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THE ANALYSIS EFFECT QUALITY PRODUCT, PRICE AND QUALITY SERVICE, TOWARD CUSTOMER SATISFACTION AND LOYALTY

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ABSTRACT

Customer Satisfaction & Loyalty are not new concept. First of 20 century, so many businessman in the world, familiar, that Customer Satisfaction & Loyalty are high priority. Those are too relevant concept. The simple logic from businessman are the customer feel satisfy and loyal, it can be work on in future. Customer Satisfaction and loyalty will be influence to finance continuity, short and long term. The objectives of this study are: to measure customer level satisfaction and loyalty toward product, price and corporate service in PT. Waru Abadi. This study is categorized as survey research with descriptive analysis method by taking sample from population and using questionnaire as the main data collecting instrument. The population in this research is all customers of PT. Waru Abadi in West Java. The respondents are chosen by using probability sampling and systematic random sampling techniques. The research sample is chosen randomly for the first data whereas the following is using certain interval. The result of analysis using Structural Equation Modeling (SEM) are : (1) Product quality has positive and significant effect toward customer satisfaction. (2) Price has positive and significant effect toward customer satisfaction. (3) Service quality has positive and non-significant effect toward customer satisfaction. (4) Satisfaction has positive and significant effect toward customer loyalty. (5) Product quality has positive and significant effect toward customer Loyalty. (6) Price has positive and significant effect toward customer Loyalty. (7) Service quality has positive and non-significant effect toward customer loyalty

KEYWORDS

product quality, price, service quality, customer satisfaction and customer loyalty.

1. INTRODUCTION

 One of the strategic industry which is used in Indonesia is cement is the important factor in development and economical. In this new era, cement become the public attention because of the classical problems which is a fluctuative price even the government already have a policy for local fixed price (LFP), and Occurring territorial division marketing among a cement producer. It means that at that time occurs cartel prices and territorial division marketing. Consequently often is scarcity cement market in question and followed by the higher prices. There are currently seven cement manufacturers, namely: PT. Semen Andalas has a market share of 4.3%, PT. Semen Gresik Group occupying of 43%, with their two subsidiaries, PT. Semen Padang and PT. Semen Tonasa, PT. Indocement has share market of 34%, PT. Semen Holcim occupying of 13.6%, PT. Semen Baturaja 2,6%, PT. Semen Bosowa 1,9%, dan PT. Semen Kupang occupying 0.6%. Judging by the mastery of the market share there are two principals undertaking having a market share is not much different from its competitors as a market leader, namely: PT. Semen Gresik Group and PT Indocement Cement. In such a market structure of the cement market in Indonesia is a oligopolies market. A satisfied customer is a customer who feels getting value from suppliers, manufacturers or service providers. This Value can come from products, services and prices. If the customer says that the value is a quality product, then satisfaction occurs when the customer gets the product with a good quality. If the value for the customer is convenience, then satisfaction will come if the service obtained really comfortable. If the value of customers is a low price, then the customer will be satisfied to manufacturers who provide the most competitive price. A satisfied customer is a customer who will share their satisfaction with other manufacturers or service providers. Even satisfied customers, will share the experience with other customers. This will be a reference for the related company. Therefore, will give advantages for both the customer and the manufacturer when they feel satisfy. By seeing this connection, it is clear that customer satisfaction must be one of the goals of any company. Loyal customers satisfied and want to continue the purchase relationship, customer loyalty is a measure of customer proximity on a certain brand, customers love the brand, the brand is becoming top of mind (the main brand that appears) if it remember the categories of products, deep force brand commitments make a option preference to purchases, help customers identify quality difference, so it will be shop more efficient. This argument strengthens and becomes important for the customer to make a purchase. Customers are different with buyers. The buyer bought goods or services produced by the company. While the customers (who are satisfied with benefit products) buying the company's products and buy again any time when they needed it. Buy again is the difference part between the buyer and the customer. For companies (large, medium, small) customer quality is a treasure of very high value. For the company's customers is a very important role. Business operations every company can be expected to be successful if the company in question can sustain long term a quality customer and add new customers substantially. Many companies serving the two categories of customers at once, namely: the end consumer (end user) and institutional buyers (institutional buyers). An essential difference between the two categories of customers located on the purpose of use of the products they buy. Consumers purchase products for their own consumption. While the institutional buyer buying products for further processing or traded back.

Based on the background description, then this research formulated based on the significant influence towards customer satisfaction.

1. Is the quality product influenced significantly to customer satisfaction?
2. Does the price affect significantly to customer satisfaction?
3. Is the quality service influenced significantly to the customer satisfaction?
4. Is customer satisfaction influenced significantly to customer loyalty?
5. Are the quality product influenced significantly to customer loyalty?
6. Does the price influence significantly to customer loyalty?
7. Does the quality service influence significantly to service customer loyalty?

2. LITERATURE REVIEW

2.1 Quality Product

According to Supranto (2003), the traditional view about the quality of the product state that votes from the goods physical attributes, such as strength, reliability, and others. In the dictionary of the language of Indonesia, quality is defined as the level of good as bad things. Quality can be defined as the level of excellence, so the quality is a measure of relative goodness. The quality of products and services is defined as the overall combined the characteristics of the products and services generated from marketing, engineering, production, and maintenance that makes these products and services can be used meet the customer’s desire or consumers. Operationally, the qualified product is a product that meet customer expectations. Many people consider the product was a real offer, but the product could be more than that, a product is anything that can be offered to the market to satisfy a desire or needs, including physical goods, services, experiences, events, people, places, property, organizations, information and ideas.

In the last few decades, the service sector has started to hold the vital role in the world economy, Tjiptono (2005: 228) conveyed the quality of goods and service also contribute greatly in customer satisfaction, customer retention, word of mouth communication, purchasing, customer loyalty, market share, and profitability. It is reinforced by the results of the study indicate that market share, ROI (Return on Investment), return stock, ROA (Return on Assets), transaction costs, and asset turnover is related to the perception of the quality of goods and services of a company.

2.2 Service Quality

Gronroos opinion in Ratminto (2005: 2) gives the definition of service is an invisible activity (cannot be touched) that occur as a result of any such interaction between consumers with employees or other things provided by the company granting services to solve the problems of consumers/customers. Next is Ratminto (2005: 3) explains more about the service by quoting the opinion of Zemke as quoted by Collins and McLoughin to understand the notions of service by using a comparison between the characteristics of the products and services, as indicated in table 2.1. here are:

TABLE 2.1: SERVICE AND PRODUCT CHARACTERISTIC

Product	Services
Object's of the customer	Customer has a memory. The experience or emmory that can't buy or give to the others.
The purpose of goods made is similarity, all the goods is the same.	The purpose of the service is the unquelly things. Every customer and contacts is 'special'.
A product, is keep in the warehouse, the sample is deliver to the customer.	A service happens in a certain time, it can be store or deliver.
Customer is a last user is not involve in production.	Customer is 'partner' which is involve in production.
Quality control is done by comparing the output result with specification.	Customer doing a control quality by comparing desire and experience.
If an error occurs, the production of products (goods) can be withdrawn from the market	If an error occurs, the only way that can be done to improve is to apologize.
Moral employees very important	Moral employees role plays crucial.

Source: Ratminto (2005 : 3)

2.3 Customer Satisfaction

According to Kotler& Keller in Benjamin Molan (2006:177), stating that: the satisfaction is a feeling happy or upset someone who comes after comparing performance (results) products that are well thought out on performance (results) expected products. If the performance was below expectations, the customer is not satisfied. If the performance meets the customer’s expectations are satisfied. If the performance exceeded expectations, customers are very satisfied or pleased. Hunt in Tjiptono (2008: 43), reveals that the word contentment (satisfaction) is derived from the latin “*satis*” means good enough, adequate “*facio*” means do or make. So that customer satisfaction can be defined as efforts the fulfillment of something or make something adequate.

Meanwhile, Giese and Cote in Tjiptono (2008:43), find common ground in the three main components of the satisfaction of the various definitions of customer satisfaction research, namely:

1. Customer satisfaction is a cognitive or emotional response
2. The response concerns the specific focus (expectations, consumption of products, experience, and so on)
3. The response occurs at a specific time (after consumption, after the selection of products/services, based on accumulative experience and others).

2.4 Customer Loyalty

Hasan (2008:81) stated that a several definition of the customer loyalty based on the as follow as:

1. The concept of generic, brand loyalty shows the tendency of consumers to buy a particular brand with a high level of consistency.
2. The concept of repeat purchase behavior, often linked with brand loyalty. It, when brand loyalty reflects a commitment to a particular brand of psychology, behavior purchase purchase concerns re the same brands repeatedly.
3. Your Purchase is a result of the dominance of the company, succeeded in making its products became the only available alternative, which was continuously doing promotions to lure and entice customers to buy the same brand again.

Mowen and Minor in Hasan (2008:81) defines the brand loyalty that consumers have a positive attitude towards a brand, has a commitment to the brand, and intends to continue to purchase in the future. Boulding in Hasan (2008:83) suggests that the occurrence of: brand loyalty on consumers was caused by the influence of the satisfaction of dissatisfaction with the brand that is accumulating continuously along with the perception of the performance of the product. Loyalty is defined as a person who buys, especially those buying regularly and repeatedly.

2.5 Previous Research

Research Bei and Chian (2001) with a headline an integrated model for the effects of perceived product, perceived quality service, and perceived price fairness on consumer satisfaction and loyalty, working from research conducted Parasuraman *et al.* (1985), (1994), and Vost *et al.* (1998). On the research, researchers want

to see the connection customer satisfaction against loyalty consumers, the services to customer satisfaction, the product quality against customer satisfaction, prices against customer satisfaction, and the quality of service, the product quality, and prices against loyaltykonsumen. Method used is survey method with sample research of consumers automotive (toyota, Nissan and mitsubishi) in five central automotive service in Taiwan. Data is taken on March 17-2.5 2000 with respondents a number of 650 respondents. The results showed that consumer satisfaction influence on consumer loyalty. The quality of the product directly or indirectly influence (by consumer satisfaction) of consumer loyalty. The quality of service to indirectly influence the loyalty of consumers are by consumer satisfaction rates influence directly or indirectly (by consumer satisfaction) of consumer loyalty.

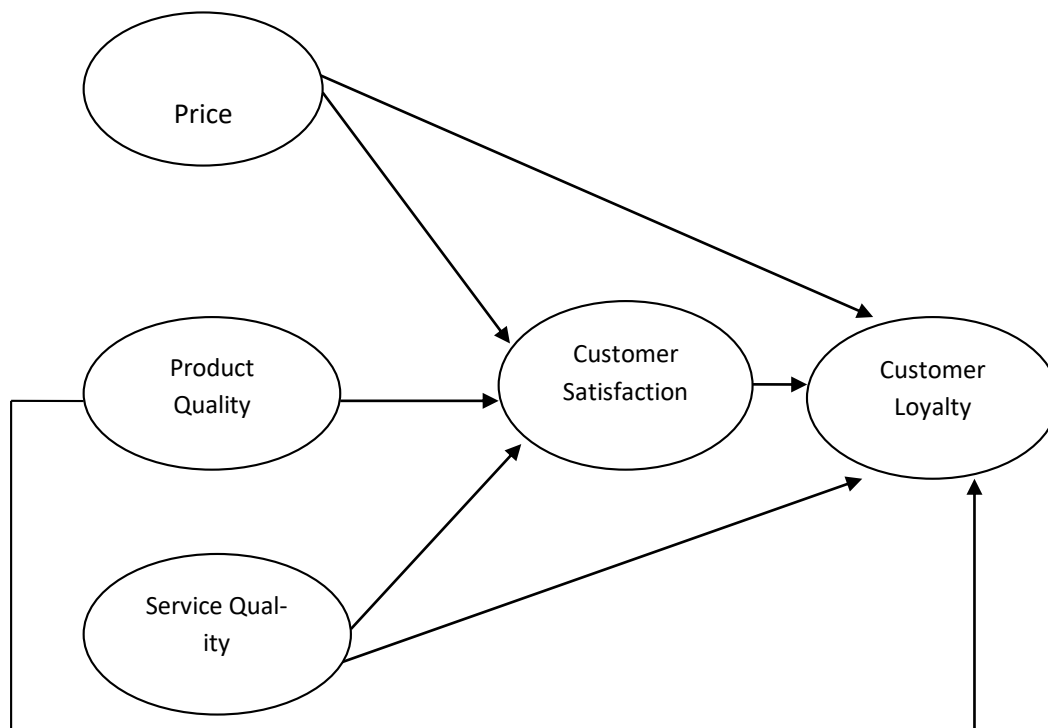
Holm (2000) examines the quality of savings, tenant satisfaction and satisfaction of employees from the point of view of workers and tenants. This research is conducted at 130 flats on 11 buildings. Research done by the method of survey with the main instrument is the questionnaire. The respondents are a number of 160 respondents. Research is conducted on October 1998 by delivering 40 questions for 20 questions for tenants and workers. The results showed that the product quality influenced the satisfaction of employees, the quality of the work have an effect on the reputation of the contractor and the probability of request in the future.

Natalisa (2000) examines the model of customer perception of quality and consumer satisfaction from Zeithalm and Bitner. In his research the researcher did some modifications of the model Zeithalm and the incorporation of quality products such as Bitner and services (because of the nature of flight services products), modifications and additions to customer's private variables variable alignment of service quality with the external community. This research examines the influence of variable management commitment towards customer satisfaction domestic airlines. Flight service market conditions are very competitive especially since the deregulation of the aviation policy in 1990. There are two variables were analyzed from the standpoint of the Publisher services. Management commitment is whether in providing service to a customer airline services renderer is already considering customer expectations. Employee job satisfaction measures employee satisfaction to the work as a whole.

3. A CONCEPTUAL FRAMEWORK AND HYPOTHESIS

Based on the description background, problems formulation, also the research purpose it can be concluded that this research is done in order to review and analyze the five important variables, namely: Product Quality, Price, Service Quality, Customer Satisfaction, and Customer Loyalty. The Conceptual Framework shows in figure 3.1.

FIGURE 3.1 : THE CONCEPTUAL FRAMEWORK



Based on the problems formulation and review literature, previous research and analysis process so that hypothesis can be arranged as follows:

1. Product quality is influenced significantly to customer satisfaction.
2. Price is influenced significantly to customer satisfaction.
3. Service Quality is influenced significantly to customer satisfaction.
4. Customer Satisfaction is influenced significantly to customer loyalty.
5. Product Quality is influenced significantly to customer loyalty.
6. Price is influenced significantly to customer loyalty.
7. Service Quality is influenced significantly to customer loyalty.

4. RESEARCH METHOD

Population and sample can be used as a data source. The population in this study is all customers of PT Waru Abadi West Java region. Does the customer is all stores that carry out transactions with PT Perennial hibiscus Tiliaceus. The population in the study as many as 1,268 customers while meeting the requirements of research (there are limitation criteria) as many as 725 subscribers and that do not meet the criteria as many as 547 customers.

In order to specify the research variable, it describe the operational definition concept in each variables as follows:

1. Product Quality (Exogenous-Free)

Product quality is the customer perception of semen gresik type PPC (Portland Cement Pozzoland) produced PT. Semen Gresik (Persero) Tbk. can be used for public buildings such as houses, multi-storey buildings, bridges, highways, airport runways and building material products industry. The PPC also has a dual function used for buildings that require low hydration heat as well as the resilience of sulfate and acid like the dock, building irrigation canals, dams and buildings. Semen gresik PPC type has the following advantages:

- It is more and more powerful
- Hold cracked
- Hold sulphuric acid

Gresik cement PPC type produce at PT. Semen Gresik (Persero) Tbk which is offered by PT. Waru Abadi who supplies or fulfilled the customer desire. The measurement of product quality variable with 4 indicators, namely:

X_{1,1} ; Cement products offered PT. Perennial hibiscus Tiliaceus has a good quality and more efficient than competitors.

X_{1,2} ; Cement products offered by PT. Perennial hibiscus Tiliaceus has a feature or a good packaging.

X_{1,3} ; Cement products offered by PT. Perennial hibiscus Tiliaceus has a long-term Durability/product durability in accordance with the specified standards.

X_{1,4} ; Cement products offered by PT. Perennial hibiscus Tiliaceus has a standard or specifications consistently.

2. Price (Exogenous-Free)

Price (X₂) is the customer perception towards price by the PT. Waru Abadi to meet and exceeding the customer desire. This variable is latent variable which is measure with 2 indicators, namely:

X_{2,1}: The price offered by PT. Waru Abadi able to compete with the other distribution.

X_{2,2}: The price is able to give benefits.

3. Service Quality (exogenous-free)

The variable quality of service i.e. everything that focuses their efforts on providing services to meet the needs and desires of customers which carries with it the accuracy in delivering it, so created a balanced compliance or exceeding customer expectations. These variables are latent variables are measured with 5 indicator observed (observed variable) variable service quality indicators include: indicators of direct evidence (tangibles), reliability (reliability), Empathy (empathy) responsiveness (responsiveness) and guarantees (assurance).Direct prove that the physical appearance of the infrastructure and facilities owned by PT. Perennial hibiscus Tiliaceus. Furthermore do the indicators against rescoring the sub is used include:

1. On-site phisik/adequate truck form
2. Delivery of the goods or products on time
3. Delivery of the goods according to the type, amount and quality of
4. Promotional gifts in the form of gathering, go out in the country in accordance with expectations.
5. The employee's appearance drew

4. Customer Satisfaction (endogenous-Intervening)

Customer satisfaction is the feeling of having customers compare performance (results) that he felt with his expectations. These variables are latent variables are measured with 2 indicators (observed variable). Customer satisfaction measurement variables include indicators, confirming expectations (confirmation of expectation) and compare that ideal (caomparing of ideal). Confirmation of hope (confirmation of expectation) is the alignment of the perceived level of satisfaction and customer expectations. Next up is done against rescoring the item indicators used include the following:

1. Product quality is offered to the same companies according to customer desire.
2. The prices given by the company in conjunction with customer's expectations
3. Services provided the company with customer expectations
4. Customer Loyalty (Endogenous-bound)

Customer loyalty is a commitment to the company's customers based on a positive attitude and is reflected in the consistent repeat purchases. These variables are latent variables are measured with 5 observed indicator (observed variable). Measurements on customer loyalty variable include: indicators of trust, emotional commitment (commitment emotion), the burden of the company (the switching cost), publication of verbal (word of mouth) and cooperation (cooperation), Baloglu (2002). Trust is the trust's response to the company's customers. Next up is done against rescoring the item indicators used include the following:

1. Trust towards PT. Waru Abadi management
2. The service who received from PT. Waru Abadi is consistent.
3. Believe that the desire of PT. Waru Abadi be obtained
4. Believe that all questions to the PT. Waru Abadi are answered seriously.
5. Believes that the information received from PT Waru Abadi precisely and accurate.
6. Believe that PT Waru Abadi will keep their promise.

This research is a multidimensional research which is describe the practical phenomenal that is analyzed as the dimensional or indicator.in order to measure the 1-7 hypothesis in this research by using *Structural Equation Modeling (SEM)* because this research model of multiple causality relationship (more than 1 (one) the equation) and tiered. Research variable is used unobservable and resiplok model. Sem analyzing causal relationships between variables are exogenous and endogenous indicating any changes the value of a variable will produce changes in other variables as well as to examine the validity and reliability of research instruments. *Structural Equation Modeling (SEM)* is a statistic technique that allows testing a coherent relations relative complicated in simultan. SEM have the major characteristics that distinguishes by analysis multivariate namely:

1. Estimation relations multiple dependence (multiple dependence relationship).
2. Allow to represent a concept that is not previously been observed in relations happened and account for the mistake.

SEM model or *linear structural relation (lisrel)* is integrated approach between factor analysis, structural model and path analysis by doing 3 (three) the simultaneous which are validity checking and reability instrument (equivalent to analysis confirmatory) testing model the relation between latent variables (equivalent to analysis path) and get a model that is beneficial to approximate (equivalent to model), structural and regression analysis (Solimun, 2003: 66).

5. RESULT ANALYSIS

Theoretical model in this conceptual research, it can said fit if it supported with empiric data, the goodness test of fit overall model, in order to find out is the hypotic model support the empiric data, it show in table 5.1 below.

TABLE 5.1: GOODNESS TEST RESULT OF FIT FULL STRUCTURAL EQUATION MODEL

Indicator	Cut-off Value	Result	Information
Chi-Square	Expected small	146,385	expected 124,342
Probabilities	≥ 0,05	0,125	Good
Cmin/Df	≤ 2,00	1,140	Good
RMSEA	≤ 0,08	0,032	Good
GFI	≥ 0,90	0,896	Good
AGFI	≥ 0,90	0,861	Good
CFI	≥ 0,95	0,970	Good
TLI	≥ 0,95	0,964	Good

Note: Cut-off value X₂ (142, 0,05) = 124,342

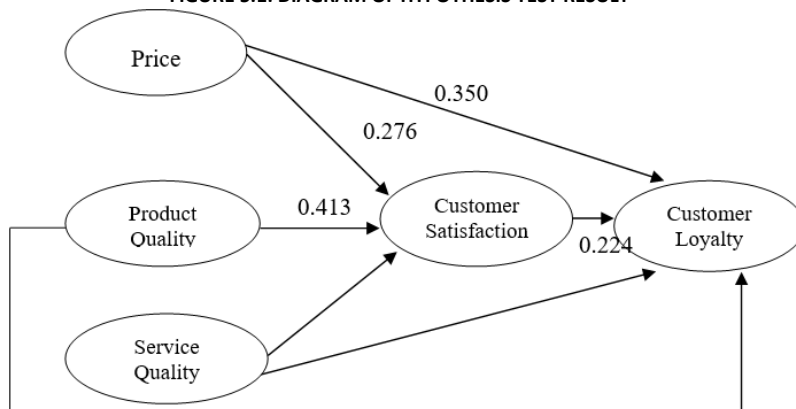
The Goodness of Fit Overall test result based on the table 5.1, it can be concluded that from the seventh criteria overall show a good model, especially it show from CMIN/DF DAN RMSEA. Because of that these model are able to use as the hypothesis test.Hypothesis test is conducted with t test (t test) on each line is the direct influence of the intermediates. Table 5.2, presents the results of hypothesis testing direct influence.

