-quality culture. Doing right and not what is easy even when nobody's looking.

7. INNOVATION

Connecting dots when others overlook, i.e. seeing possibilities and bring new and better ways to help people enjoy high quality life.

8. INFLUENCE OF LEADERS IN SHAPING CULTURE

Leaders can also create unhealthy cultures. An ineffective leader, a leader who is not a good fit for a desired culture, or even a good leader who makes bad decisions that impact an organization's culture can tear down or damage a culture that took decades to build (5). Although culture is often thought to be resistant to change, Alan Mulally was able to change the culture of a struggling Ford Motor Company and transform the performance of Ford in a relatively short time span (6).

9. VISIBLE AND INVISIBLE FACTORS OF QUALITY CULTURE

Culture can be viewed on two levels (7). There is a visible level that can be observed by artifacts such as dress, office layout, office design, and the emphasis on technology. Artifacts could also include leadership style, the nature of the work environment, how people are treated, and how decisions are made and get implemented. There is also an invisible level characterized by expressed values, underlying assumptions, and deep beliefs. Expressed values are consciously held convictions, clearly stated or practiced, that influence the behavior of group members. For example, the expressed values of the U.S. Army are loyalty, duty, and selfless service (8). These values influence the behavior of soldiers at all levels. Another example may be the expressed value: "It is important to take great care of our people and our customers." This sentiment will create a different culture than that of an organization with the dominant value: "What we really care about is maximizing bottom line results, no matter what it takes to get there (9).

10. GUIDELINES FOR BUILDING QUALITY CULTURE

CEOs such as Bill Gates of Microsoft, Herb Kelleher (formerly) of Southwest Airlines, and Jeff Bezos of Amazon have all been known for their emphasis on culture and willingness to take specific culture building actions. Often, other leaders mistakenly think that by talking a lot about culture, posting cultural values on walls, passing out books on culture, and placing cultural values on coffee mugs, the desired culture will happen. Following are the guidelines (10)

- ✓ Make strategy and culture important leadership priorities
- ✓ Develop a clear understanding of the present culture
- ✓ Identify, communicate, educate, and engage employees in the cultural ideals
- ✓ Role model desired behaviors
- ✓ Recruit and develop for culture
- ✓ Align for consistency between strategy and culture
- ✓ Recognize and reward desired behaviors and practices
- ✓ Use symbols, ceremonies, socialization, and stories to reinforce culture
- ✓ Appoint a culture team

- ✓ Monitor and manage the culture

11. MONITOR AND MANAGE QUALITY CULTURE

It would be wise for organizations to assess their culture at least on an annual basis. Leaders need to know if the culture is moving in the right or wrong direction and if potentially influential events are affecting the culture negatively so they can respond proactively. Organizational cultures are reasonably stable and can be difficult to change. However, as discussed previously, they can also be vulnerable to events such as downsizing, natural disasters, or changes in leadership. As pointed out above, assessing the culture can be an important function of a culture team.

12. FUTURE OF PHARMACEUTICAL INDUSTRY

The future of pharmaceutical manufacturing should be quality culture for both patient / consumer healthcare and economic reasons. On the patient side, eliminating drug shortages and recalls provides more reliability and less risk to the consumer. Equally or more importantly, quality culture can also help assure consistent performance. On the manufacturing side, significant real-life cost savings can be the result of the drive to quality culture performance. To fully realize the benefits of quality culture, the pharmaceutical sector must introduce the economic factor society needs to recognize and pay for quality. At present, public self- or independent-reporting of quality measures and marketing focused on quality is not common in the pharmaceutical industry, though it is a major focus of other industries (e.g., automobile, consumer electronics). On the regulatory side of the equation, regulators need to move from predominantly management-based to performance-based regulation to give the industry enough flexibility to manage and improve quality on its own.

13. TRANSFORMING QUALITY ASSURANCE APPROACH AND ROLE

As per CrossBy instead of setting up the world's largest smallpox hospital, we vaccinate people and then we don't need a smallpox hospital. That's the same way you have to run a company, by preventing the problems. There really isn't any system you can put in place that causes things to happen; it's a question of understanding the basic concepts. US FDA new initiatives are increasingly driving the industry toward preventive rather than the control- and audit-based approach. For an example Since then, the FDA, the International Conference on Harmonization (ICH) and the industry have been extremely active, working together to shape the new quality requirements and standards. They began to endorse a "quality by design model" that contrasts with the industry's historical "quality by test" results approach. The publication of ICH Q10, Pharmaceutical Quality System, in 2009, emphasizes the responsibility of senior management for the quality system; it is a big step in modernizing our thinking about quality.

14. ATTRIBUTES OF QUALITY CULTURE

Respected business journals, such as the Harvard Business Review (HBR), have also dedicated time and effort into identifying the key characteristics of a culture of quality. For example, in its April 2014 issue, the HBR published results of a survey it conducted that identified four essential attributes that predict a culture of quality. These attributes are as follows (4):

- ✓ Leadership Emphasis
- ✓ Message Credibility
- ✓ Peer Involvement
- ✓ Employee Ownership.

SUGGESTION

This strategies and study was done keeping in mind the views of the literature as well as regulatory perspective. It can be assumed that like the employees & management are also bound to be affected by the implementation of quality culture. Changes should be brought about only where required. Some traditional existing practices may be beneficial to the quality culture. Before introducing any major changes, the evaluation should keep in mind how it would affect the quality culture. Similarly, frequent changes in the same quality culture are not recommended by the employees of pharmaceutical industry.

DISCUSSION

Quality Culture is based on simplicity and consistency, commitment, transparency, partnership, and mindset. Quality Culture is good for pharmaceutical industry, economic development, the market, and most importantly, patients and consumers everywhere. Pharmaceutical industry and management both had to recognize that a quality culture is imperative if India is to increase productivity, reduce compliance risk, lessen rework, and minimize supply interruptions that result in lost revenue and increased risks to public health. It is important that leaders consider understanding, building, and sustaining quality culture. An abundance of research makes it clear that building strong cultures can play a significant role in the success of organizations. Making quality culture as a high priority for pharmaceutical organizations can be a high payoff investment and can have a significant influence on the success and competitive advantage of an organization. Organizational culture is directly connected with effectiveness and performance of the organization – the stronger is organizational culture, the more effective is organization. Successful integration between the quality culture and business objective drive organization performance and sustainability.

LIMITATIONS

The limitations of this study are that the point of view of the pharmaceutical industry has been considered. The reason was that the pharmaceutical industry is such a sector where heal and influence the wellbeing of society for catering quality medicines across world and other industrial sector point of view has not been considered.

CONFLICTS OF INTEREST

No current or previous support have been received from industry or organizations that might have influenced this work.

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