TABLE 5.2: THE HYPOTHESIS TEST RESULT

Symbol	Causality Relationship	Estimate Standard	Probability	Information
H1	Y1 <- X1	0,413	0,010	Proved
H2	Y1 <- X2	0,276	0,005	Proved
H3	Y1 <- X3	0,152	0,600	Not proved
H4	Y2 <- Y1	0,224	0,011	Proved
H5	Y2 <- X1	0,478	0	Proved
H6	Y2 <- X2	0,350	0	Proved
H7	Y2 <- X3	0,109	0,607	Not Proved

The results of hypothesis testing the line direct influence can also be seen in the image path diagram as figure 5.1:

FIGURE 5.1: DIAGRAM OF HYPOTHESIS TEST RESULT



First Hypothesis (H₁) stating that the products quality variable influence customer satisfaction, it means that significantly proved. Component value estimate of 0.413 to the level of probability of 0,010 ($p > 0,05$) indicates a variable quality of products provides a significant influence of the variable customer satisfaction of 41.3%.

Second Hypothesis (H₂) stating that the price variable influence customer satisfaction variable (Y₁) proved to be significantly. Component value estimate of 0.276 to the level of probability of 0.005 ($p > 0,05$) indicates a variable price (X₂) gives significant influence towards customer satisfaction variable (Y₁) amounted to 27.6%.

Third Hypothesis (H₃) stating that the service quality variable (X₃) influence customer satisfaction variable (Y₁) not proven significantly. Component value estimate of the probability level of 0.152 0,600 ($p > 0,05$) indicates a variable service quality (X₃) gives the effect on customer satisfaction variable (Y₁) amounted to (Y₁) of 4,1%.

Forth Hypothesis (H₄) stating that customer satisfaction variable (Y₁) affect the variable customer loyalty (Y₂) proved to be significantly. Component value estimate of the probability level 0,224 with the probability 0,011 0,011 ($p < 0,05$) indicate variable customer satisfaction (Y₁) provides a significant influence of the variable customer loyalty (Y₂)

Fifth Hypothesis (H₅) stating that the variable quality of products (X₁) affect the variable customer loyalty (Y₂) proved to be significantly. Component value estimate of 0,478 to the level of probability of 0,000 ($p < 0,05$) indicates a variable quality of products (X₁) provides a significant influence of the variable customer loyalty (Y₂) amounted to 47.8%;

Sixth Hypothesis (H₆) stating that the variable price (X₂) affect the variable customer loyalty (Y₂) proved to be significantly. Component value estimate of the probability level 0,350 0,000 0,000 ($p < 0,05$) indicates a variable price (X₂) gives the effect on the variable customer loyalty (Y₂) by 35%

Seventh Hypothesis (H₇) stating that the variable quality of service (X₃) affect the variable customer loyalty (Y₂) not proven significantly. Component value estimate of the probability level 0,109 0,914 ($p > 0,05$) indicates a variable service quality (X₃) gives the effect on the variable customer loyalty (Y₂) is amount of 6.67%.

6. FINDINGS

After doing the testing and analysis of influence of product quality, price, service quality to customer satisfaction and loyalty, then there is some theoretical findings that led to the development of a theory that results in this study are as for following:

First: The quality of the product is positive and significant impact on customer satisfaction and loyalty. Likewise, influence product quality positively and significantly to the loyalty by customer satisfaction. Improved quality of products (Semen Gresik) marked with the good quality of the products produced by PT Semen Gresik (persero) Tbk and offered via PT. Waru Abadi was able to make the customer satisfied. The results of this study support and develop study results Bei and Chian (2001) which States that the product quality is influenced directly or indirectly by customer satisfaction to customer loyalty. Bouding et al., (1993) stated that the occurrence of loyalty to customers due to the influence of satisfaction/dissatisfaction that accumulates continuously along with the quality of the product.

Second: Price positive and significant impact on customer satisfaction and loyalty. So does the price influence positively and significantly to the loyalty by customer satisfaction. Pricing of the products (Semen Gresik) is characterized by increasingly price competitive position given by PT. Waru Abadi was able to make the customer satisfied. The results of this study supports the results of the Bei and Chian study (2001) which States that the price influence directly or indirectly by customer satisfaction to customer loyalty. This study also supports studies of Jiang and Rosenbloom (2005) the research results show that the price perception of the consumer influence on overall satisfaction. The perception of the consumer at a price effect on repurchases.

Third : Service Quality positive and significant impact on customer satisfaction and loyalty. Improvement of the quality of service that is marked with the good quality of services provided, PT. Waru Abadi was only able to increase customer satisfaction and loyalty, but not necessarily automatically make customers into satisfied and loyal. PT. Waru Abadi still need to do innovation in every field, especially the service quality. With a good quality of service will be able to increase customer knowledge about product quality as well as price so that customers can increase sales and profits.

7. RESEARCH LIMITATION

The results of this research are not in spite of some limitations. The limitation is that the results of this study cannot be generalized to the population that has a character that is not the same as penelitian is due to the sample used in this study is limited to customers of PT. Waru Abadi West Java region. With regard to the limitations found in this research agenda for future research is to apply the model of research on companies that have different characteristics with PT. WaruAbadi.

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CHALLENGES OF GAUGING PRODUCTIVITY IN TEACHING IN HIGHER EDUCATION: A STUDY

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ABSTRACT

In a world led by results and strategies designed for the same, where does teaching stand? A manufacturing concern shows this with its world class products and improvising on the same from time to time. The enhanced quality from time to time reflects its improvements. The service industry is faced with a different set of challenges. Yet, they raise their benchmark to define productivity. If teaching is considered in particular for understanding productivity and its various nuances, what are the ideal parameters? Teaching is a profession which involves active participation of the student community and the teaching fraternity, synthesized with effective learning resources. The researchers design an operational definition for defining productivity in the typical context of teaching in higher education. In this humble research effort to explore the various challenges and probable suggestions to the given premise, the researchers build a quantitative tool and a qualitative appraisal model. Here, responses are collected through a data collection tool, at the grass root level through purposive sampling choosing teaching professionals from the higher education space. The results clearly indicate multi-layered challenges encountered and lack of clarity at various levels on various counts, apart from lack of standardization in the system, although the apex institute – University Grants Commission – lays down an elaborate protocol.

KEYWORDS

intangibility of teaching & learning, productivity, quantification, diverse tasks.

1. INTRODUCTION

Teaching is an intangible service. Since ancient times, teaching has been identified to be a divine profession and was not inhabited by metrics and competition in the past. In the last decade, teaching in higher education has undergone sea change. Research has already uncovered that services have special features distinct from products. To state a simple few, in services, production and consumption happen simultaneously, while in tangible products, they are separated (Services Management, Jan 2007). Teaching is a participatory service, where the role of the teacher and the student need to be synthesized together, if the service needs to be delivered by the teacher and consumed by the student. This factor is resolved only in online teaching where the service can be produced at the convenience of the producer (teacher) and consumed at the convenience of the consumer (student) as technology enables recording in such a way it does not interfere with their lack of participation. However, in such a case, the interaction element is sacrificed compromising the very essence of the service. This research effort is therefore focused on regular face-to-face teaching in higher education.

Being an intangible service makes it challenging to define its role in its entirety and makes it hard to subject it to wholesome judgement. The nature of tasks aligned in teaching in higher education has grown to be diverse and is building on itself over a period of time. The Performance Based Appraisal System form (PBAS) as indicated by UGC is a testimony to such range of diverse roles and responsibilities an academician needs to comply in today's educational world. (UGC) According to businessdictionary.com, productivity is defined as "A measure of efficiency of a person, machine, factory, system, etc., in converting inputs into useful outputs. Productivity is computed by dividing average output per period by the total costs incurred or resources (capital, energy, material, personnel) consumed in that period. Productivity is a critical determinant of cost efficiency". When all outputs and inputs are included in the productivity measure it is called total productivity. Outputs and inputs are defined in the total productivity measure as their economic values. The value of outputs minus the value of inputs is a measure of the income generated in a production process. It is a measure of total efficiency of a production process (Productivity Management - A Practical Handbook, 1998). Such definitions hold clarity in the manufacturing sector. Teaching, being distinctly different from manufacturing and even most other services, offers a platform to debate the concept of productivity offering a new shape to the concept. In the age of racing technology and rapid changes, without generalizing teaching as one among many services, when due interest and care are offered, how can one understand the concept of productivity? In the light of such questions, the research design may be laid out as follows:

2. REVIEW OF LITERATURE

Jack E. Triplett and Barry P. Bosworth present some measures of the growth in labor and multifactor productivity within the services industries (Bosworth, 2000) quoting the substantial disparities exist among productivity growth rates within the manufacturing sector and also within the nonmanufacturing sector. Mohammad S Owlia & Elaine M Aspinwall; University of Birmingham, UK; pitch TQM in higher education from customers' perspective to define quality in engineering education in higher education in particular (1998).

LAUREN MARIE CALIMERIS provides evidence on measuring teacher quality is extremely difficult in her work. (CALIMERIS, 2011)

The e-balanced scorecard (e-BSC) for measuring academic staff performance excellence By May Leen Yu & Suraya Hamid & Mohamad Taha Ijab and Hsiao Pei Soo focused on using a Balanced Score card through a pilot study to create a means of communication between lecturers and top management.

3. NEED FOR THE STUDY

The above studies focus on productivity in teaching in higher education from different places. This provides research gap that can be addressed by more research studies. Hence the need for the study is felt.

4. STATEMENT OF THE PROBLEM

The concept of productivity can be mathematically quantified in the manufacturing sector. The output input ratio brings out the numerical representation. However, in services, the core aspects of a job (along with the various related tasks) are intangible in nature. Services also are known for heterogeneity in application of their work, while manufacturing sector has promoted homogeneity. In a profession, such as teaching, defining and gauging productivity is a challenging task, as there are discretionary elements in the very nature of the job.

5. OBJECTIVES OF THE STUDY

1. To define productivity for a teaching faculty member in teaching in higher education.
2. To develop a quantitative and qualitative model of appraisal for the same.

6. HYPOTHESIS

Tasks of a teaching profession in higher education cannot be quantified

7. OPERATIONAL DEFINITIONS

Higher Education: UG and PG level of college education and above.

Academician: A teaching professional/member of an educational institution in higher education

8. RESEARCH METHODOLOGY

(a) Type of research: Both, field research and library research were undertaken. The objectives were first analyzed through field research and then elaborated through library research.

(b) Tool: A Semi-Structured Questionnaire was drafted, keeping in mind the objectives of the study as listed above.

(c) Sample Design:

- Purposive Sampling Method is adopted for the study. Here, the sample units are chosen primarily on the basis of the convenience of the investigator and willingness of the respondents to participate in the study undertaken.
- The study is relevant to all teaching professionals in higher education in general. Such professionals are spread across the length and breadth of the country. As the population size is huge and has heterogeneous features, purposive sampling method had to be resorted to.
- The sample size of fifty respondents who consented for the study are teaching faculty members in higher education.

(d) Profiles of the respondents:

- A sample size of fifty respondents are in the age group of 23 – 60 years.
- Men and women were included without preference to either of them.
- As the subject is confined to teaching, the respondents chosen were confined to teaching professional in higher education.
- Online teaching, visiting faculty members, etc. were not included in this study.

(e) Collecting data:

- Each respondent was asked to answer the questions in their own words. Initially, rapport was established with the respondent and he/she was made aware that they were part of research work and his/her co-operation to the fullest extent would make the research meaningful.
- The respondent was asked to give his/her opinion freely. Any doubts raised by the respondents were clarified so as to gain honest answers.
- In certain cases, the questionnaire was translated into the vernacular languages so as to facilitate right understanding of the concept.
- Apart from the interview method; survey method, observation methods, group discussion method and experiences have been employed to collect and analyse data.

(f) Method of analysis:

- MS word, Excel and Power point applications have been used to tabulate and present the data.
- Descriptive analysis including bar charts, percentages along with Large Sample Testing is used to present and analyse the data.

9. RESULTS & DISCUSSION

The revelations from primary data are as follows:

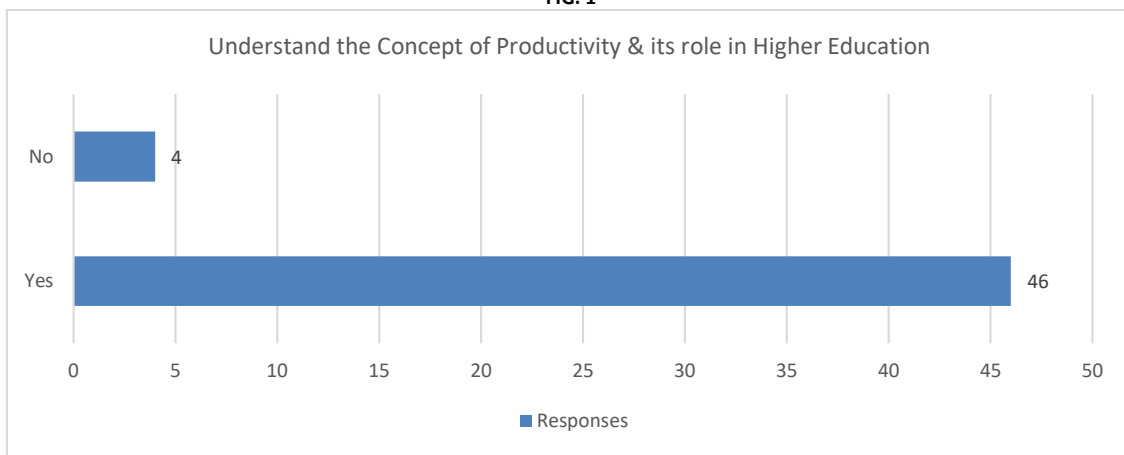
1. When asked if the respondents understand the concept of productivity, except two respondents, all said 'yes'.

TABLE 1

Sl. No	Understand concept of productivity	Responses	% values
1	Yes	46	92%
2	No	04	8%
	Total	50	100

Sl. No	Understand concept of productivity in Higher Education	Responses	% values
1	Yes	46	92%
2	No	04	8%
	Total	50	100

FIG. 1



2. When asked to explain the same, the following was discovered (most striking responses are listed, ignoring repetitions):
 - Productivity means getting back after investing. For eg. Use of natural resources to get useful things done. Use of sunlight in getting hot water, cooking etc. through solar powered equipment.
 - Doing quality work with efficient utilisation of resources and time
 - Efficiently completing the task (much before time) without compromising the quality.
 - With reference to education productivity is nothing but delivering the knowledge content to students with the effective use of pedagogy provided to a faculty
 - Production per unit of factor of production
 - Personal capability to utilize talents, skills, knowledge etc. to achieve the desired result
 - Productivity is ratio of input to output to explain efficiency
3. All teaching respondents said the concept of 'productivity', often referred to as performance is applicable even to a teacher in higher education, except 4/50. When asked how is the concept applicable to a teacher in higher education; the following was revealed (striking responses presented verbatim and repetitive ones are avoided):
 - It's related to how information delivered by the academician is understood by the student. If understanding is more in students it means high level of productivity is gained by the lecture/teaching.
 - Teaching different subjects with activities or projects by utilizing the resources and time efficiently and effectively.
 - You teach some theoretical aspects to student and you also tell them about the practical use of the concept taught.
 - Productivity implies the use of those concepts in day to day practice. As a clinical biochemist we teach the student a bed side diagnostic test to detect diabetes. If the student applies this knowledge in rural area where there are no sophisticated labs, it will benefit the patient and the community at large. Use of bed side test at low cost. Productivity at low cost and more efficiency is what it is.
 - How you teach, how much time you take to finish the syllabus, do students understand, your students pass percentage, etc.
4. The respondents who felt productivity is not applicable in teaching, said:
 - Knowledge cannot be measured through productivity. Productivity cannot be measured either through teacher or student alone, as it depends upon the receiver of the knowledge.
 - Productivity is a very vague term to define the efficiency of a teacher.
5. When asked to choose the best way determining performance of a teaching professional in higher education (where multiple choices were allowed), none of the respondents could limit this response to any single criterion and strongly felt it has to be considered on multiple parameters as inherent and typical to the role and responsibilities of an academician in higher education. Teacher respondents opined that the Performance Based Appraisal System (PBAS), Systematic Student Feedback, Superior Feedback, student pass percentage, their overall performance are some very important parameters.
6. When asked if the diverse tasks of a teaching professional are clearly included and acknowledged in the present system, all respondents disagreed, except 5/50 respondents.

TABLE 2

Sl. No.	Inclusion of diverse tasks in productivity appraisal	Responses	% values
1	Yes	05	10%
2	No	45	90%
	Total	50	100%

7. When asked, if the present system of performance appraisal addressed the specific needs of the diverse disciplines that encompass in higher education; all respondents disagreed and felt, there should be higher degree of customization developed and allowed, as many details are generalized, in an effort to standardize which is not applicable in a service such as teaching in higher education. To substantiate the point, respondents went on to explain that the needs and nuances of teaching learning can strongly vary across disciplines and this also considerably true within disciplines many times.
8. When addressing 'what challenges are faced in gauging productivity in higher education for teaching professionals?'; the following responses were derived through discussions and questionnaire:
 - Discretionary aspects of a job; for ex: higher efficiency in teaching is not particularly recorded in PBAS, the higher student-teacher ratio is a neglected challenge – for example – often commerce colleges have larger student strength than their counterpart disciplines causing greater challenges in classroom management and increase in regularly expected work pressure to cater to such large audiences in the classrooms. This increases related aspects of the job such as increased interactions in the classroom, challenges in designing and administering internal assessment activities, lack of individual attention and focus, etc. are some prominent points noted amongst others. When the student-teacher ratio is small such challenges are automatically curbed.
 - No clarity of identifying and measuring the performance. This is also true while aggregating and reporting work completed. For example, the relative efficiency in teaching tasks alone is not documented beyond the systematic student feedback system. In spite of establishing such a practice, the implementation part is to be critically appraised to check if the sanctity is upheld.
 - It is difficult to assess the performance in teaching because too many components are involved in teaching and performance in teaching is a vague concept
 - Challenges such as biased superior feedback, competition and hierarchy are prevailing obstacles
 - Issues related to biased attitude of students displayed in student feedback, old methodology of appraisal system, etc. defeat the purpose of appraisal.
 - Concentrating on only one parameter like student feedback based appraisals may lead to biases in opinion.
 - It is mainly in terms of maintaining discipline and strictness. Now a day, students are treated as customers and in the view of providing all the facilities. The appraisal system is ignoring the importance of teacher strictness. It is observed that higher the level of strictness, exhibited by the teacher, lower is the rating of the faculty by the students.

- Efficient faculty cannot be measured only through result based system. But today result has been given more importance. Enough time should be given/allotted for research publications. More time on research would improve the performance of the teacher in class.
- Responsibilities are diverse and judging parameters are not very clear
- During performance appraisal whether the person has put in that many hours of work or not, he is entitled to show it in the appraisal form. This is a major drawback as someone is looking at quantity rather than quality of work.
- The following comment is worth noting by a respondent "Performance is not always in your control, 80 students in a class control it".
- The PBAS, which is a prominent tool used according to the instructions of UGC, focusses more on Research and Consultancy than teaching. Is teaching lesser than research? If research is so important, a teaching professional should be judged for their contribution after ensuring the necessary infrastructure is in place and it is built into one's time table schedule where time is particularly allotted for the same. In government colleges, faculty members are given a sabbatical (with full pay) to pursue doctoral studies. In many private institutions, the pressure exists to enroll into research without the corresponding support. Yet, such private institutions expect the same PBAS form to be implemented in all its sanctity, which will give lop-sided view of one's performance. To explore the knowledge seekers point of view, the students of PG were asked in a GD on the same concept as they are one of the most important consumers of a teaching professional's services and the same is presented below:

10. FINDINGS FROM GD FROM THE STUDENT COMMUNITY

- All the student participants are from M' Com final year and found it difficult to understand and interpret the concept of productivity in teaching.
 - In general, students explained the meaning as output/input ratio, which is applicable in the manufacturing sector and when the discussion moved towards applying it to teaching service, they unanimously felt, it cannot be used so.
 - Students opined that the Systematic Student Feedback, Analysis of Semester End Results and interaction with students can provide useful insights to understand the performance of a teaching professional.
 - At the same time, they also expressed difficulty in quantifying the concept and felt it has to be analysed according to the merit of each case.
- This also brings out the challenge of intangibility and need for re-looking into the PBAS which is close-ended and needs clarity in its rationality.

11. FINDINGS

1. Productivity cannot be limited to pass percentage or any one criterion and there has to be wholesome approach towards the same
2. Problems exist at various levels in gauging productivity for an academician
3. As exploring the idea of quantification is listed as one of the objectives of this study, it is understood that quantifying is not considered suitable by the respondents and using a rating scale is a preferred option.

After scrutinizing the responses, productivity in higher education may be defined as:

"The composite role of a teaching professional in higher education contributing towards the various task sets – Teaching and Exam related duties, Administrative duties, Academic Life Enrichment and Research & Consultancy – so as to contribute towards the overall welfare of the diverse stakeholders – Students, Management, peers and society"

12. LARGE SAMPLE TESTING RESULTS

The Null Hypothesis is accepted at 5% level of significance and one may say that "Tasks of a teaching profession in higher education cannot be quantified"

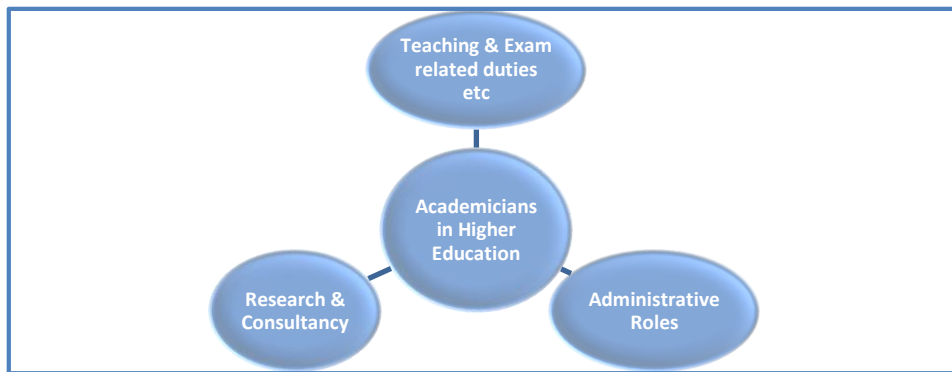
13. RECOMMENDATIONS/SUGGESTIONS

Some of the suggestions given by the respondents are presented here:

- Include teachers in their appraisal. Often teachers are a passive part of the process. This is challenging and yet required as teaching is a people processing job, offering increased dynamism to the entire profile of the job.
- Since high importance is given to the number of classes taken, number of publications/ presentations, indicators which can help in assessing quality of work ought to be included.
- Training sessions need to be held for faculty members to explain various judging parameters and how and why they are applicable to teaching professionals in higher education.
- Everyday work should be tracked online. Suppose, a regular working day consists of 8 hours, how much time is devoted for classes, how much for research, how much for breaks etc. Software can be used for this. At the end of every session, teachers' cumulative performance can be measured like student's feedback, colleague feedback, number of publication in refereed journal with impact factor, number of paper presented in conferences etc.
- Faculty performance appraisal should be based on the content delivered about the subject in the class and also the quantum of knowledge of that faculty in a given area of specialization
- Make it more objective than subjective
- A qualitative Self-appraisal tool needs to exist, for important things beyond just keeping score about work accomplished. The zeal required for a teaching job is never recorded.
- The emotional turmoil one undergoes is hardly quantifiable and many other aspects exist in this regard. Here again the qualitative approach can be applied.
- The no. of classes taken is recorded. How well they are taken, is not considered in PBAS and student feedback works towards this. But how well is such feedback taken? etc. are the concerns to be brainstormed upon.

The researchers have developed a *"Three Parameter Model – A Quantitative Approach"* and *"A Qualitative Appraisal Model: An Insight into the Self"* after considering the multiple roles and responsibilities, concerns presented by respondents, etc. This model also keeps up with the qualitative elements that exist in teaching. The three parameters recommend listing of specific tasks aligned to each faculty member beyond teaching such as – organizing fests, organizing conferences of FDPs – Faculty Development Programmes, etc. and later rating the same according to the status of completion and quality of work executed to bring in transparency. The rating scale is suggested to be used according to standards set for each parameter. Standards need to be set according to the needs of the discipline and the experience / seniority of the teaching professionals. At the same time, the contribution can be considered as primary for the teaching parameter and for others it can be considered at varying levels towards the remaining roles.

FIG. 2



The 3 Parameter Model - A Quantitative Approach showcasing the split of roles for an academician

Thus, it may be built in the following way:

“The Three Parameter Model – A Quantitative Approach”

TABLE 3

Sl. No.	Parameters (All tasks may be briefly described under relevant sub-heads to be approved by the HOD/HOI)	Rating Scale
1	Teaching & Exam related duties (Classroom teaching compliance w r t subjects allotted and no. of classes)	1 2 3 4 5
2	Administrative Roles (Coordination duties, documentation work, Academic Life Enrichment, contribution towards co-curricular and extra-curricular activities) Description of the roles and responsibilities complied with:	1 2 3 4 5
3	Research and Consultancy: (Paper presentations, publications, workshop participation, guest lectures delivered, research guidance provided, organization of such events, etc.)	1 2 3 4 5

It is also observed that one person may show a dominant role in Academic Life Enrichment or an administrative role and need not equally contribute towards all the parameters consistently. In such situations, it may be advised to identify one’s roles and mark the appraisal only on the roles allotted and not make it compulsory to indulge everybody on all parameters.

Examples are cited below from real life experiences.

Self-appraisal and superior appraisal

At the same time the form may be used for self-appraisal as well as superior appraisal, at the discretion of the departments involved.

A detailed description of the roles fulfilled must be allowed and relevant documentary evidence may be attached for the same. The need for description arises as the nature of tasks can be diverse under each subhead.

The following examples are worth mentioning as received from primary sources:

- If a faculty member has guided a student team to win an inter-collegiate case study competition held by a world renowned body; where will this be documented and how will it be included in performance appraisal, especially when this takes substantial time from their working schedule and beyond?
- If a team of faculty members have incessantly worked towards designing and delivering the needs of intra and inter-collegiate fests for a large audience and a department whose total student strength runs into thousands, it is visibly large amount of work that surpasses one’s official hours of work. How should this be reflected in the attempt to gauge such teacher’s productivity?
- If a team of faculty members works on compiling the annual report for the college/institution, where will this be documented and how will it be accounted for their contribution?
- If a faculty member works on developing the syllabus, course material, conducts subject meetings for the benefit of the other faculty members, contributes towards digital lectures, where will this be documented and how will it be accounted for their contribution?

These examples present the nature of diversity and this is only a glimpse of the ice-berg. Such challenges can typically vary according to the discipline and the intensity of the roles assumed. For example, a doctor who is into teaching majorly can have concerns of his/her own.

The needs of an engineering college faculty member can be different from their counterparts in commerce and management disciplines.

“A Qualitative Approach: A qualitative assessment of one’s journey in the process needs to be acknowledged. This is felt by every individual at the grass root level and can be introduced as a personal indicative instrument which can serve as a tool kit to understand their emotional journey from lack of awareness to achievement at various levels.

The following is a sample tool designed to serve such needs:

“A Qualitative Appraisal Model: An Insight into the Self”

TABLE 4

SAMPLE OF A SELF-APPRAISAL TOOL – QUALITATIVE ANALYSIS	
Name:	Date of joining:
Age:	Total Experience:
Department:	
Questions related to self: What motivates me the most on job? What are my strengths and weaknesses?	
Questions related to job: Which is the most challenging aspect I faced this semester? What have I done to work towards tackling the challenges listed above?	
Questions related to co-workers: Am I able to get-along with my co-workers? What is the best skill I have learnt by working in this team?	
Questions related to employer: Am I able to adhere to what is expected by my HOD/HOI? Am I able to communicate my concerns to my superior/HOD/HOI?	
Questions related to the Organisation: What is the vision of this organisation? Is that translated into the tasks my job holds?	
Any other:	
Disclaimer: Ideas conceived sincerely and worked upon consistently can lead to awesome growth	

This tool is not expected to be submitted to any authorities for further scrutiny. It is meant for the individual professional to draw insights from their experience to deliberate on the listed items, add to them and learn from the overall experience. This also serves to address the happenings of the informal environment and the faculty member gets a guiding question from this to be answered by them for their own sake. When done consistently, it has long-run benefits in understanding what it takes to translate vision into real time work.

14. LIMITATIONS OF THE STUDY

- a. The findings and suggestions are limited by the opinions and knowledge of the respondents.
- b. An interpretation of this study is based on the assumption that the respondents have provided true and correct information.
- c. The study has limitations w r t time, place and resources

15. SCOPE FOR FURTHER RESEARCH

- Such research may be conducted at a large scale to understand what challenges are perceived and what solutions are prescribed in the teaching profession’s appraisal process.
- In depth research can be conducted separately for each of the disciplines to understand their diverse roles, unique challenges, etc.

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APPENDIX

DATA COLLECTION TOOL

QUESTIONNAIRE

1. Do you understand the meaning of the term ‘Productivity’? **Yes** **No**
2. If yes, what is it, please explain: _____
3. Is it applicable in teaching? **Yes** **No** **Maybe**
4. If yes, how? _____
5. If no, why not? _____
6. What is the best way of determining performance of a teaching professional in higher education? (Tick as many as applicable)
 - a. Performance Based Appraisal System (PBAS) b. Systematic Student Feedback c. Superior Feedback d. Pass percentage
 - e. Any other, pls specify: _____
7. Do you think the diverse tasks of a teaching professional are clearly included and acknowledged in the present system? **Yes** **No** **Maybe**
8. What hurdles are faced in the process of Performance Appraisal with special reference to Teaching in higher education?
9. Is the present PBAS aligned to the specific needs of teaching professionals across various disciplines? **Yes** **No** **Not sure**
10. What suggestions do you offer in this regard?

ABOUT YOURSELF

Name (optional): _____ Age: _____ Gender: Male/Female

A COMPARATIVE STUDY OF FINANCIAL PERFORMANCE OF PNB AND HDFC BANK

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ABSTRACT

A better performance in terms of Efficiency and profitability of banking sector is must for a flourishing economy to ensure the growth and development by facing intense competition, meeting greater customer demands and changing banking reforms. The fast moving competitive environment unleashed by Government policy of liberalization and globalization has brought about significant changes in the working of Indian banking industry. Recently the Indian economy has witnessed the emergence of many banks in the private sector. There are several reasons behind the increasing number of commercialization of banks. The growth of such banks is not possible unless they witness some success in the context of customer satisfaction or may it be the net assets held by these banks, efficiency of their management or the networks of each bank both in private as well as the public sector bank. The main objective of this paper is to make an evaluation of the financial performance of Punjab National Bank and HDFC Bank. The financial performance of a bank is measured by a number of key indicators with reference to Deposits, Advances, Total Income, Investment and Net Profit etc. Recommendations and suggestions have been given for improving the performance of both the Banks in India.

KEYWORDS

efficiency, indicators, profitability, performance parameters, PNB and HDFC bank.

INTRODUCTION

Public Sector Banks (PSBs) are banks where a majority stake (i.e. more than 50%) is held by a government. The shares of these banks are listed on stock exchanges. There are a total of 27 PSBs in India [21 nationalized banks + 6 State bank group (SBI + 5 associates)].

The **private-sector banks in India** represent part of the Indian banking sector that is made up of both private and public sector banks. The "private sector banks" are banks where greater parts of state or equity are held by the private shareholders and not by government.

Banking in India has been dominated by public sector banks since the 1969 when all major banks were nationalized by the Indian government. However, since liberalization in government banking policy in the 1990s, old and new private sector banks have re-emerged. They have grown faster & bigger over the two decades since liberalization using the latest technology, providing contemporary innovations and monetary tools and techniques.

Punjab National Bank is an Indian multinational banking and financial services company. It is a state-owned corporation based in New Delhi, India. Founded in 1894, the bank has over 6,968 branches and over 9,656 ATMs across 764 cities. It serves over 80 million customers.

Punjab National Bank is one of the *Big Four banks* of India, along with Bank of Baroda, ICICI Bank and State Bank of India.

HDFC Bank is an Indian banking and financial services company headquartered in Mumbai, Maharashtra. It has about 76,286 employees including 12,680 women and has a presence in Bahrain, Hong Kong and Dubai. HDFC Bank is the second largest private bank in India as measured by assets. It is the largest bank in India by market capitalization as of February 2016. It was ranked 58th among India's most trusted brands according to Brand Trust Report, 2015.

As of June 30, 2016, the Bank's distribution network was at 4,541 branches and 12,013 ATMs.

REVIEW OF LITERATURE

Uppal R. K. (2006) studies the impact of computerization on the performance of public and private sector banks. The study is based on primary and secondary data. The study concludes that the performance of fully computerized banks (HDFC, PNB, IDBI, ICICI and OBC) is much better than the partially computerized banks. In inter-bank group comparison, all bank groups show significant difference in profitability and productivity. Primary survey concludes that majority of the customers are satisfied with computerization of banking services where urban sector respondents show keen interest in computerization of banking business.

Tiwari B. and Herstatt (2006) examine the installation of mobile banking and mobile financial services provided in Germany and other countries. 50 banks worldwide have been selected, half of them from Germany during May/June, 2005. From Indian banks, Bank of Punjab, HDFC, ICIC are dominating, providing mobile-financial services to their customers. The study explains different ways/methods to provide mobile-services that contain technical part with some case studies. The study concludes that mobile banking applications are gaining popularity amongst banks and suggests mobile banking to take the route of online banking.

Garg and Jham (2006) investigate factors that influence Indian customers to adopt ATMs by using factor analysis and focused on the influence of demographic and psychological variables of 296 customers of six selected banks such as SBI, PNB, ICICI, HDFC, ABN and IDBI. It is examined that most of the respondents are below the age of 35 years and the users with lesser experience face more problems in comparison to other and they look for reliability 42 of information. There are problems of dim vision of screen and they use ATMs maximum for withdrawals and rarely for deposits.

Jha and Sarangi (2011) analyzed the performance of seven public sector and private sector banks for the year 2009-10. They used three sets of ratios, operating performance ratios, financial ratios, and efficiency ratios. In all eleven ratios were used. They found that Axis Bank took the first position, followed ICICI Bank, BOI, PNB, SBI, IDBI, and HDFC, in that order.

Thakarshibhai, L.C. (2011), "The Profitability Analysis of Banks in India", Paripex Indian Journal of Research, done study on the profitability analysis of few public and private sector banks and found that three key factors which are mean, standard deviation and anova model affect the profitability analysis of Indian banking sector. He found that in public sector banks return on capital employed found poor in contrast to private sector banks and suggested that it is essential for the public sector banks to apply their capital employed very efficiently to yield enough return. So, as they can contest with private sector banks.

K.V.N. Prasad and Dr. A.A. Chari (2011) conducted a study to evaluate financial performance of public and private sector banks in India. In this study they compared financial performance of top four banks in India viz., SBI, PNB, ICICI and HDFC, concluded that on overall basis HDFC rated to most position.

Dr. R. Gupta, Dr. N. S. Sikarwar, (2013) studied the growth rate of Punjab National Bank of India and HDFC Bank Limited as both the banks are giant banks in public and private sector, hence a study on growth analysis of both the bank for a period of 10 years, from 2000 to 2010 is done. The main growth parameters in banks are Net profit growth, Net assets growth, Earning Per Share growth and the results reveal that HDFC Bank has performed must better than PNB Bank.

OBJECTIVES OF THE STUDY

1. To review the financial performance of the PNB and HDFC bank in terms of deposits, advances, net profit etc.
2. To make a comparative study on the performance of the PNB and HDFC bank.

METHODS OF DATA COLLECTION

- **PRIMARY DATA:** Are those which are collected a fresh and for the first time and thus happen to be original in character and known as Primary data.
- **SECONDARY DATA:** Are those which have been collected by someone else and which have already been passed through the statistical process are known as Secondary data.

RESEARCH METHODOLOGY

The secondary data is collected from various journals, reports and annual reports have been collected from various websites of respective banks.

PERIOD OF THE STUDY

The post-reform period of five years has been taken for measuring the financial performance of PNB and HDFC bank. The years selected for analysis are from 2011-12 to 2015-16.

ANALYSIS AND DISCUSSION

Various parameters are used in identifying the strengths/weaknesses of banks and suggesting improvement measures in its future working. In the present study, following data/ parameters are used for the analysis of Financial Performance.

1. Net profit
2. Total Income
3. Investment
4. Advances
5. Deposits

NET PROFIT

Net profit, often referred to as net income, is the amount of money a company has left after all expenses, including taxes, have been subtracted from total revenue. Net profit is reported on a company's income statement and is one of the key indicators of the success or failure of a company's business operation during a given time period. The actual formula for calculating net profit is:

Net Profit = Total Revenue - Total Expenses

The balance of operating profit after the provisions and contingencies is known as net profit.

Net Profit mainly depends upon productivity of the bank and growth of profit per employee. The net profit patterns of banks under study are given in Table-1.

TABLE 1: NET PROFIT OF BANKS (in Rs. Crores)

BANKS	2011-12	2012-13	2013-14	2014-15	2015-2016	GROWTH RATE	AVERAGE
PNB	4884	4748	3343	3062	-3974	-181.3	2412.6
HDFC	5167	6726	8478	10216	12296	137.9	8576.6

Source: Compiled from the Annual Reports of the Banks

Table-1 Depicts that HDFC Bank has the better growth rate (137.9%) than PNB growth rate (-181.3%) and HDFC is good in Average (8576.6) than the Average of PNB (2412.6) during the study period. All this certify that HDFC Bank stands better than PNB in view of stability and profitability

TOTAL INCOME

The total income indicates the rupee value of the income earned during a period. It consists of: Interest on advances, discount on bills and Income on investments, etc. Noninterest income of banks arises from sources other than money lent. It comprises of Commission, exchange, brokerage, Profit on sale of investment, Profit on sale of land, buildings and other assets and Profits on Foreign exchange transaction. The higher value of total income represents the efficiency and good performance. The Total Income pattern of Banks under study is given in Table-2.

TABLE 2: TOTAL INCOME OF BANKS (in Rs. Crores)

BANKS	2011-12	2012-13	2013-14	2014-15	2015-2016	GROWTH RATE	AVERAGE
PNB	40630.63	46109.25	47799.96	52206.09	54301.37	33.65%	48209.46
HDFC	32530.04	41917.49	49055.18	57466.25	70973.17	118.18%	50388.43

Source: Compiled from the Annual Reports of the Banks

Table-2 Depicts that HDFC Bank has the better growth rate (118.18%) than PNB growth rate (33.65%) and HDFC is good in Average (50388.43) than the Average of PNB (48209.46) during the study period. All this certify that HDFC Bank stands better than PNB in view of efficiency and good performance.

INVESTMENTS

A **investment** is an asset that you put money into with the hope that it will grow or appreciate into a larger sum of money. The idea is that you can later sell it at a higher price or earn money on it while you own it.

Investment as a window of deployment of funds was given more emphasis than lending. Investment can be defined as sacrifice of present consumption with expectation of return in future. Investment takes place at present but return can be expected in future but return is uncertain too.

"Investment is made in assets. Assets in all are of two types- real assets (land, building etc.) and financial assets (stock, bond, etc.). Highly developed financial institutions greatly facilitate real investment.

"Investment is nothing but deploying our saving in manner that ensures safety of our money & provides a sustained return to supplement our regular income" (Delhi Stock exchange 2002). The total Investment pattern of Banks under study is given in Table-3.

TABLE 3: TOTAL INVESTMENT OF BANKS (in Rs. Crores)

BANKS	2011-12	2012-13	2013-14	2014-15	2015-2016	GROWTH RATE	AVERAGE
PNB	122629	129896	143786	149877	157846	28.72%	140806.8
HDFC	84728.34	97342.80	105831.88	151641.77	163885.78	93.42%	120686.11

Source: Compiled from the Annual Reports of the Banks

Table-3 Depicts that HDFC Bank has the better growth rate (93.42%) than PNB growth rate (28.72%) and PNB is good in Average (140806.8) than the Average of HDFC (120686.11) during the study period. All this certify that HDFC Bank stands better than in view of stability and profitability

ADVANCES

Advance is a 'credit facility' granted by the bank. Banks grant advances largely for short-term purposes, such as purchase of goods traded in and meeting other short-term trading liabilities. In other words, it is the amount borrowed by a person from the Bank. It is also known as „Credit“ granted where the money is disbursed and recovery of which is made later on. Bank credit means the loan (advances) made by the banks to the customers. Credit deployment is the major force through which banks helps in the transformation of saving into capital. This is considered to be the single most important causal factor in the process of economic development with the expansion of bank deposits. There has been continued expansion of bank credit reflecting the rapid expansion of agricultural and industrial output. The Advances pattern of Banks under study is given in Table-4.

TABLE 4: ADVANCES OF BANKS (in Rs. Crores)

BANKS	2011-12	2012-13	2013-14	2014-15	2015-2016	GROWTH RATE	AVERAGE
PNB	293775	308796	349269	380534	412326	40.35%	348940
HDFC	195420	239721	303000	365495	464594	137.74%	313646

Source: Compiled from the Annual Reports of the Banks

Table 5 Depicts that HDFC Bank has the higher growth rate (137.74%) than PNB growth rate (40.35%). On the other hand, PNB has the higher average total credits of Rs. 348940 crores than the average of HDFC Rs. 313646 crores. Therefore, it indicates that the bank with good growth rate of total credits during the study period does not always mean having high average of total credits.

DEPOSITS

Deposit is the amount accepted by bank from the savers in the form of current deposits, savings deposits and fixed deposits and interest is paid to them. In general terms money deposits in banks are known as bank deposits. Deposits mobilization gets added attention in a developing country like India where resources mobilization acts as a prime mover of the development process. Expansion of Public Sector Banks deposits has been an important feature in recent years. Planned economic development, deficit financing and increase in currency issue have led to increase in Public Sector Banks deposits. At the same time Public Sector Banks have contributed greatly to the development of banking habit among the people. The deposit pattern of Banks under study is given in Table-5.

TABLE 5: DEPOSITS OF BANKS (in Rs. Crores)

BANKS	2011-12	2012-13	2013-14	2014-15	2015-2016	GROWTH RATE	AVERAGE
PNB	379588	391560	451397	501379	553051	45.70%	455395
HDFC	246706	296247	367337	450795	546424	121.49%	381502

Source: Compiled from the Annual Reports of the Banks

From the Table 5, HDFC Bank has the higher growth rate (121.49%) than PNB growth rate (45.70%). On the other hand, PNB has the higher average deposits of 455395 than the average deposits of HDFC 381502. Therefore, it indicates that the bank with good growth rate of total deposits during the study period does not always mean having high average of total deposits.

ANALYSIS AND FINDINGS

On the basis of study of financial performance, based on the parameters like Net profit, Total income, Investment, Total assets, Advances, Deposits, it can be concluded very safely that the study of last five years i.e. from 2012 to 2016 HDFC Bank has performed much better than Punjab National Bank and we conclude that the HDFC bank have much better growth prospects as compared to PNB bank.

SUGGESTIONS TO IMPROVE THE PERFORMANCE OF PNB BANK

The forgoing analysis reveals that though there is a phenomenal development in the performance, still PNB bank lagging behind in some major thrust areas. Some recommendations to improve the performance of PNB bank are given below:

TECHNOLOGY: Technology has been a boon to many industries and especially to the banking industry. With the help of technology banks are able to reach out to more customers and provide better services to them. Also, it helps them function in an organized and in a secure way. PNB Bank is lagging behind in technology when we compare it with HDFC bank.

COMPETITION: Competition in the banking system is desirable for efficiency and maximization of social welfare. Due to LPG, the banks are facing a severe competition. To stay ahead in the race, therefore, banks will have to leverage technology development as well as developing sophisticated financial products. PNB bank in particular will have to develop new tech-savvy products to beat the competition.

NON-PERFORMING ASSETS: The PNB bank should prepare a loan recovery policy for reducing NPA. The advances provided by bank should be given after pre-sanctioning evaluation and post-disbursement control for reducing NPA. For effective handling of NPA, the bank should create special recovery cells as head office/regional office/zonal office identify critical branches for recovery. NPA may be reduced by proper selection of borrowers & clients required to get timely payment.

HUMAN RESOURCE MANAGEMENT: Human resources development is a crucial factor which can play a vital role in increasing business per employee and profit per employee. The management should execute appraisal system based on merits and performance of employees. The training system of PNB bank should be geared to design innovative and highly specialized programs as a measure to improve and provide skills, knowledge and expertise in functional areas.

CHECK ON OPERATING COST: Operating expenses are the expenses incurred in conducting the bank's ongoing operations. High operating cost is a major hurdle impacting the profitability of public sector banks. The financial position of PNB bank can be enhanced by keeping a control on operating cost through higher labour productivity, updated technology, low cost funds and restructuring of un-remunerating branches.

PNB bank must refer the suggestions provided above in the study in order to improve the efficiency.

CONCLUSION

A better performance in terms of Efficiency and profitability of banking sector is must for a flourishing economy to ensure the growth and development by facing intense competition, meeting greater customer demands and changing banking reforms. The fast moving competitive environment unleashed by Government policy of liberalization and globalization has brought about significant changes in the working of Indian banking industry. Recently the Indian economy has witnessed the emergence of many banks in the private sector. There are several reasons behind the increasing number of commercialization of banks. The growth of such banks is not possible unless they witness some success in the context of customer satisfaction or may it be the net assets held by these banks, efficiency of their management or the networks of each bank both in private as well as the public sector bank. The main objective of this paper is to make an evaluation of the financial performance of Punjab National Bank and HDFC Bank. The financial performance of a bank is measured by a number of key indicators with reference to Deposits, Advances, Total Income, Investment and Net Profit etc. Recommendations and suggestions have been given for improving the performance of both the Banks in India.

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MARKETING STRATEGIES ADOPTED BY PATANJALI AYURVED LIMITED**DR. RAJSHREE. R****HEAD****DEPARTMENT OF COMMERCE****KASTURBA GANDHI COLLEGE FOR WOMEN****SECUNDERABAD****SHIVALAXMI****LECTURER****KASTURBA GANDHI COLLEGE FOR WOMEN****SECUNDERABAD****T. SUSHMA SADANAND****LECTURER****KASTURBA GANDHI COLLEGE FOR WOMEN****SECUNDERABAD****ABSTRACT**

Patanjali Ayurved Limited was founded by Swami Ramdev Maharaj and Acharya Shree Balakrishna at Haridwar Uttarakand on 13/1/2006. It is the fastest growing Indian FMCG Company which imports herbs from Himalayas of Nepal. The Company aims at manufacturing Ayurvedic medicine as well as distribution of products ranging from food, beverages to cosmetics and fabri-care. The focus or USP has been to provide natural ingredients and herbal cosmetics solutions to consumers at affordable costs. Since its inception the company has grown manifold expanding across many segments and many countries worldwide. Today Patanjali has established itself as a formidable player in the FMGC industry. It has grown exponentially in term of size and revenue. It has gained popularity and dominance over markets in urban and now even in rural areas under the umbrella of spirituality. This paper focuses on the strategies adopted by this giant corporation which has contributed to its success.

KEYWORDS

ayurveda, spirituality, herbal cosmetics, marketing strategies.

INTRODUCTION

 spirituality has become the magic word a remedy for all ills. Kale defined spirituality as "An individual's endeavors to explore and deeply and meaningfully connect one's inner self to the world and beyond" {Kale2006}. In this world of chaos all one seeks is to be in a stage of bliss. This is the universal problem today, and Shri Baba Ramdevji has strategically, successfully tapped the right chord. He initially introduced breathing exercise and asanas (yogic exercises), in a simple way to bring ease to the diseased, mental or physical... He has touched billions of people worldwide and later he has launched several products based on ayurveda making marketing through spirituality as his strategy to change the consumption behavior of consumers worldwide.

Furthermore, Patanjali yogapeeth has brought about health revolutions in the country with the integrated approach of yoga and ayurveda which has also become popular all over the globe. Hindustan Unilever and P&G are the FMCG companies whose sales have been massively affected by the launch of Patanjali products. Patanjali has generated revenue of 5000 crores for the fiscal year 2015-16.

RELEVANCE OF AYURVEDA IN TODAY'S WORLD

Since time immemorial (almost 5000 B.C) Ayurveda has always been a trustworthy remedy for many ills promising optimal health and wellbeing of mind, body, behavior and environment. Modern medicine along with promising doctors and hospitals has created a sense of fear and mayhem in the minds of people throughout the world. Many prefer to revert back to the natural form of medicine with little and no side effects with nature being the main component. Ayurveda proposes maintenance and positive health, cure of diseases through medicine, exercises, dietary restrictions and regulated life style. Ayurveda is known for its increasing safety, and efficacy is time tested. Ayurveda has been recognized by WHO as complete system of natural medicine. Ayurveda has a 70% share in the formal medicine market in the country. Demand for ayurvedic formulations is increasing both in the domestic as well as international market. Due to the rapidly increasing demand, there is tremendous pressure on the supply bar. Rural Consumers relate to ayurvedic medicine even today.

Patanjali Ayurved has risen amidst competition from many domestic and multinational companies in the year 2012. It had entered the retail sector launching 100 products to much more today.

PRODUCT PORTFOLIO

The company's many products include:

- FOODS: Jams, noodles, pulses, oats, biscuits and many other lines of food products
- Beverages like herbal teas, and other drinks
- Healthcare & Medicines
- Personal care products- Shampoos, Soaps,
- Cleaning agents
- The list is exhaustive. The products which have given an edge over its competitors are honey, tooth paste and noodles of patanjali.

STRATEGIES ADOPTED BY PATANJALI AYURVED LTD.

The strategies which have made this a global phenomenon are as follows:

ADVERTISING STRATEGY

Advertising of Patanjali initially was only by word of mouth. The brand loyalty of its customers took care of their advertising. Later Baba Ramdevji started his Yoga sessions and this was beamed live into 170 countries, which was well received by all, irrespective of class, creed, culture. Through his strategies of mass customization, mass advertising, low cost and feasibility, he has become a sensation worldwide almost overnight.

He later built powerful partnerships with various prominent T.V Channels and his techniques of yoga, healing through ayurveda were broad cast and soon he was considered a veteran guru of yoga across the globe. He also, created employment opportunities through his numerous camps.

Advertising his products as "Swadeshi" made in India was well received by consumers. He has marketed his commodity and service through national Broadcasting networks. Apart from word of mouth yoga camps, with DVD's and Videos etc., he has marketed and promoted his products/services exceptionally well.

MARKETING STRATEGY

The marketing strategy has included the crux of the idea behind Patanjali. 1) use of natural ingredients and Ayurved 2) Pricing. By advocating that their honey is purer than Dabur Honey and by pricing it 30% lesser than Dabur, they have given the customers a better buying option. Similarly, they have launched their noodles during the Maggi noodles controversy. Using herbs to cleanse teeth and gums lead people to buying Patanjali toothpaste instead of Colgate and other ones. They are continuously educating the people about the benefits and advertising that their products are affordable. They have adopted the BRANDED HOUSE STRATEGY which means all the products produced and promoted will be less than one brand PATANJALI AYURVEDA. The company does not market and promote individual products. They promote the brand Patanjali which saves them marketing and advertising costs. Patanjali products can be bought online too.

PRICING AND PACKAGING STRATEGY

This is like an icing on the cake. The company has developed an effective and affordable pricing strategy thereby targeting large market. It is penetrative pricing strategy. Since the ingredients are natural and local, the cost is less too. The products are sourced directly from farmers. Middlemen are eliminated resulting in profits. The price of Patanjali products is lesser by 30 % compared to the other international products. The packaging of Patanjali products are kept simple and natural so that the consumers get the feel of health and wellness. The packaging itself advocates the message of ayurveda.

PROMOTION AND DISTRIBUTION STRATEGY

The slogan "PRAKRI TI KA ASHIRWAD" has helped in their promotions. The Patanjali ads also focused that the revenue will be given to charity. Furthermore, Baba Ramdevji himself single handedly is the brand ambassador of Patanjali. He has contributed a great deal to the lives of millions of people and this has added to the requisite fame and popularity.

The assurance given to people is that through ayurveda one can have cure from a single cold to cancer including HIV and AIDS. Distribution of ayurvedic medicines is through three types of medical centres. Patanjali chikatsalyas which are like clinics. Patanjali Arogya Kendras which are health and wellness centres. Non medicine outlets called Swadeshi Kendras, and yoga chikatsalyas. All of this has given easy access to treatment for people. The distribution is through retail stores too which are likely to grow in the near future. Today they have 4000 distributors, 10,000 stores and 100 mega marts. They have tied up with retail chains like Future Group and Reliance Retail.

CONCLUSION

The success of Patanjali Ayurveda Ltd has been due to its carefully crafted strategies keeping in mind the middle class needs, values, sentiments, without any discrimination of gender. Determinants like price, quality, availability, effectiveness and even packaging size played a major role in the popularity of this giant corporation. Product leadership, Operational excellence and Customer familiarity has been the factors which have contributed to the success of Patanjali Ayurved. However, the need of the hour is to strengthen the distribution channels so that they cater to rural markets too in a big way. The market is attractive and has vast potential. Quality should always be the focus. Since people buy Patanjali products due to the hedonic value attached to its products it attracts more of brand loyal customers than price sensitive customers. The strategies adopted so far have contributed to phenomenal success of Patanjali Ayurveda but sustainability is an important factor. In the long run, it has to be seen if the company will still rule the FMCG sector.

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ISSUES AND PROSPECTS OF MARINE FISHERIES SUB-SECTOR IN INDIA

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ABSTRACT

Fisheries, marine fisheries in particular, constitute an important sector of the Indian economy. It makes an important contribution to Indian economy in terms of employment, livelihoods, food security and foreign exchange earnings. It plays significant role in the development of coastal communities of India. The marine fishing sub-sector accounts for approximately one percent of national Gross Domestic Product (GDP). Fisheries constitute about 4.75 per cent of the agriculture GDP. This paper briefly describes the growth of marine fisheries in India. It reviews and identify key issues and opportunities and recommend some changes that could improve the productivity of marine fisheries sector and increase net benefits from the sector.

KEYWORDS

marine fisheries, inland fisheries, fish production, gross domestic product, sustainable fisheries, informal source of finance, fisheries co-operative societies.

JEL CODE

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INTRODUCTION

Fishing in India is a very important economic activity employing over 14 million people. According to Government of India figures, the marine sub-sector accounts for approximately 39 percent of the total national fish production. Inland fishing accounts for 61 percent of total fish production. India is the world's third largest fish producing nation and second in inland aquaculture. The marine fishing sub-sector accounts for approximately one percent of national Gross Domestic Product (GDP). It also forms an important component of the rural coastal economy, generating income, employment, livelihoods, and food security for an estimated 3.52 million people along the 8,118 km Indian coastline, who depend on fishing for their livelihoods. Close to 100 percent of working people in these small coastal communities are engaged in marine fisheries-related livelihoods.

TABLE 1: MARINE FISHERIES RESOURCES OF INDIA – AT A GLANCE

Marine Resources & Fisher Statistics	
Coastline (km)	8 118
Exclusive Economic Zone (million km ²)	2.02
Continental shelf ('000 km ²)	530
Fish Landing Centres (Nos.)	1376
Fishing villages (Nos.)	3 322
Fishermen families (Nos.) (NMFC, 2005)	764868
Fisher folk population (Nos.) (NMFC, 2005)	3574704

Source: Report of the Working Group for the XII Five Year Plan: 2012-17

OBJECTIVES OF THE STUDY

1. To study the prospects of Marine fisheries sub-sector in India.
2. To find the growth of marine fish production in India over the years.
3. To review and identify major issues of marine fisheries sub-sector in India.

RESEARCH METHODOLOGY

This paper is mainly exploratory in nature. For the study, secondary data has been used. The sources of secondary data are books, journals, various reports and websites.

GROWTH AND PERFORMANCE OF MARINE FISHERIES IN INDIA

TABLE 2: MARINE AND INLAND FISH PRODUCTION IN INDIA

Year	In '000 Tonne			Growth (%)		
	Marine	Inland	Total	Marine	Inland	Total
1950-51	534	218	752	--	--	--
1955-56	596	243	839	11.61	11.47	11.57
1960-61	880	280	1160	47.65	15.23	38.26
1965-66	824	507	1331	-6.364	81.07	14.74
1970-71	1086	670	1756	31.8	32.15	31.93
1973-74	1210	748	1958	11.42	11.64	11.5
1978-79	1490	816	2306	23.14	9.091	17.77
1979-80	1492	848	2340	0.134	3.922	1.474
1980-81	1555	887	2442	4.223	4.599	4.359
1981-82	1445	999	2444	-7.074	12.63	0.082
1982-83	1427	940	2367	-1.246	-5.906	-3.151
1983-84	1519	987	2506	6.447	5	5.872
1984-85	1698	1103	2801	11.78	11.75	11.77
1985-86	1716	1160	2876	1.06	5.168	2.678
1986-87	1713	1229	2942	-0.175	5.948	2.295
1987-88	1658	1301	2959	-3.211	5.858	0.578
1988-89	1817	1335	3152	9.59	2.613	6.522
1989-90	2275	1402	3677	25.21	5.019	16.66
1990-91	2300	1536	3836	1.099	9.558	4.324
1991-92	2447	1710	4157	6.391	11.33	8.368
1992-93	2576	1789	4365	5.272	4.62	5.004
1993-94	2649	1995	4644	2.834	11.51	6.392
1994-95	2692	2097	4789	1.623	5.113	3.122
1995-96	2707	2242	4949	0.557	6.915	3.341
1996-97	2967	2381	5348	9.605	6.2	8.062
1997-98	2950	2438	5388	-0.573	2.394	0.748
1998-99	2696	2602	5298	-8.61	6.727	-1.67
1999-00	2852	2823	5675	5.786	8.493	7.116
2000-01	2811	2845	5656	-1.438	0.779	-0.335
2001-02	2830	3126	5956	0.676	9.877	5.304
2002-03	2990	3210	6200	5.654	2.687	4.097
2003-04	2941	3458	6399	-1.639	7.726	3.21
2004-05	2779	3526	6305	-5.508	1.966	-1.469
2005-06	2816	3756	6572	1.331	6.523	4.235
2006-07	3024	3845	6869	7.386	2.37	4.519
2007-08	2920	4207	7127	-3.439	9.415	3.756
2008-09	2978	4638	7616	1.986	10.24	6.861
2009-10	3104	4894	7998	4.231	5.52	5.016
2010-11	3250	4981	8231	4.704	1.778	2.913
2011-12	3372	5294	8666	3.754	6.284	5.285
2012-13	3321	5719	9040	-1.512	8.028	4.316
2013-14(P)	3443	6136	9579	3.674	7.291	5.962
2014-15(P)	3491	6577	10069	1.394	7.187	5.115

Source: Ministry of Agriculture, Govt. of India. (14268), (ON463) & (16361)

FIG. 1

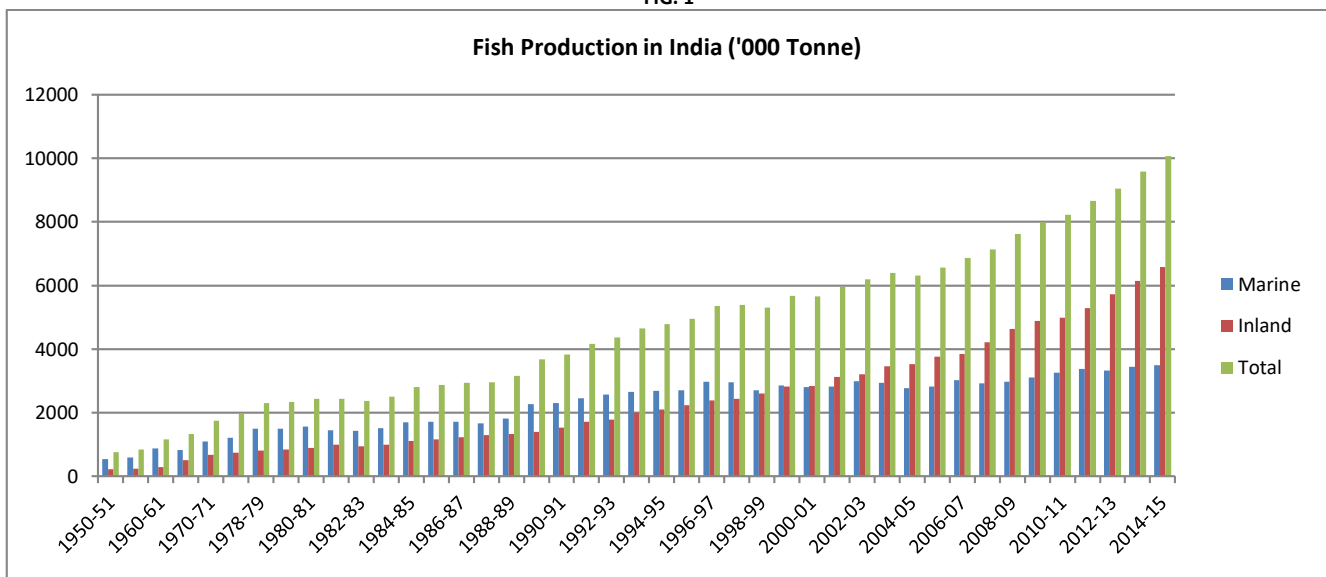
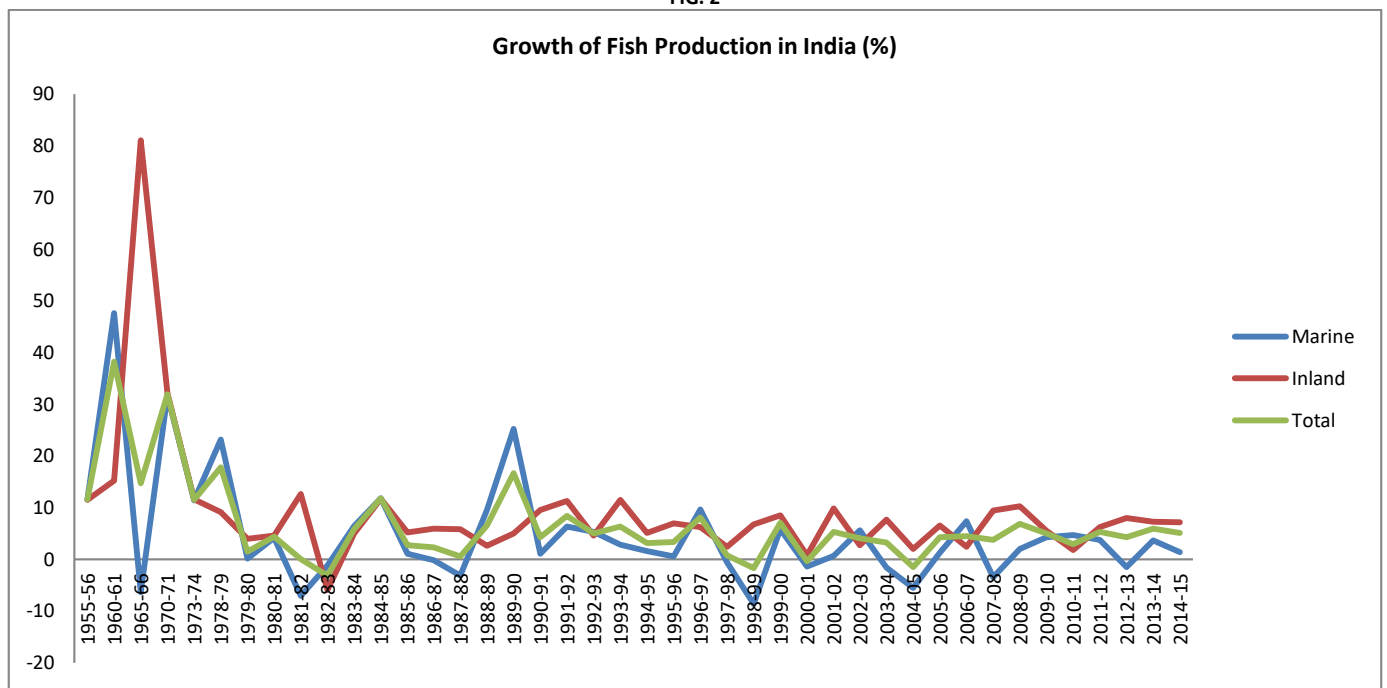


FIG. 2



ISSUES OF MARINE FISHERIES SUB-SECTOR IN INDIA

ISSUES OF SUSTAINABLE FISHERIES MANAGEMENT

Issues in marine fisheries management in India are: declining trend in catch and catch rates of commercially exploited stocks; overfishing due to open access/common property nature of coastal resources, the use of inappropriate technology, excess fleet size in terms of numbers; ecosystem/ diversity degradation affecting the productivity. In India there are basic regulatory and licensing regimes for fisheries management, augmented by seasonal fishing bans, mesh size, and limited use of zoning. However, Absence of suitable policies, institutions and regulatory mechanisms due to lack of appropriate and effective governance is also factor contributing to unsustainable fishery.

According to government of India, over 61 percent of marine capture fish stocks are already over-exploited, and most of the remaining stocks are fully exploited, leaving little or no scope for future expansion in inshore waters. Another factor contributing to declining fish stocks may be expanding coastal development activities, including land reclamation; construction of ports, bridges, roads, and buildings for industrial and residential purposes; oil and natural gas exploration; pollution from agricultural run-off containing chemicals, fertilisers and pesticides; and industrial effluents and urban sewage.

ISSUES RELATED TO FISHERIES CO-OPERATIVE SOCIETIES

A number of fishery co-operatives in the country are helping their members and their family members to the extent of providing complete marketing infrastructure for the sale of the catch at remunerative prices. They satisfy investment needs of members such as purchase of boats and engines, purchase of nets and gears, marketing and processing equipment and plants. They also satisfy working capital requirement such as repair of boats and nets, purchase of diesel, marketing expense. They also provide loans to members. Cooperatives can enhance production, processing, storage, transport capacity and back up finance needs.

The poor performance of fisheries co-operative is due to absence of genuine co-operative leadership, lack of financial resources, incompetent management personnel and growth of vested interests. Generally, co-operative leadership comes from the middle men and economically, socially and politically dominating members of the village. These societies are not having adequate facilities for storage, processing, and marketing of fish.

There is a need to create an economically viable, technically sound and professionally managed fishery cooperative which should be capable of providing genuine support to fishers.

ISSUES RELATED TO CREDIT FOR FISHERIES ACTIVITIES

According to a study conducted by Thiraphong Tangthirasunan (2007), credit to fisheries from the banking sector in India is only 1% of the total credit that goes to agriculture. Informal sources of credit continue to play significant role as the source of financing of fishermen.

It is difficult to obtain loan by poor fishermen since they don't have adequate property that can be offered as collateral. Since fishery business is seasonal, the repayment schedule for fishermen is inflexible. It is also very difficult to obtain formal credit by the people involved in fish marketing chain.

Majority of small scale fishers and traders prefer to take loan from informal sources such as traders, money lenders, merchants. They prefer informal sources for credit due to ease of access relative to more formal structures such as banks and other financial institutions.

A study conducted by Srivastava U.K., Reddy M. Darma, and Gupta V.K. (1982), on "Management of marine fishery industry" revealed that fishermen feel that the finance provided by the merchants is both cheaper and easier. Merchants are able to provide cheap finance because they are able to make it up by selling the fish from bonded boats. Fisherman, after having obtained a boat through institutional finance, needs money for repairs and maintenance. Often these entail a large expenditure. Financial institutions are reluctant to finance this activity.

ISSUES RELATED TO MARKETING OF FISH

Domestic marine fish market chains in India are generally characterised by unhygienic conditions, poor handling of fish and loss of quality (from the boat to the final market), and a subsequent reduction in profits. While new developments in marketing channels such as mega-grocery stores are emerging in some larger cities, with modern fish handling practices and facilities, smaller-scale fishers are often unable to gain access to these marketing channels due to the poor quality of their product.

Major contributors to this problem are the lack of easily accessible and low-cost credit, and the affordability of basic infrastructure such as ice, cold storage, and transport that would enable fishers to maintain better quality and obtain higher prices. While demand for fish products in India is forecasted to rise significantly in the future, the small-scale fishers and traders do not have adequate information about market requirements and emerging market opportunities.

ISSUES RELATED TO INFRASTRUCTURAL FACILITIES

In India, the infrastructural facilities for fisheries activities are inadequate. The on-shore infrastructure to be developed includes the landing centers and fishing harbours along with the requisite ancillary facilities. Domestic marine fish market chains in India are generally characterised by unhygienic conditions, poor handling of fish and loss of quality from the boat to the final market. Major contributors to this problem are the lack of basic infrastructure such as ice, cold storage, and transport facilities. There should be facilities for clean water, ice, and cold storages. Apart from the on-shore infrastructure, the boats would need to be suitably equipped with navigational and safety equipment, equipment for on-board preservation and handling of catch to bring fish in good condition to the shore.

CONCLUDING REMARKS

Majority of the small-scale fishermen are taking credit from non-institutional or informal sources which are costlier and exploitative. Therefore institutional credit should be provided to them at concessional rate. The major problem for getting institutional credit is inability of fishermen to offer adequate amount of collateral security. Credit programmes need to be designed so that they fulfil the criteria of timeliness, simplicity and flexibility. The credit system could be improved for those in the fishing sector by making repayment schedules tailored to the fishing season, i.e. with higher repayments in the open season and lower repayments in the closed season.

The fisheries co-operatives are not working properly and they are dominated by rich people. Government should actively take interest in and keep watch on functioning of the fisheries co-operatives. There is need to develop proper infrastructure for fisheries activities. For sustainable fisheries, efforts are directed towards formulation of suitable policy and its effective implementation. Fisheries management needs to be strengthened.

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SERVICE QUALITY IN IT SERVICES: A CASE STUDY

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ABSTRACT

Information Technology (IT) industry has played a significant role in transforming India's image from a slow moving bureaucratic economy to a land of innovative entrepreneurs and a global player in providing world class technology solutions and business services. This study is based on service quality assessment of IT services. The main objective is to identify the relationship between customer satisfaction and customer retention in the IT industry. The study adopts a case study design. The application of Kano model variables and their relevance in service quality of the company are critically evaluated. Questionnaire is used to collect primary data from respondents who are the customers of the company. From the analysis, it is evident that customer satisfaction and customer retention are highly correlated. The Kano model variables which result in customer satisfaction when fulfilled and in dissatisfaction when not fulfilled are design of user interface and security. The other factors which contribute to customer satisfaction are content management services, free optimization services and site traffic analysis. The factors which neither result in satisfaction and dissatisfaction were also identified. The factors which result in reverse quality are over adherence to contractual agreements, presence of bugs and low price. Frequent client communication, after launch services and timely completion of the project are the major factors which result in customer retention. The study poses various implications in the field of service quality of IT firms.

KEYWORDS

information technology (IT) industry, service quality, customer satisfaction, customer retention, Kano model.

INTRODUCTION

Information Technology (IT) industry in India has played a key role in putting India on the global map. The IT industry in India has been one of the most significant growth contributors for the Indian economy. The industry has helped India transform from a rural and agriculture-based economy to a knowledge based economy. The growth momentum attained by the overall economy since the late 1990s to a great extent can be owed to the IT sector, led by a liberalised policy regime with reduction in telecommunication costs have led to spurt in investments by multinational companies as well as domestic companies in the country.

Indian IT companies have globally established their superiority in terms of cost advantage, availability of skilled manpower and the quality of services. They have been enhancing their global delivery capabilities through a combination of organic and inorganic growth initiatives. Global giants like Microsoft, SAP, Oracle, and Lenovo have already established their captive centers in India. In the turbulent, challenging and competitive IT business scenario, it is very important to ensure service quality for better customer satisfaction, for customer retention, for better customer service and for overall success of the organisation. IT companies must adopt best practices to address those issues in order to sustain the current growth. The measurement of subjective aspects of customer services depends on the conformity of the expected benefit with the perceived results.

CUSTOMER SATISFACTION, CUSTOMER RETENTION AND SERVICE QUALITY

Customer satisfaction has been considered to be based on the customer's experience on a particular service encounter (Cronin & Taylor, 1992). Service quality is a determinant of customer satisfaction. Regarding the relationship between customer satisfaction and service quality, Oliver (1993) suggested that service quality would be antecedent to customer satisfaction regardless of whether these constructs were cumulative or transaction-specific. Lehtinen and Lehtinen (1982) pointed out that service quality is created by the interaction between customers and the service provider, and they divided service quality into the process and result for observation. Gronroos (1984) proposed that service quality is the comparison result of customer's expectation and cognition for service, and proposed the service quality model in 1984. The service quality model proposed by Gronroos (1984) is formed by the three functions: Technical Quality, Functional Quality, and Corporate Image. Technical Quality refers to the integrated result between the customer and service company, which often can be objectively measured; Functional Quality refers to the cognition of a customer regarding service and includes the service process, which is often subjectively identified.

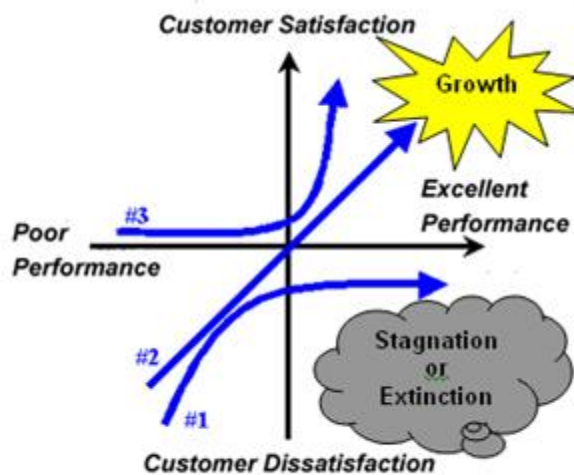
Some researchers have found empirical supports for the view that customer satisfaction came as a result of service quality (Anderson & Sullivan (1993); Fornell, Johnson, Anderson, Cha, & Everit (1996). In relating customer satisfaction and service quality, researchers have been more precise about the meaning and measurements of satisfaction and service quality. Satisfaction and service quality have certain things in common, but satisfaction generally is a broader concept, whereas service quality focuses specifically on dimensions of service (Wilson, Zeithaml, Bitner, & Gremler, (2008). Although it is stated that other factors such as price and product quality can affect customer satisfaction, perceived service quality is a component of customer satisfaction (Parasuraman, Zeithaml, & Berry, 2006).

Kano, Seraku, Takahashi and Tsuji (1984) developed a model to classify the attributes of services or products which studies the relationship between customer satisfaction and the function of product or services. Kano model can effectively evaluate current products or develop new products as per the research studies conducted by Matzler, Bailom, Hinterhuber, Renzl, & Pichler (2004). Lee, Cheng & Yen, 2009 opined that Kano model can ensure that customer demand and expectation to achieve the organizational goal. Hu, Yen, Chiou & Cheng (2009) summarized that Kano's Model has the following advantages such as: Provides better method to understand customer demands; Provides clear priority order for improvement; Assists in providing valuable contingency model in the developing and manufacturing system stage; Provides market segmentation method; Provides market differentiation method. The basic concept of Kano's Model has been broadly applied in many regions and studies (Matzler & Hinterhuber, 1998; Anderson & Sullivan, 1993) and has been verified as a very useful tool for quality attribute categorization, customer satisfaction analysis, and the continuous improvement of quality attributes (Lee, Cheng & Yen, 2009).

KANO MODEL

The Kano model shows why service providers and consumers see quality in different ways and demonstrates the importance of expectations and perceptions in service delivery. Kano model is aimed at a better understanding of how customers evolve, evaluate and perceive quality attributes and focused the attention on the attributes considered more important by customers in order to improve them. Kano model explains how the differences that separate the degree called sufficient by that of excellent when considering the customer's satisfaction.

FIGURE 1: KANO MODEL AND CUSTOMER'S SATISFACTION



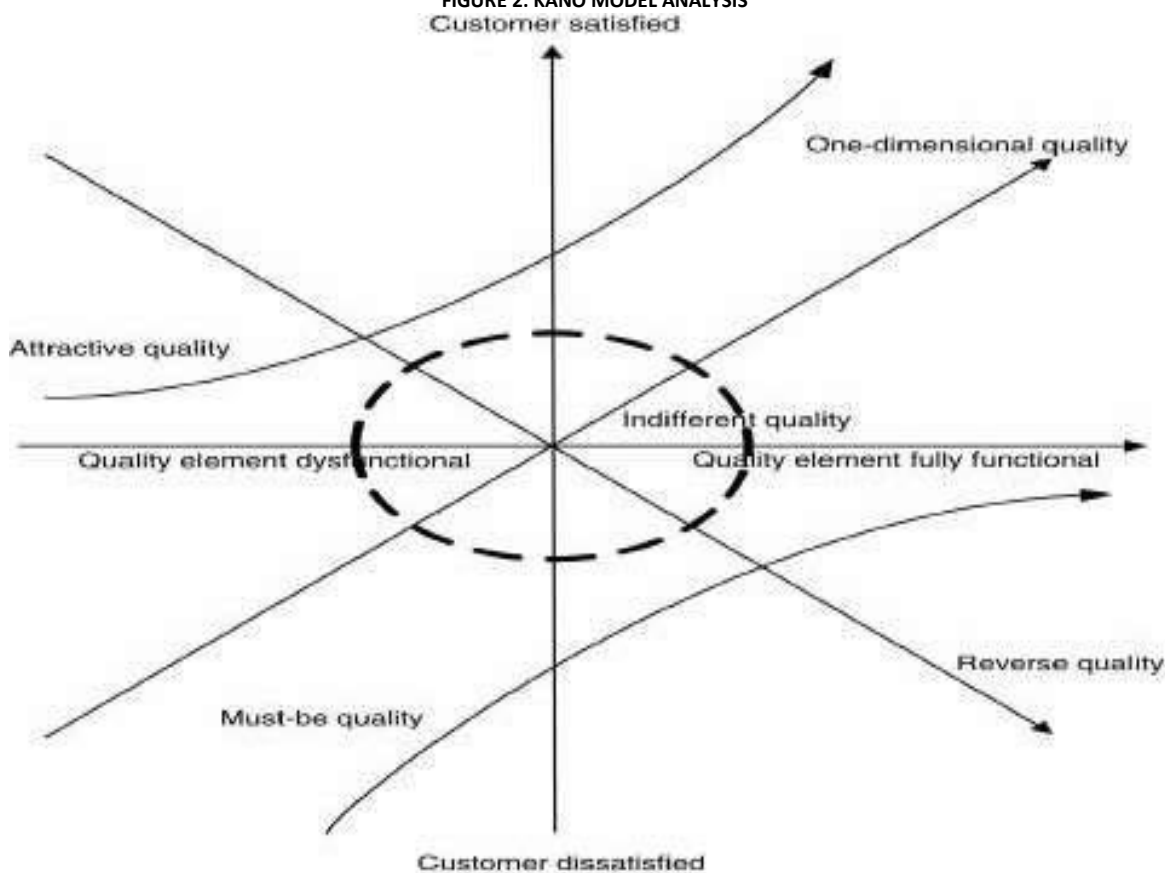
Note: this is only a concept and not an exact graphic. The center where the two scales meet is not necessarily zero.

Source; http://www.tools2improve.com/kano_analysis_dr.html

Fig. 1 depicts the association of customer satisfaction and organisational performance. Beside theoretical considerations, the gap-based measurement offers the opportunity to analyze the reasons for dissatisfaction by examining significant gaps between customers' perceptions and expectations. The main idea behind the two-dimensional quality theory for distinguishing quality elements is the observation of the impact on customer satisfaction in the fulfilled conditions (high performance) and the impact on dissatisfaction in the non-fulfilled conditions (low performance). Kano model classifies the customer requirements into 6 categories, based on the extent to which they have been able to satisfy customers. Kano model states that quality attribute can categorize six types, attractive, One-dimensional, Must-be, Indifferent, Reverse, and Questionable quality attributes.

The first class includes attractive quality elements and includes some attributes of services or products the presence of which leads to customer satisfaction; however, the absence of them will not result in dissatisfaction. These are the attributes of products or services that will distinguish the organization from its rivals. The second class includes one-dimensional quality elements that have a positive and linear relationship with customer satisfaction. So, the more these attributes are realized, the more satisfied the customers will be and vice versa, the lesser these attributes are realized, the lesser satisfied the customer will be. The third category is the must-be quality elements. These attributes are the basic criteria for a product or service the lack of which will make the customers quite dissatisfied. However, the fulfillment of these attributes will not increase the customer satisfaction. Another class belongs to the indifferent quality elements the presence or the absence of which will not influence the satisfaction or dissatisfaction of customers. The fifth class in Kano Model is the reverse quality elements the presence of which causes the dissatisfaction of customers and the absence of which causes their satisfaction. There is another class in Kano's classification, other than these elements, that is called questionable elements. This is when customer has not perceived the question or the information provided by the question is not sufficient, or in other words, the customer is doubtful about this criterion.

FIGURE 2: KANO MODEL ANALYSIS



Source: www.kanomodel.com

RESEARCH METHODOLOGY

This study is based on service quality assessment of IT services which result in customer satisfaction and customer retention. The study attempts to identify quality attributes which lead to customer satisfaction. The main objective is to identify the relationship between customer satisfaction and customer retention in the IT industry. The quality factors which influence IT services which can provide satisfaction when delivered are identified. The relationship between after launch services and customer satisfaction, the relationship between price and customer satisfaction and the relationship between frequency of client communication and customer satisfaction is assessed. The reverse quality attributes which cause dissatisfaction when fulfilled are identified. The application of Kano model variables and their relevance in delivery of IT services of the company are critically evaluated. The research design in this study is exploratory design. The study adopts a case study method. Cenveo Solutions, an offshore outsourcing and offshore software development company in India is identified for the study by judgment sampling.

PROFILE OF THE COMPANY SELECTED FOR THE STUDY

C Solutions was established in year 2008 and since then has maintained remarkable growth over the years as a web development company. C Solutions offers complete services for web application development, web hosting solutions, web Promotion, web maintenance, graphic design that stand out, to final implementation and testing. They specialize in web design & development, search engine optimization and web marketing, ecommerce, multimedia solutions, content writing, graphic and logo design. The company builds web solutions, which evolve with the dynamic needs of business. A team of web consultants, creative designers, content writers, programmers and web marketing professionals offer high end Web Consulting. C Solutions had shown effective proficiency in Open Source based solutions. The outsourcing development is a relatively recent business innovation, made possible by global advances in long distance transportation and communication combined with developing international economies.

They offer significant cost savings and we have built a reputation for doing solid, disciplined work that is delivered on time. The global presence, process oriented methodologies and efficient delivery models enable the company to provide an integrated and highly flexible mix of on site, off site, near shore and offshore delivery options.

DATA COLLECTION AND ANALYSIS

The primary data for this research was collected by a questionnaire. The questionnaire consists of open ended questions, closed ended questions to assess the variables of the study. The study also collected customers' views of past events with the company. The questionnaire consisted of questions in the Likert Scale for evaluation of the Kano model in service delivery of the organisation. The classification of quality attributes in Kano Model will be possible by Kano's two-dimensional questionnaire. In this questionnaire, any one of these customer requirements is analyzed by a pair of functional (positive) question and dysfunctional (negative) question. There are 5 points or answers for every question: Very satisfied, somewhat satisfied, neutral, somewhat unsatisfied and very unsatisfied. Then, the answers of customer are combined into two categories of functional and dysfunctional questions and so the customer requirements are classified into 6 categories such as: attractive (A), One-dimensional(O), Must-be(M), Indifferent(I), Reverse(R), and Questionable(Q) quality attributes. In Kano Model, an indicator that is marked as mode or the most frequent, based on customer's answers is used as the final classification of customer requirements. The validity and reliability of the questionnaire is assessed. Pilot study is done to assess the feasibility of the study.

In this study primary data was collected among the clients with the help of questionnaire through online mode. The data is tabulated and interpreted with the help of SPSS. Frequencies and percentages are computed. Pearson correlation is done to assess the relationship between variables. The secondary data include published and unpublished document. Secondary data was collected from company files, brochures of the company, business journals and magazines.

MAJOR FINDINGS**ANALYSIS OF KANO MODEL**

The data regarding the application of Kano model with the services of the company is done in two steps. The first step involves surveying the customers (through questionnaires) about each service dimensions through a pair of questions (functional and dysfunctional). Functional questions are asked in a positive way and dysfunctional questions are asked in a negative way. The participants are asked to choose from among five choices for each question. Step 2 is to use the evaluation to count and summarize the results. The abbreviations used in the evaluation table represent one-dimensional requirements (O), attractive requirements (A), must-be requirements (M), indifferent requirements (I), questionable requirements (Q) and reverse requirements (R). For instance, if one respondent chose "I like it" for a functional question and answered "I can live with it" for a dysfunctional question, the tested product or service feature would be classified as an attractive requirement (A). For indifferent requirements (I), the customer is neither satisfied nor dissatisfied if the product, service or process is dysfunctional or fully functional with regard to that particular aspect. Questionable requirements (Q) represent results that exhibit contradictory answers. Reverse requirements (R) signify that the product or service feature is not wanted by customers and that they strongly expect the reverse. One-dimensional, must-be and attractive requirements, together with indifferent requirements, are primarily being investigated in the Kano model analysis.

CUSTOMER SATISFACTION COEFFICIENT

The customer satisfaction coefficient indicates the extent to which satisfaction increases if a product requirement is met or the extent to which satisfaction decreases if a product requirement is not met. It is useful to know the average impact of a product or service requirement on the satisfaction of all customers. The calculation of this coefficient is as follows. A positive customer satisfaction coefficient ranges in value from zero to one; the closer to one the value is, the higher the influence on customer satisfaction. The negative customer satisfaction operates in the same way. A value of zero signifies that this feature does not cause dissatisfaction if it is not met. In this way, all the evaluated characteristics can be represented visually in a diagram. It is helpful to know their influence on customer satisfaction and set priorities when designing products or services.

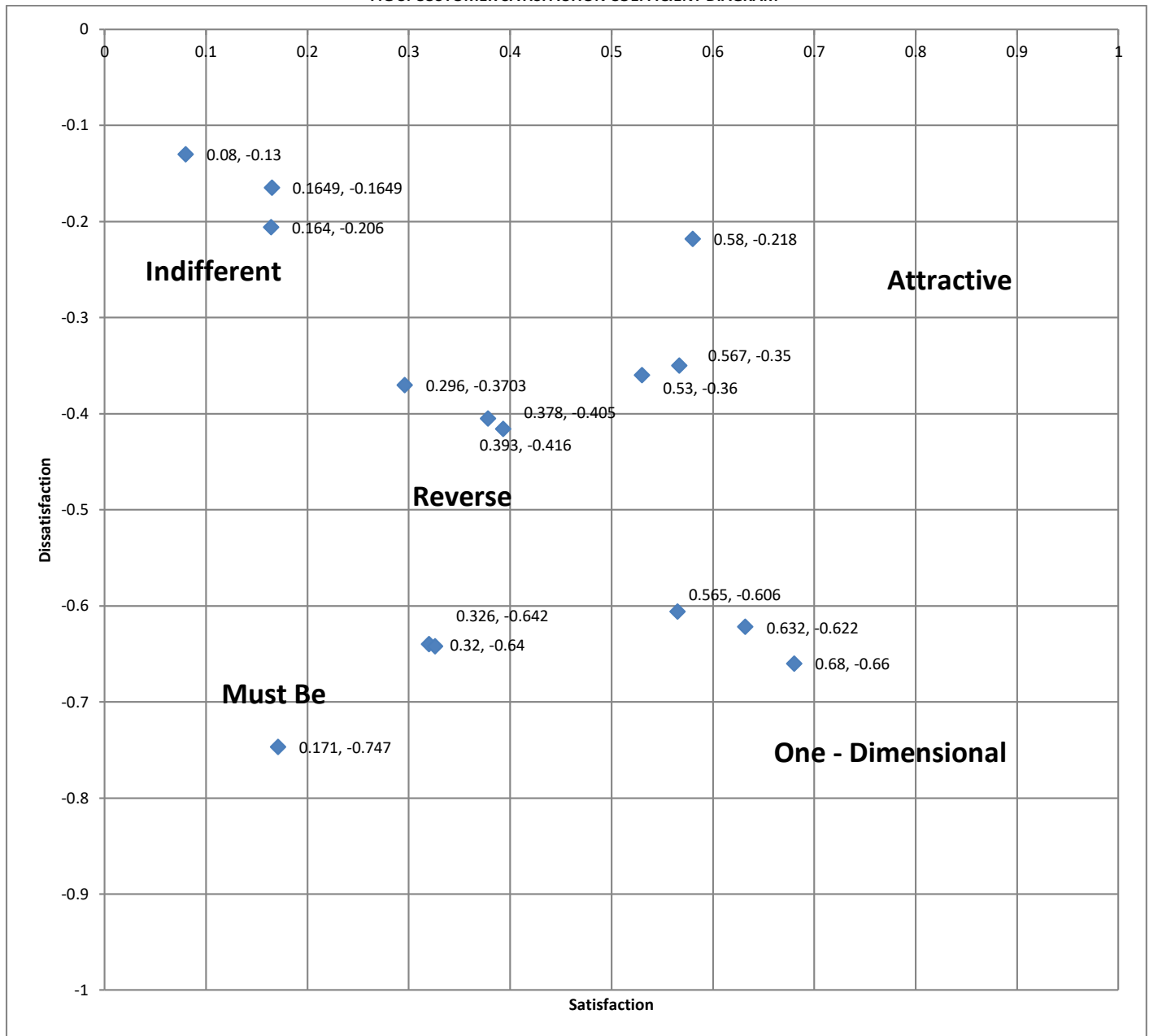
Enhanced Satisfaction Coefficients =

$$\frac{A+O}{A+O+M+I}$$

Reduced Dissatisfaction Coefficients =

$$\frac{O+M}{A+O+M+I}$$

FIG 3: CUSTOMER SATISFACTION COEFFICIENT DIAGRAM



From Fig. 3. portraying the Customer Satisfaction Coefficient, it is understood that, Content Management Services is an attractive quality factor with satisfaction coefficient as 0.53 and dissatisfaction coefficient as -0.36. Free optimization services offered by the company after the launch of the application and website is an attractive quality with satisfaction coefficient as 0.567 and dissatisfaction coefficient as -0.35. Free analysis on the website to extract site traffic statistics is an attractive quality factor with satisfaction coefficient as 0.58 and dissatisfaction coefficient as -0.218.

Compatibility with all devices is a One- dimensional quality with enhanced satisfaction coefficient as 0.565 reduced dissatisfaction coefficient as -0.606. Design of the user interface is a One- Dimensional quality factor having satisfaction coefficient as 0.632 and dissatisfaction coefficient as -0.622. Security is a factor having satisfaction coefficient as 0.68 and dissatisfaction coefficient as -0.66.

Old coding platforms are a Must Be quality factor with satisfaction coefficient 0.32 and dissatisfaction coefficient as -0.64. Timely completion of the project is a Must Be quality factor which has satisfaction coefficient as 0.326 and dissatisfaction coefficient as -0.642. Quality of service professionals is a Must Be quality factor giving satisfaction coefficient as 0.171 and dissatisfaction coefficient as -0.747.

Pre-Launch test is an Indifferent Quality element having satisfaction coefficient is 0.08 and dissatisfaction coefficient is -0.13. Free web hosting service by the company is an Indifferent quality element having satisfaction coefficient as 0.164 and dissatisfaction coefficient as -0.206. Company's own server for hosting service doesn't affect the satisfaction of customers is an Indifferent quality factor has satisfaction and dissatisfaction coefficients as 0.1649 and -0.1649.

Over adherence to contractual statements can cause reverse quality with satisfaction coefficient 0.296. Relatively low price will result in dissatisfaction with dissatisfaction coefficient as -0.405. Presence of bugs can influence your satisfaction level after the successful launch of the website/application will create reverse quality effect which affect customer satisfaction have dissatisfaction coefficient as -0.416.

CRITICAL EVALUATION OF THE KANO MODEL AND THE SERVICE QUALITY OF THE COMPANY

The summary of the findings related to application of Kano model related to Attractive Quality factors(A), One- dimensional quality factors(O), Must Be quality factors(M), Reverse quality factors(R) and Indifferent Quality factors(Q) with the service quality of the company are presented. Kano model states that quality attribute can categorize six types, attractive (A), One-dimensional(O), Must-be(M), Indifferent(I), Reverse(R), and Questionable(Q) quality attributes.

Attractive Quality factors(A): Content Management Services is an attractive quality factor which when fulfilled, provide satisfaction, but when not delivered, they do not cause dissatisfaction, because they are not expected by the customer. Free optimization services offered by the company after the launch of the application and website is an attractive quality factor which will provide satisfaction if provided and doesn't cause dissatisfaction if not provided. Free analysis on the website to extract site traffic statistics is an attractive quality factor which can provide satisfaction of the customer.

One-dimensional quality factors(O): Compatibility with all devices is a One-dimensional quality factor that result in satisfaction when fulfilled and in dissatisfaction when not fulfilled. Design of the user interface is a One-Dimensional quality factor. Security is a factor which can result in satisfaction when fulfilled and in dissatisfaction when not fulfilled.

Must Be quality factors(M): Old coding platforms result in dissatisfaction when used whereas latest ones are desired by customers is a Must Be quality factor. Timely completion of the project will not increase satisfaction but may cause dissatisfaction when not fulfilled is a Must Be quality factor. Quality of service professionals is a Must Be quality factor.

Indifferent Quality factors (I): Pre Launch test is an Indifferent Quality element that results neither in satisfaction nor dissatisfaction, whether fulfilled or not. Free web hosting service by the company is an Indifferent quality element which has no effect on customer satisfaction. Company's own server for hosting service doesn't affect the satisfaction of customers is an Indifferent quality factor.

Reverse quality factors(R): Over adherence to contractual statements can cause reverse quality. Relatively low price will result in dissatisfaction. Presence of bugs can influence your satisfaction level after the successful launch of the website/application will create reverse quality effect which affect customer satisfaction.

CORRELATION BETWEEN CUSTOMER SATISFACTION AND CUSTOMER RETENTION

Pearson Correlation is done to assess the relationship between customer satisfaction and customer retention. The r value is 0.434 which indicates a high level of correlation. From the analysis it is clear that there exists significant relationship between customer satisfaction and customer retention.

CORRELATION BETWEEN AFTER LAUNCH SERVICES AND CUSTOMER SATISFACTION

The relationship between After Launch Services and Customer Satisfaction is assessed by Pearson Correlation. The r value is 0.326 which indicates a positive level of correlation. There exists a significant relationship between customer satisfaction and after launch services.

CORRELATION BETWEEN CUSTOMER SATISFACTION AND TIMELY COMPLETION OF PROJECT

Pearson Correlation is done to assess the relationship between customer satisfaction and timely completion of project. The r value 0.365 which indicates a high level of correlation. From the analysis it is clear that there exists significant relationship between customer satisfaction and timely completion of project.

CORRELATION BETWEEN PRICE AND CUSTOMER SATISFACTION

Pearson Correlation is done to assess the relationship between customer satisfaction and price The Pearson Correlation has a value 0.307 which indicates a moderately high level of correlation. From the analysis it is clear that there is significant relationship between customer satisfaction and price for the services received.

CORRELATION BETWEEN FREQUENCY OF CLIENT COMMUNICATION AND CUSTOMER SATISFACTION

Pearson Correlation is done to assess the relationship between customer satisfaction and frequency of client communication. The r value is 0.350 which indicates a moderately high level of correlation. There exists significant relationship between customer satisfaction and frequency of client communication.

LEVEL OF SATISFACTION OF THE RESPONDENTS

On analyzing the level of satisfaction of the respondents, 15 % of the customers were very satisfied with the company's services. The respondents who were very dissatisfied contributed to 36%. Only 7% of the respondents were having neutral response. 16% of the respondents were satisfied while 26% of them were dissatisfied.

TURNOVER OF CUSTOMERS

Among the respondents, 42% of the customers were having Turnover above \$25000. 23 % of the respondents had turnover between \$20001 and \$25000. 8% of the customers had turnover between \$5000 and \$10000. The customers whose turnover was between \$10001 to \$15000 was also 8%. Only 7% of the respondents had turnover below \$5000.

AFTER LAUNCH SERVICES AND CUSTOMER RETENTION

53% of the respondents believed that after launch services have strong relationship with customer retention while only 3% of the customers strongly disagree with the same. 11% of the respondents neither agreed nor disagreed with the relationship between customer retention and after launch services.

FREQUENCY OF CLIENT COMMUNICATION AND CUSTOMER RETENTION

46% of the respondents agree that frequency of client communication have strong relationship with customer retention while only 4% of the customers strongly disagree with the same. 16% of the respondents neither agreed nor disagreed with the relationship between customer retention and frequency of client communication.

TIMELY COMPLETION AND CUSTOMER RETENTION

Among the respondents, 35% of the respondents strongly agree that timely completion of the project have strong relationship with customer retention while only 5% of the customers strongly disagree with the same. Overall 12% of the respondents neither agreed nor disagreed with the relationship between timely completion of the project and customer retention.

PRICE AND CUSTOMER RETENTION

It is revealed that 34% of the respondents strongly disagree that price have strong relationship with customer retention while only 21% of the customers strongly agree with the same. Among the respondents 10% neither agreed nor disagreed with the relationship between price and customer retention.

SUGGESTIONS

The suggestions related to various dimensions of service quality according to the Kano model such as Attractive Quality factors(A), One-dimensional quality factors(O), Must Be quality factors(M), Reverse quality factors(R) and Indifferent Quality factors(Q) to improve the service quality of the company are as follows. The suggestions in the light of the present study for better service quality, customer satisfaction and customer retention are explained in detail.

Attractive Quality factors

- Content Management Services is an attractive quality factor which when fulfilled, provide satisfaction, so free content management services can be provided to increase satisfaction.
- Free optimization services offered by the company after the launch of the application and website is an attractive quality factor which will provide satisfaction if provided, so free optimization services can be provided to increase satisfaction if needed.
- Free analysis on the website to extract site traffic statistics is an attractive quality factor which can provide satisfaction of the customer so this can be provided to the customers.

One-dimensional quality factors

- Compatibility with all devices is a One-dimensional quality factor that result in satisfaction when fulfilled and in dissatisfaction when not fulfilled so it is necessary to ensure compatibility.
- Design of the user interface is a One-Dimensional quality factor hence the design should be satisfactory to the customer.
- Security is a factor which can result in satisfaction when fulfilled and in dissatisfaction when not fulfilled so it is advisable to ensure security of the website and applications developed by the company.

Must Be quality factors

- Old coding platforms result in dissatisfaction when used whereas latest ones are desired by customers, so it is advisable to upgrade to new coding platforms.
- Timely completion of the project will not increase satisfaction but may cause dissatisfaction when not fulfilled. So it is a Must Be quality factor. Hence projects must be finished on time to avoid dissatisfaction.
- Quality of service professionals is a Must Be quality factor which is expected by the customer and hence it must be ensured.

Indifferent Quality factors

- Pre Launch test is an Indifferent Quality element that results neither in satisfaction nor dissatisfaction, whether fulfilled or not. So the pre launch test can be avoided if not necessary.

- Free web hosting service by the company is an Indifferent quality element which has no effect on customer satisfaction and hence the company need not provide free hosting services. The company can charge additionally on such services.
- Company's own server for hosting service doesn't affect the satisfaction of customers and hence need not be provided.

Reverse quality factors

- Over adherence to contractual statements can cause reverse quality and hence result in dissatisfaction. This can be avoided by adopting flexible contractual agreements.
- Relatively low price will result in dissatisfaction hence price should be maintained in an optimum level.
- Presence of bugs can influence your satisfaction level after the successful launch of the website/application will create reverse quality effect which affects customer satisfaction. Hence bugs must be fixed before launch.

Customer Retention

- Among the respondents, 34% of the respondents strongly disagree that price have strong relationship with customer retention while only 21% of the customers strongly agree with the same. Hence, the price should be neither too low nor too high.
- It is inferred that 35% of the respondents strongly agree that timely completion of the project have strong relationship with customer retention, hence the projects must be completed on specified time.
- It is identified that 46% of the respondents agree that frequency of client communication have strong relationship with customer retention and hence it is necessary to maintain proper communication with the customers.
- Among the respondents, 53% believed that after launch services have strong relationship with customer retention, so after launch services must be provided to the customers.

Customer Satisfaction

- After launch services and customer retention are highly correlated and hence it is necessary to ensure that the customers are highly satisfied with the company's services.
- Frequency of client communication has an impact on customer satisfaction and hence it is necessary to ensure proper communication through email or phone calls.
- Timely completion of project has significant correlation with customer satisfaction and hence the project must be finished on time to ensure customer satisfaction.
- Only 15% of the customers were very satisfied with the company while 36% of the customers were very dissatisfied with the company's services. The satisfaction level of the customers need to be improved to support the company's efforts on customer retention.

LIMITATIONS

The study is based on service quality, customer satisfaction and customer retention in a selected IT firm. The study also collected customers' views of past events. It has been assumed that the customers were telling the truth about their feelings regarding those events. It is likely that their mentioned feelings, after the event, resulted from post hoc rationalization of the event in the context of other events and activities, and may actually not relate to their feelings about the event in question at the time. The researcher feels that it is not appropriate for this study to make the claim that the findings are applicable to all the IT firms as each organisation is unique and different. However, it is hoped that the study can be reproduced to test the extent of the applicability of the findings.

CONCLUSION

IT industry in India has been one of the most significant growth contributors for the Indian economy. In this study the customer satisfaction and customer retention among the customers of IT services is assessed. The study revealed that that customer satisfaction and customer retention are highly correlated. The application of Kano model variables and their relevance in delivery of IT services of the company are critically evaluated. The Kano model variables which result in customer satisfaction when fulfilled and in dissatisfaction when not fulfilled are design of user interface and security. The other factors which contribute to customer satisfaction are content management services, free optimization services and site traffic analysis. The factors which neither result in satisfaction and dissatisfaction were also identified. The factors which result in reverse quality are over adherence to contractual agreements, presence of bugs and low price. Frequent client communication, after launch services and timely completion of the project are the major factors which result in customer retention. The customer retention can be ensured by proper communication and after launch services. Hence the Company needs to focus on those attributes which will enhance customer satisfaction and thereby result in customer retention. The study poses various implications in the field of service quality of IT firms. Dedicated efforts are to be put in towards meeting the service quality challenges and ensuring customer satisfaction and customer retention.

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FUNDAMENTAL VICISSITUDES: A CASE OF SAARC COUNTRIES

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ABSTRACT

SAARC countries are populated by those civilizations in the world, where people from all races and religions have co-existed over a long period of time. The South Asian Association for Regional Cooperation (SAARC), as a role model for political or economic regional integration. India has been the central core of this region both physically and culturally. This paper mainly focuses on the growth and fundamental vicissitudes in the South Asian countries since the last two decades. For this purpose, certain common parameters including growth rate in GDP, Employment in different sectors, transformation from Rural to urban migration, declining share of agriculture in GDP, increasing the share of industrial and service sector and certain another indicator will be studied.

KEYWORDS

SAARC, fundamental vicissitudes, economic growth.

INTRODUCTION

With a combined population of some 1.5 billion, South Asia is a home to half of the world poor. Strong economic growth gives these countries the opportunity to eliminate the pervasive poverty in their economy. With increasing the globalisation open trade, economic development, peace become an important factor for every economy. Now the days, the caliber of the state can't see with its defence capacity, but can see with its economic integration, trade relations with another countries or its investment capacity. SAARC countries have been growing at faster rate with transformation from agriculture to industry and service sector and opening up their economy for trade and investment at global level. Over the past 20 years, South Asia has experienced a long period of robust economic growth, averaging 6 per cent a year (source). This strong growth has translated into declining poverty and impressive improvements in human development.

OBJECTIVES

This paper focuses to examine the growth and fundamental vicissitudes in the South Asian countries since the last two decades. For measuring the structural transformation in South Asian countries, certain common parameters have been taken like growth rate in GDP, Employment in different sectors, transformation from Rural to urban migration, declining share of agriculture in GDP, increasing the share of industrial and service sector and certain another indicator. The data are mainly taken from World Development Indicators (WDI) of World Bank and Asian Development Bank (ADB).

SAARC COUNTRIES

Seven South Asian countries- Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka- formed the South Asian Association for Regional Cooperation (SAARC) founded in 1985, in April 2007; Afghanistan became its eighth member to increase the integration between these regions. The SAARC was established when it is chartered was formally adopted on 8 December 1985. It is headquartered in Kathmandu (Nepal). European Union (EU), Asia and Organization for Economic Cooperation and Development (OECD), Pacific Economic Cooperation (APEC) are also the regional economic groups that are more developed in comparison of SAARC. Very few people know that SAARC is overshadowed by ASEAN in South East Asia and Mercosur or NAFTA in the Americas. The population density is 275 people per sq km which is six times higher than that of the world average population density. This region is the home of 23 per cent of the world's population comprising an area of only 3.8 per cent of the total global land. Considering the market-size in terms of population, SAARC is one of the largest economic blocs in the world. This region covers almost 67 per cent of the low income population of the world economy (Ali and Talukdar, 2009). SAARC countries differ greatly in land area, GDP, and population, although these countries have similar levels of human and economic development. They also share the unusual feature of having a common border with one another member country (Iqbal 2006). Considering the size of land area, population and economy, India is by far the largest country in South Asian region; while Pakistan and Bangladesh are the second and third largest country respectively. India occupies over 70 per cent of the landmass of the region and its territorial and maritime boundary touches all South Asian countries except Afghanistan. Out of the eight SAARC countries, all the countries barring India and Pakistan are small in territorial size. Two countries (Bhutan and Nepal) are land-locked and their contact with the rest of the world virtually depends on the cooperation of India, while Maldives and Sri Lanka are island states (Chowdury, 2004). All these countries have economic problems like poverty, unemployment, income inequality, regional imbalances and all are dependent on external aid/assistance. These countries may be termed as underdeveloped or developing economies. Except Maldives, in all the SAARC economies more than 10 per cent of the population lives on less than US\$1.25 a day and have no access to improved sanitation (Asian Development Bank, 2009). South-East Asia and South Asia was associated with a rapid decline in the importance of agriculture and strong expansions of industry and services during 1970-2005. Economic growth of India, Pakistan and Bangladesh jumped from an average of 5 percent in the 1990's to well above that in 2000-2008. Shortly, before the onset of the global financial crisis in 2008, India's growth rate was a staggering 9 per cent and that of Pakistan, Bangladesh and Sri Lanka's around 7 per cent. (IGC 2010). "Welfare economics" and "Collective self-reliance", "Accelerating economic growth" and Cultural development are the main goals of the SAARC countries.

FUNDAMENTAL TRANSFORMATION AND ECONOMIC GROWTH

When a country shifts from being a largely agrarian economy to one based on services or industry, it is said to have undergone "fundamental transformation". This has happened in some Asian countries, contributing largely to their economic development (IMF 2013). An essential insight of classical development economics was that economic growth is intrinsically linked to changes in the structure of production. According to this view, industrialization is the driver of technical change, and overall productivity increases are mainly the result of the reallocation of labor from low to high productivity activities. Early empirical studies had already showed the importance of industrial development for higher long-term economic growth, indicating that it has indeed been an observed "regularity" in development patterns (Kuznets, 1966; Chenery and Taylor, 1968; and Chenery, 1979). Modernisation of agriculture is also essential to facilitating a dynamic

transformation from an agricultural to a modern industrial society. Fast growth in East and South-East Asia has been associated with a rapid decline in the importance of agriculture and strong expansions of both the industrial and service sectors (United Nations, 2006).

RECENT ECONOMIC GROWTH IN SOUTH ASIA

SAARC Preferential Trading Agreement (SAPTA) transformed into South Asian Free Trade Area (SAFTA) in 2004 with a view to enhancing their industrious capacity and the region's trading interests for the structural changing in their economy. Unlike other economies, the astonishing growth of service sector in South Asia has consciously skipped the manufacturing sector and has jumped directly from agriculture to services sector. This enormous structural transformation from primary sector to tertiary sector has been a key driver of growth in the region. The GDP per capita growth (annual per cent) in South Asia was last reported at 4.91 per cent in 2011, according to a World Bank report published in 2012, Sri Lanka has the highest GDP per capita in the region, while Afghanistan has the lowest. India is the largest economy in the region (US\$ 1.97 trillion) and makes up almost 82 per cent of the South Asian economy; it is the world's 10th largest in nominal terms and 3rd largest by purchasing power adjusted exchange rates. Pakistan has the next largest economy and the 5th highest GDP per capita in the region, followed by Bangladesh and then by Sri Lanka which has the 2nd highest per capita and is the 4th largest economy in the region. South Asia is the least integrated region in the world; trade between South Asian states is only 2% of the region's combined GDP, compared to 20% in East Asia (World Bank 2007).

TABLE 1: GROWTH RATE OF GDP

Country	Annual percentage growth rate of GDP			
	1990	2000	2010	2013
Afghanistan	-	-	8.4	1.9
Bangladesh	5.9	5.9	5.6	6.0
Bhutan	10.9	6.9	11.7	2.0
India	5.5	3.8	10.3	6.9
Maldives	-	-	7.1	3.7
Nepal	4.6	6.2	4.8	3.8
Pakistan	4.5	4.3	1.6	4.4
Sri Lanka	6.4	6.0	8.0	7.3

Source: The World Bank (WDI 2014)

The growth rate of GDP among the different South Asian countries present in Table 1. There has been increase in the rate of growth of GDP only for Bhutan, India, and Sri Lanka during the time periods in 1990 to 2010 but in 2013 it has decreased. In case of Bangladesh, Nepal and Pakistan it has decreased during the time periods in 1990-2010 but in 2013 it has increased except Nepal. There by pointing towards a slowdown in these economies. Growth rate of GDP was also declined in case of Maldives during the time periods in 2010 to 2013.

TABLE 2: SECTORAL CONTRIBUTION TO GDP (1990-2013)

Country	Agriculture (%GDP)				Industry (%GDP)				Services (%GDP)			
	1990	2000	2010	2013	1990	2000	2010	2013	1990	2000	2010	2013
Afghanistan	-	-	27	24	-	-	21.9	21.2	-	-	51	55
Bangladesh	30	26	17.8	16.3	21	25	26.1	27.6	48	49	56	56.1
Bhutan	35	27	17.5	17.1	25	36	44.6	34.2	40	37	38	38.3
India	29	23	18.2	18	26	28	27.2	30.7	44	51	54	57
Maldives	-	9	4.3	-	-	15	15.5	22.5	-	76	80	73.3
Nepal	52	41	36.5	35.1	16	22	15.6	15.7	32	37	48	49
Pakistan	26	26	24.3	25.1	25	23	20.6	21.1	49	51	55	53.8
Sri Lanka	26	20	12.8	10.8	26	27	29.4	32.5	48	53	57.8	56.8

Source: adapted from The World Bank (WDI 2014).

Though, agricultural sector has played a very significant role for generation of rural employment in the Asia and Pacific region, its contribution to the overall economy has greatly reduced in the recent past (Asian Productivity Organization, 2004). Table 2 shows that In Afghanistan the sectoral contribution of agriculture has decreased, whereas there has been a significant increase in service sector from 51 per cent in 2010 to 55 per cent in 2013. The share of agriculture sector in Bangladesh has also decreased from 30 per cent in 1990 to 16.3 per cent in 2013 and the share of industrial sector has increased 21 per cent in 1990 to 27.6 per cent 2013. The share of service sector has also increased from 48 per cent in 1990 to 56.1 per cent in 2013 in Bangladesh. In the case of Bhutan, the both share of agriculture sector and service sector has declined whereas the share of industrial sector has increased from 25 per cent in 1990 to 34.2 per cent. There has been considerable declined in the share of agriculture sector and increased in both the industrial and service sector in case of India. The share of industrial sector has increased from 26 per cent in 1990 to 30.7 per cent and the share of service sector has increased from 44 per cent to 57 per cent in 1990 to 2013. In the case of Nepal, the share of both the sectors that are agriculture and industrial sector has decreased and the share of service sector has increased from 32 per cent in 1990 to 49 per cent in 2013. Similarly, in case of Pakistan, same structural changes have been occurred. In the economy of Sri Lanka, there has been acceleration in both the industrial and service sector while reduction in agriculture sector. This shows a major structural transformation in the economies of South Asian Countries the expansion of industrial and service sector and contraction of agriculture sector.

No doubt, service sector has been playing a vital role in GDP, but this sector is providing employment opportunities only to the skilled persons. In that situation, industrial sector becomes a good option to absorb the large unlimited labour surplus. In case of India and Nepal share of service sector to GDP is high as compared to employment in this sector. In India, the share of service sector in GDP is 57 per cent, but this sector is providing employment about 28.1 per cent. Similarly, in case of Nepal, share of service sector in GDP is 49 per cent, but this sector is providing employment around 21 per cent. So, these economies should also focus on industrial sector and non-farm sectors also.

TABLE 3: SHARE OF EMPLOYMENT IN DIFFERENT SECTORS (% of total employment)

Country	Agriculture				Industry				Services			
	1990	2000	2010	2013	1990	2000	2010	2013	1990	2000	2010	2013
Bangladesh	66	62	49	-	13	10	17	-	16	39.2	39.9	-
Bhutan	-	-	60	56.3	-	-	7	11	-	39	34	32.7
India	-	60	51	47.2	-	16	22	24.7	-	24	27	28.1
Maldives	25	13.7	4.3	-	-	22	19	-	58.8	72.9	86.3	-
Nepal	81	76.1	-	-	3	13	-	-	14.7	15	21	-
Pakistan	51.1	48.4	45.1	43.7	20	18	22	22	36.0	40.0	41.5	42.2
Sri Lanka	46.8	36.0	32.5	29.7	19.4	23.6	24	26.2	33	40.3	42.9	44.1

Source: The World Development Indicator (WDI 2014), Annual Report 2011-2012, ADB 2014

Table 3 shows that with the structural transformation the share of employment have been increasing in services sector and in industrial sector, while start decreasing in agriculture sector because agriculture sector alone is not in a position to absorb extra labour force. This phenomenon happened almost in all SAARC countries which show the economic growth of these countries.

GROWTH OF URBANIZATIONS IN SOUTH-ASIA COUNTRIES

Urbanization is a complex dynamic process which is now being accelerated by the rapid globalization, Privatization and expansion of local economies, especially in Asia. As urbanization offers various opportunities for economic growth, but at the same time they also present many challenges, such as poverty, pollution and disease.

TABLE 4: GROWTH OF URBANIZATION

Country	Urban population (as percent of total population)			
	1990	2000	2010	2013
Afghanistan	18	21	25	26
Bangladesh	20	24	30	33
Bhutan	16	25	35	37
India	26	28	31	32
Maldives	26	28	40	43
Nepal	9	13	17	18
Pakistan	31	33	37	38
Sri Lanka	17	16	18	18

Source: The World Bank, 2014 and ADB, 2014

Table 4 shows that there has been a growth of urbanization in all the countries Sri Lanka. In Afghanistan urban population was 18 per cent in 1990 which was increasing to 24 per cent in 2012. In Bhutan urban population was growing at a faster rate from 16 per cent in 1990 to 25 per cent in 2000 and then 35 per cent 2010 and in Pakistan it was at slower rate from 31 per cent in 1990 to 33 per cent in 2000 and then 36 per cent 2010. In India it was also at slower rate from 26 per cent in 1990 to 28 per cent in 2000 and then 32 per cent in 2013.

TABLE 5: GROWTH OF POPULATION IN SOUTH ASIAN COUNTRIES

Country	Population growth (annual %)			
	1990	2000	2010	2013
Afghanistan	4.5	3.0	2.5	2.4
Bangladesh	2.5	1.8	1.1	1.2
Bhutan	1.2	2.8	1.7	1.6
India	2.0	1.7	1.3	1.2
Maldives	3.0	2.0	1.9	1.3
Nepal	2.4	2.2	1.1	1.2
Pakistan	2.9	2.3	1.8	1.7
Sri Lanka	1.1	0.2	1.0	0.8

Source: adapted from World Bank, 2014

Data shows that growth rate in population have decreased in all south Asian countries except Bhutan between the time periods 1990 to 2000. Between 2010 to 2013 growth rates of population of all SAARC countries almost remaining the same.

TABLE 6: LABOR FORCE PARTICIPATION RATE (LFPR)

Labor Force Participation Rate (% of total population age 15+)				
Country	1990	2000	2010	2013
Afghanistan	49	48	48	48
Bangladesh	76	71	71	71
Bhutan	65	67	72	73
India	61	59	55	54
Maldives	50	55	66	67
Nepal	85.2	86	84	83
Pakistan	51	51	54	54
Sri Lanka	57	57	55	55

Source: adapted from World Bank

This table shows that in case of Afghanistan LFPR has decreased from 49 per cent in 1990 to 48 per cent in 2000 and remaining the same between the time periods in 2000 to 2013. Similarly, in Bangladesh, LFPR has decreased from 76 per cent in 1990 to 71 per cent in 2000 and remaining the same in letter periods. In Bhutan it has increased from 65 per cent to 73 per cent during the time periods of 1990 to 2013. In India it has decreased from 61 per cent to 54 per cent between the time periods 1990 to 2013. In case of Maldives, it has increased from 50 per cent in 1990 to 67 per cent in 2013. In case of Pakistan, LFPR was remaining the same i.e. 57 per cent during 1990 to 2000 and after that it has decreased to 55 per cent during 2010 to 2013.

TABLE 7: KEY ECONOMIC INDICATORS OF SOUTH ASIAN COUNTRIES

Country	Total debt (% of GDP)				Interest payments (% of revenue)			
	1990	2000	2010	2013	1990	2000	2010	2013
Afghanistan	-	-	15.4	13.7	-	-	0.1	0.0
Bangladesh	-	36.1	-	22.6	-	15.5	18.3	15.9(2011)
Bhutan	51.2	69.9	56.8	56.8	2.9	1.0	8.4	-
India	49.2	54.3	50.6	50.3	27.6	38.9	22.8	24.9
Maldives	30.8	40.9	66.6	73.5(2011)	2.3	4.5	10.4	7.7(2011)
Nepal	52.6	64.6	33.9	33.9	-	10.5	4.6	4.1
Pakistan	78.8	-	60.1	52.6	28.1	41.6	37.4	34.1
Sri Lanka	96.6	96.6	81.9	79.14	27.8	32.9	42.3	38.3

Source: World development indicator (2014), ADB, (2014)

Table 7 shows that the debt-GDP ratio for Afghanistan, Bangladesh, Pakistan, and Sri Lanka has decreased during 1990 to 2013. In case of Bhutan, India and Nepal debt-GDP ratio has increased during 1990 to 2000 and letter years it almost remaining the same. The debt-GDP ratio has increased only in case of Maldives at

higher pace. Interest payments include interest payments on government debt—including long-term bonds, long-term loans, and other debt instruments—to domestic and foreign residents. It has decreased in case of Afghanistan, Bangladesh, India and Nepal. It has increased in case of Bhutan, Maldives, Pakistan and Sri Lanka.

CONCLUSION

Under the World Bank designated category, amongst the eight countries, four economies namely Bangladesh, Bhutan, Maldives and Nepal are least developed countries (LDCs); and India, Pakistan Sri Lanka are considered developing countries. On the basis of income Bhutan, Maldives and Sri Lanka are lower-middle-income countries; and Bangladesh, India, Nepal and Pakistan are low-income countries (Das, 2007; World Bank, 2007). India is the star amongst all these nations in terms of its economic strength. As a region, the South Asia's growth momentum was led by the services sector, but industry sector growth accelerated in regional big economies India, Pakistan, Bangladesh and Sri Lanka, reinforcing the sustainability of high growth rates into the future (Central Bank of Sri Lanka, 2008). The share of services sector in GDP as well as in employment has been growing at faster rate almost in all South Asian economies. All South Asian countries have adopted liberalisation, globalisation and macro-economic reforms for the growth and modernisation of their economies. Moreover, these nations have a lot of potential to grow. These nations need to improve governance as well as strengthen the institutions and education line that help and promote inclusive growth and economic development.

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MAPPING OF MUNICIPAL LOAN CAPACITY IN INDONESIA

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ABSTRACT

Region's dependence on central government is very high, the contribution of the balancing funds from 2010 to 2015 is consistently in the range of 60%. Thus the role of the region issuing municipal bonds is required. This paper examines loan potential area focused on the regional financial capacity and accountability using DSCR (Debt Service Coverage Ratio), Capability of LGR and BPK's opinion. Quantitative approach with descriptive statistical method is used to map the potential supply from region as issuer and local community as potential investors. Potential demand is quantified using ratio of deposits to the population of the local area. The results of this research indicate there seven provinces with greatest potential supply namely DKI Jakarta, Sumatera Utara, Jawa Barat, Jawa Tengah, Jawa Timur, Sulawesi Selatan, and Nusa Tenggara Barat. While the potential demand comes from DKI Jakarta, Sumatera Utara, Bali, Papua and Kalimantan Timur. These results prove that only two provinces that were ready to issue municipal bonds both demand and supply, they are DKI Jakarta and Sumatera Utara.

KEYWORDS

municipal bonds, region's potency, supply demand.

1. INTRODUCTION

Based on National Medium Term Development Term (NMTDT) 2015-2019, needs of infrastructure investment in Indonesia is USD 424,54 billion while potency of National Expenditure and Revenue Estimation (NERE) is still limited to USD 130 billion. It has gap funding in the amount of USD 294,57 billion which must be provided by the government through a loan (Nazara 2016). Fiscal policy to have a direct loan from developed countries is decreased and turned by issuing sovereign bonds with retail model. It influences the developments of retail conventional bonds and sukuk which had oversubscribed demand when they were being issued. In spite of increasing local investment culture, it also could decrease capital outflow.

Funding gap problem also calls for local governments' contribution, especially investing in strategic infrastructure in their country. But the capability of Local Expenditure and Revenue Estimation (LERE) has remained deficit for the past 5 years. While balancing funds policy from central government is continuing to decrease every year, on contrary locally-generated revenue (LGR) contribution to LERE is continue to increase (Kemendagri 2015). This potency must be optimized by the local government as a player and central government as regulator and supervisor to support municipal investment based on bonds.

TABLE 1: POSTURE OF LERE 2011 -2015

	LERE 2011	LERE 2012	LERE 2013	LERE 2014	LERE 2015
LGR Composition	13 %	20 %	20,65 %	22,67 %	24,11 %
Balancing funds	68 %	66 %	63,43 %	60,45 %	55,93 %
Another Income	19 %	14 %	16,02 %	16,88 %	19,95 %
Total Income	Rp. 522.33	Rp. 577.08	Rp. 682.34	Rp. 796.87	Rp. 937.00
Total outcome	Rp. 521.74	Rp. 617.54	Rp. 736.56	Rp. 855.27	Rp. 1.012.86
Surplus/ deficit	Rp. 0.59	Rp. -40,46	Rp. -54,22	Rp. -58,40	Rp. -75,86

*in trillion rupiah

Source: www.keuda.kemendagri.go.id

Supporting the previous condition, in Government Regulation number 30 year 2011 about municipal loans has opened a chance for the local government to propose municipal loan through public offering in the capital market. The technical rule also has been ruled in Ministry of Finance Regulation (MFR) no 180 year 2015. It is assured a chance for the local government to issue municipal bonds independently to support local investment than depended on balancing funds from the central.

Municipal bonds known as Munis isn't new capital market instrument. The first official muni bond in the U.S. was issued in 1812 by New York City and sought to raise funds for the purpose of building a canal (neighborly 2015), it success then followed by Korea, Germany and India. Historically, Indonesia has issued Munis before the independent day. In early decade 1900-s many big cities in Indonesia has issued it such as Bandung, Batavia, Buitenzorg, and in the year 1921 Surabaya issued municipal bonds with tenor 40 years and interest rate 7,5% (Indriani 2013).

Analysis of municipal finance is needed before issuing bonds to decrease default risk as it happened in Detroit (Hacket et al 2013). The capability of municipal finance may be measured from LGR performance which remains positive in previous years. Moreover, accountability of Local Government Financial Report (LGFR) may show the readiness of local government's human resource to becoming emitter in the capital market. In another side, the capability of local society also must be measured as expectant investors to hold municipal bonds. With participation from local society, it will increase local investment culture and build a sense of belonging to maintain local infrastructure development.

Opportunity to issue Munis has also opened the same chance for sukuk issued by region. It is Islamic municipal bonds with its law base may be benchmarked through conventional municipal bonds with an addition in UU number 19 year 2008 about SBSN (Sovereign Islamic Bonds). Its potency may be supported by the majority population of Moslem in Indonesia and sharia economic lifestyle that continue to increase during new millennium. Moreover, academic research on Islamic municipal bonds has been discussed since 2009 (Walidi 2009). It may be considered as potency alternative instruments to issue bonds.

Based on problems and condition mentioned above, the purpose of this paper is to analyze the potency of regional finance using quantitative method base on domestic regulation which has been legalized and the capability of local society to invest in municipal bonds which are issued by their local government.

2. MUNICIPAL BONDS

Paragraph 1 Government Regulation number 54 year 2005 mentioned that municipal bonds defined as all transactions which make region receive money or benefit as equal as money from others which cause it to be burdened an obligation to payback, it isn't included short term credit as it happens in trading. Variable to be calculated is LGR, profit sharing and natural resources, and do so resource from General Allocation Fund (GAF). Municipal total income estimation then compared with fixed expenditure. If fixed expenditure as much as or more than total income, a region isn't considered deserve to propose loan. Loan resources from domestic may come from central government, the financial institutions (bank or non-bank), and local society. Municipal loan risk is unscheduled payment of return. Deciding time period of loan depends on kind of project which is funded. Based on purpose and time period, municipal bonds is divided into 2 section:

1. Short term loan is used to help cash flow liquidity and early capital for long term investment.
2. Long term is used to finance infrastructure development which has the revenue stream to payback, also has benefit for public service.

One of the main factor to be concerned is loan capacity and its purpose. The ideal goal is to buy asset or long term investment and suppose not to cover the deficit. Then the exact model of Municipal bonds is revenue. However, if the loan is planned to be invested, it may consider the characters of investment whereas it is cost recovery or not. If it is cost recovery, total amount and loan capacity is not a big deal, yet if it isn't cost recovery, it must be calculated the limit of loan which decided by central government and region, in order not become burden of regional finance.

To avoid the mentioned risk, it is needed to review some theorems to estimate municipal loan capacity through LGR performance analysis. Beside it, there are two measurements which are usually used they are debt service ratio and debt coverage ratio.

1. Debt Service Ratio (DSR) is limit of municipal capability that used by local government to control a total of secured loan to be considered.
2. Debt Coverage Ratio (DCR) is a comparative number between municipal funding to be saved with the annual total return of loan payment.

In paragraph 10 verse 2 Ministry of Finance Regulation (MFR) number 180 year 2015 mentioned that regional properness to issue bonds is calculated by debt service coverage ratio at least 2,5 and total of cumulative loan (previous loan plus issued bonds) is not more than 75% of general income from the previous LERE.

3. REVIEW OF LITERATURE

Research written by Muslim Sarip under tittle Prospect of Municipal bonds development through sukuk issued by county/ city's government in Jawa Barat. Thesis took sample data from 2007 to 2008 as resource analysis to measure municipal bonds prospect base on the market mechanism. Supply side is analyzed by LGR performance, debt service coverage ratio, and maximal loan (base on formulae mentioned in PP number 54 year 2005). The demand side is analyzed by Moslem population, the amount of liquid fund and prosperous family. The result is county and city that proper to issue sukuk are Bandung city, Bandung county, Bogor county, Bekasi county, Bekasi city, Sukabumi county, Cirebon county and Garut county.

Walidi in his thesis The Map of demand and supply of Islamic municipal bonds, the sample used were data from 2005-2006. Supply side is analyzed by LGR performance, debt service coverage ratio, and limit of maximum loan then they were mapped by index and quadrant. While demand side is analyzed by moslem population, prosperous family, and the amount of liquid fund. The result there were 7 regions with high potency to propose loan they are DKI Jakarta, Jawa Barat, Jawa Tengah, Jawa Timur, DI Yogyakarta, Sumatera Barat and Jambi.

Gunawan in his thesis, Factors influence the readiness of regional government of DI Yogyakarta to issue bonds. His result found they were 5 factors that may explain this issue they are project readiness, the capacity of human resource, managerial principle, mechanism, administration and capacity of municipal finance. Based on qualitative descriptive analysis showed that generally the proposed project has social and service character or non-profit which provided by the government.

4. RESEARCH METHODOLOGY

Mapping potency of loan capacity sees municipal finance capability to issue bonds as supply and capability of local finance society to invest as demand. Index from both variables are mapped by quadrant. Index methodology is used to see sample's position among others, while quadrant method is used to see sample strategic position based on two variables that have been quantified before.

This research is used secondary data. Secondary data is taken from report and publication from the related institutions such as Financial Service Authority (FSA), Ministry of Finance, Central Bureau of Statistic (CBS), National Development Planning Agency and others related literature. Data is analyzed using panel that is a combination between time series and cross section. Data series are annual reports from 2012-2014 and cross section between regions consist of 33 provinces minus North Kalimantan, because this province has just been launched in 2013.

5. RESEARCH STAGES

5.1. ANALYSIS OF MUNICIPAL FINANCE CAPACITY

- a. Define the value of LGR performance
 1. Calculate elasticity of LGR performance to gross domestic product (GDP)
 2. Calculate share LGR to LERE income
 3. Calculate growth for outstanding to previous LGR
- b. Define the value of Debt Service Coverage Ratio based on MFR 180/MFR.07/2015.

$$DSCR = \frac{(LGR + GAF + (SF - SFR)) - CSE}{(OC + OI + OE)} \geq 2,5$$

Definitions:

- LGR : Locally-general revenue
- SF : Shared Fund
- GAF : General allocation fund
- SFR : Shared Fund for Reforestation
- CSE : Civil servant expenditure
- OC : Outstanding credit
- OI : Outstanding interest
- OE : Others expenditure.

c. Maximum cumulative of the principle amount of municipal bonds is less than 75% of general income for the previous LERE. With formulae below:

$$GR = TMI - (SAF + EF + AL + AIS)$$

Definitions:

- GR : Genera Revenue
- TMI : Total Municipal Revenue
- SAF : Special allocation fund
- EF : Emergency fund
- AL : another outstanding loan
- AIS : others income with a special purpose.

d. Define regional accountability index. Accountability value is defined for scoring to BPK’s opinion on Local Government Financial Report from 2012-2014. The score is made based on BPK’s grade opinion consecutively from 1 up to 5.

e. Define the value of Local financial capacity index using Bayes method. Weight is defined from an expert who has the decision to judge the properness of local finance. Marimin (2004) explained that Bayes method is technical analysis to decide the best decision among available alternative. Weight in Bayes method based on trust level, faith, experience along with decision background. Bayes equation that used to calculate each alternative’s value simply as mentioned below.

$$Total\ Value_i = \sum_{j=1}^m Value_{ij}(criteria_j)$$

Definitions:

- Total value _i = final total value from alternative to _i
- Value _{ij} = alternative value
- Criteria _j = importance level (weight) criteria to _j
- _i = 1,2,3,...n : n = total alternative
- _j = 1,2,3,...m : m = total criteria

5.2. ANALYSIS OF LOCAL INVESTMENT CAPACITY

Local investor potency is mapped by calculating capability real investment per capita. That is total deposit in region x is divided by total population.

$$Rm = \frac{\sum d}{\sum p} \times 100\%$$

Definitions:

- Rm : Capability of real investment per capita
- $\sum d$: Total banking deposit year n
- $\sum p$: Total Region population year n

The used data is limited to annual bank deposit from 2012 to 2014 taken from each province that published by Financial Service Authority, except Kalimantan Utara. The limit due to deposit is because this saving type is purely for investment purpose and its customer is assumed as the customers who have leeway funds and good financial literacy.

5.3. MAPPING OF MUNICIPAL LOAN CAPACITY

Municipal financial capacity is mapped by quadrant. Regional properness to issue bonds is assumed as supply, while the capability of local society to invest is assumed as demand. Combination from both results are entered into graphic and mapped into four quadrants.

TABLE 1: DEFINITION OF QUADRANTS

Quadrant 1	An ideal condition. Local authority has good financial capability to issue bonds, followed by ability of local society to invest in its bonds
Quadrant 2	Minus for the ideal condition. Local authority has bad financial capability to issue bonds but followed by good ability of local society to invest
Quadrant 3	Minus for the ideal condition. Local authority has good financial capability to issue bonds but followed by inability of local society to invest in its bonds
Quadrant 4	Not ideal condition. Local authority has bad financial capability to issue bonds followed by inability of local society to invest in its bonds

6. RESULT & DISCUSSION

6.1. MUNICIPAL FINANCE CAPACITY

6.1.1. LGR PERFORMANCE

1. Elasticity

Result for elasticity analysis of LGR to GDP from 2012-2014 show that there are no any regions in Indonesia which have elasticity value more than 1 (≤ 1), moreover there are three regions which have minus value (Riau, Jambi and Kalimantan Timur) with total average 0,14. This result shows that every change GDP doesn’t have sensitivity to change LGR value. It may be caused by impropriate tax revenue as the main resource of LGR. In the year 2014, elasticity result >1 has achieved by Jawa Barat (1,01) Kalimantan Selatan (1,35) and Bali (1,49).

2. Growth

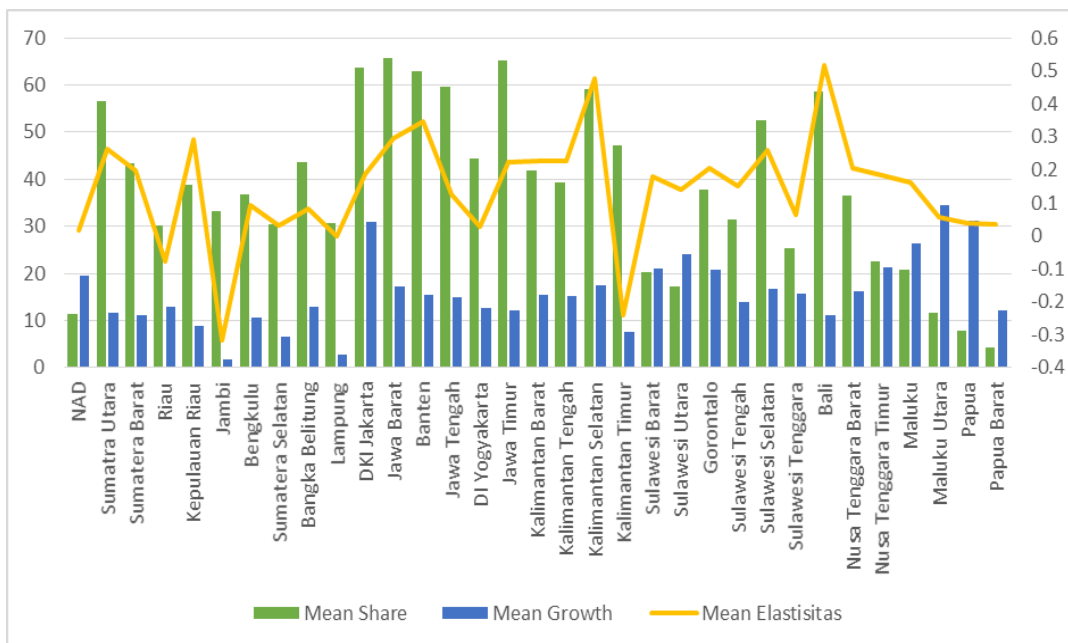
Calculation on realization data LERE from the year 2012 to 2014 shows that national growth average is 15.85%. The result shows that LGR contribution average to LERE is keep growing, and there are no any regions which have minus. Moreover, the biggest growth is performed by provinces located on East side Indonesia which their growth more than 25%. They are Papua (31,19%), Maluku Utara (34,43%) and Maluku (26,26%). The calculation shows that there is a positive correlation between elasticity and growth, that provinces which have the less elasticity so do their growth they are Jambi (1,74%) and Lampung (2,74%).

3. Share

Generally, all provinces in Indonesia don’t have the capability to finance their own needs. It is showed by calculation of share national average of LGR to LERE 37.9%. There are only 4 provinces which their LGR more than 60% they are DKI Jakarta (63,79%), Jawa Barat (65,6%), Banten (62,96%), and Jawa Timur (65,26%). Increasing of LGR’s contribution in those provinces because of industrial sector development, both real and financial. Many factories and central government facility were built in those provinces become an excellent resource for the tax to increase LGR. Unfortunately, in other provinces mainly in east and middle have only depended on limited natural resources.

From three analyses above, it can be measured LGR performance index based on elasticity, growth, and share. Map of LGR performance is showed by the graphic given on the next page:

FIGURE 1: LGR PERFORMANCE FOR 33 PROVINCES OF INDONESIA

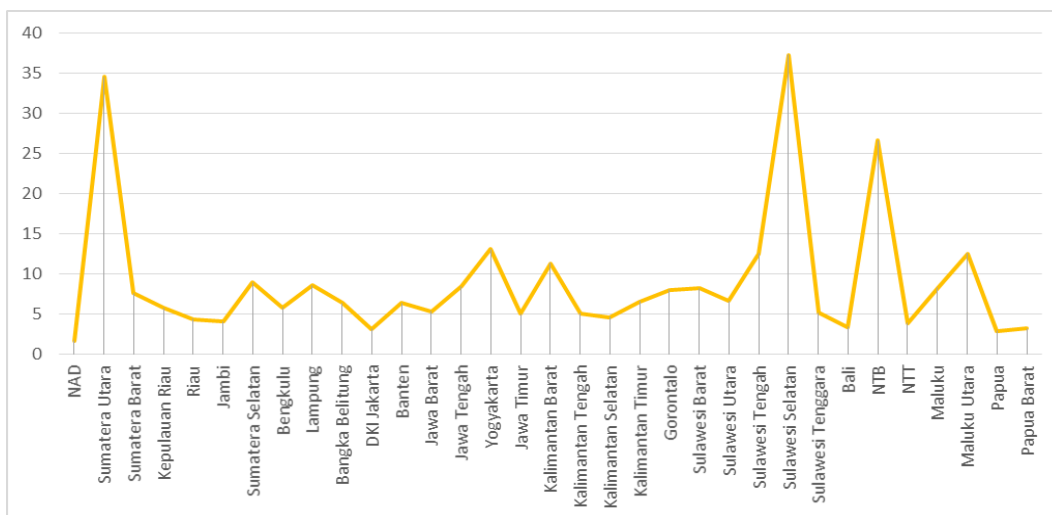


This graphic shows a significant different between each province in all three analysis ie elasticity, share and growth. Therefore, to know current position for a sample to the population using index method. The best five of LGR performance is DKI Jakarta, Banten, Kalimantan Selatan, Bali and Jawa Barat. Based on the index value, 33 provinces in Indonesia are divided into 3 zones they are 7 provinces in zone 1 with high performance, 18 provinces in zone 2 with medium performance, and 8 provinces in zone 3 with low performance. The best value for elasticity is achieved by Bali, for growth is achieved by Maluku and for share is achieved by Jawa Barat.

6.1.2. DEBT SERVICE COVERAGE RATIO

DSCR analysis is used to measure capital adequate ratio to debt load. Calculated based on interest expenditure and financing expenditure average. The limit number is 2,5. If there are any regions which have more, it is considered as a proper region to propose loan. The result shows that only NAD which its ratio less than limit number ie 1,65. The rest regions have value more than 2,5. The big four result are achieved by Sulawesi Selatan (37,3), Sumatera Utara (34,6), Nusa Tenggara Barat (26,6) and Yogyakarta (13,1). Whereas the rich provinces like DKI Jakarta (3,1), Jawa Barat (5,31), Jawa Timur (4,97) and Kalimantan Timur (6,54) have small value due to civil servant expenditure, interest cost, and others outstanding loan.

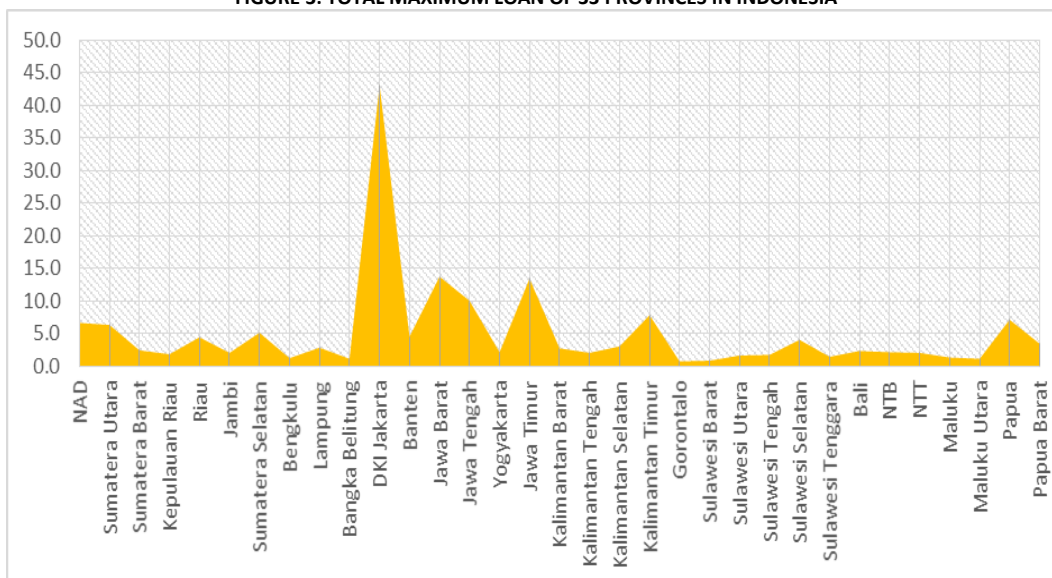
FIGURE 2: DEBT SERVICE COVERAGE RATIO



6.1.3. ANALYSIS OF MAXIMUM LOAN

The considered maximum loan is 75% from general income for the previous year. In this research, the aimed previous year is 2014. As ruled on MFR 180/MFR.07/2015 mentions that new total loan is no more than 75% of general income for the previous year. The result from this analysis shows 5 rich provinces have domination begin from DKI Jakarta (43 Trillion), Jawa Barat (13,6 Trillion), Jawa Timur (13,4 Trillion), Jawa Tengah (10 Trillion) and Kalimantan Timur (7,7 Trillion). While the lowest are achieved by Gorontalo (794 Billion) and Sulawesi Barat (820 Billion).

FIGURE 3: TOTAL MAXIMUM LOAN OF 33 PROVINCES IN INDONESIA



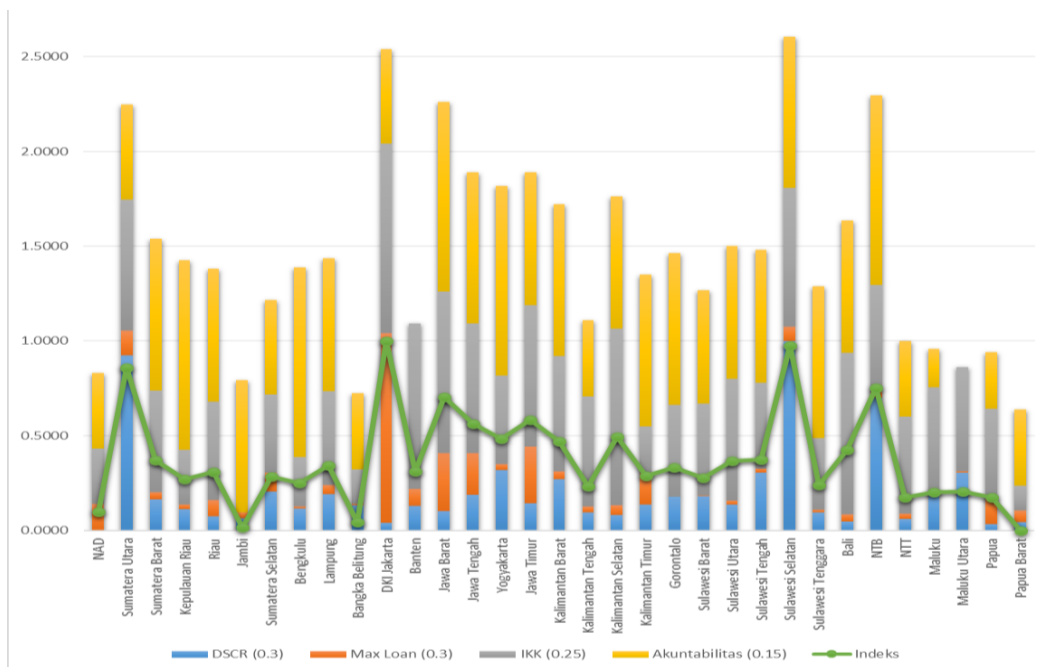
6.1.4. ACCOUNTABILITY ANALYSIS OF MUNICIPAL FINANCE

This analysis based on Government Regulation number 30 year 2011 which perfecting of government law number 54 year 2005 about needs of municipal finance accountability as a requirement to asses province properness to propose loan. Scoring result Municipal Financial Report refers to BPK’s opinion from year 2012-2014 show only 5 provinces which consistently have WTP opinion (Proper without exception) during 3 previous years they are Kepulauan Riau, Bengkulu, Jawa Barat, Yogyakarta and Nusa Tenggara Barat. Meanwhile other provinces which have good LGR performance such as DKI Jakarta, Banten and Papua trapped in the ground zone. Only Jawa Barat which consistently in high zone. Banten and Maluku Utara got the lowest value due to 2 or 3 their financial report got TM opinion (No Opinion). It indicates that good LGR performance and financial concession don’t have a positive relation to financial accountability.

6.1.5. CAPACITY ANALYSIS OF MUNICIPAL FINANCE

After calculating and getting the index from four previous analyses they are LGR performance, loan capacity, maximum loan, and municipal accountability. Index result from each analysis is calculated by Bayes Method. The weight value is made by an expert who works as fiscal analysis in Ministry of Finance which has a direct relation to influence for issuing municipal bonds. The weight value from expert show the LGR performance index (0,25), DSCR Index (0,3), Maximum Loan index (0,3) and municipal accountability index (0,15) with total weight is 1.

FIGURE 4 GRAPHIC MUNICIPAL BONDS CAPACITY

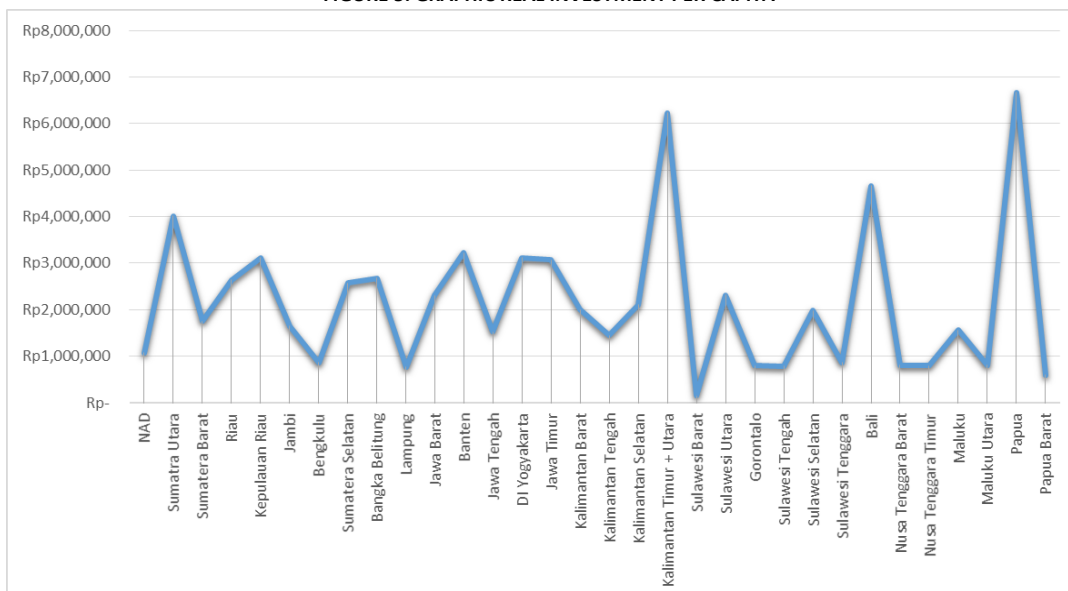


Index calculation result based on bayes weight show that 7 provinces has big value to issue bonds above 0,5 they are DKI Jakarta (1.0000), Sulawesi Selatan (0,9766), Sumatera Utara (0,8575), Nusa Tenggara Barat (0,7519), Jawa Barat (0,7046), Jawa Timur (0,5847) and Jawa Tengah (0,5628). It means those 7 provinces have the capability to become the role models for other provinces to issue bonds either in conventional bonds or sukuk.

6.2. LOCAL INVESTMENT CAPACITY

To see local capacity to invest use ratio banking deposit which is published to the population of local citizen. The used data is from 2012 to 2014. Data from sharia bank and civil financing bank are ignored due to incomplete available data. However, the issue doesn’t influence much due to its percentage less than 10% of banking market share in Indonesia. Population data is taken from BPS for the year 2014. Because it is the last available data which is published by BPS. The previous data is census population data in 2010. The result may be seen in the graphic below.

FIGURE 5: GRAPHIC REAL INVESTMENT PER CAPITA



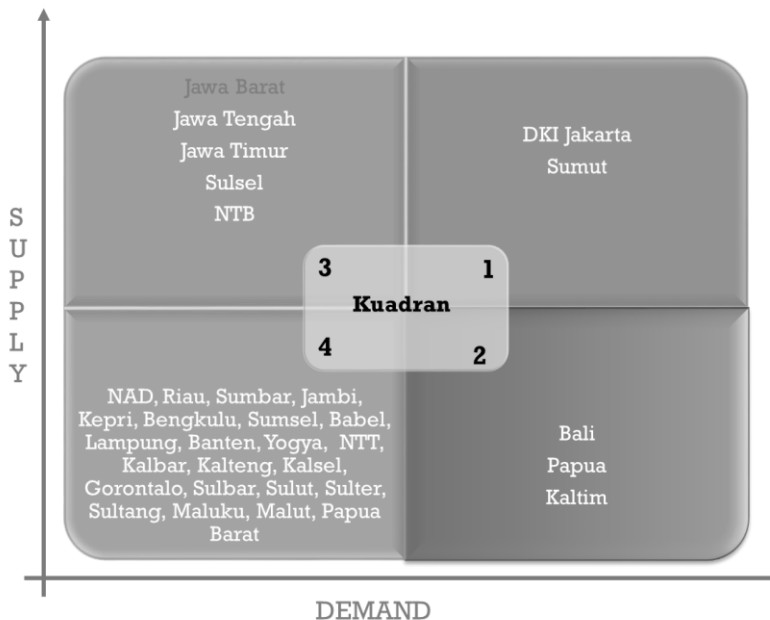
DKI Jakarta isn't included in the graphic above because it has very high value exceeded others 32 provinces. Real investment per capita for DKI reach out Rp. 80,261,597. It's caused due to central government cash flowed over there. So that, DKI Jakarta is ignored to keep the diversity of data. However, it directly assumed DKI Jakarta as the province which has demand potency to invest. The other provinces with demand potency are Papua (Rp 6.673.727), Kalimantan Timur (Rp 6.230.887), Bali (Rp. 4.663.776) and Sumatera Utara (Rp. 4.16.857).

6.3. FINDINGS

6.3.1. MAPPING OF MUNICIPAL LOAN CAPACITY

Based on supply and demand analysis, capacity map of municipal finance is showed by quadrant method to see equilibrium between demand and supply all regions to issue bonds and to buy it. The map may be seen on the figure below:

FIGURE 6: MAP OF FINANCIAL CAPACITY OF 33 PROVINCES IN INDONESIA



Quadrant table above shows only two provinces which categorized as the proper region to issue bonds both in supply and demand side they are DKI Jakarta and Sumatera Utara. Meanwhile Papua, Bali and Kalimantan Timur gathered in quadrant II that show the high local capability to invest in other word has high demand potency but haven't been followed by properness of local authority to issue bonds. On contrary, Jawa Barat, Jawa Tengah, Jawa Timur, Sulawesi Selatan and Nusa Tenggara Barat have readiness from their local authority to issue bonds but haven't been followed by the capability of local society to invest. The result from this analysis also shows that majority of provinces in Indonesia don't have properness yet both in supply and demand to propose loan through bonds. It is indicated by the domination of other 24 provinces in quadrant IV.

7. RECOMMENDATIONS

The result from this paper may become a reference to the central and local government to decide a suitable policy for each region based on their strategic position in the quadrant.

8. CONCLUSION

Mapping the potency of municipal capacity to issue bond show only 2 provinces which have properness in demand and supply, they are DKI Jakarta and Sumatera Utara. These provinces may become the role models to issue bonds with retail model. Meanwhile the provinces in quadrant II needs training for their local government about management of regional finance focused on their LGR performance and accountability. In view of Bali and Papua have many foreign citizens, it is needed a followed research to calculate capital inflow and a number of the account to check the validity of their real per capita revenue. Provinces in quadrant III which their local government has good properness to issue bonds may issue municipal bonds with Project Based Bonds Model.

The policy for other 24 regions in quadrant IV is increasing LGR and GDP based on local natural resources with decreasing loan and increasing GAF and DAK mainly for regions with high accountability value. Education and socialization are also needed to increase their LGR performance thorough elasticity. Because income per capita has a positive correlation to increasing LGR which it main source from tax.

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SOLID WASTE MANAGEMENT: A CHALLENGING UNDERTAKING

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ABSTRACT

A substantial amount of fund being released in the account of "Swachh Mission" and to a great surprise, cities getting more and more crowded with the problem of solid waste which includes the waste product extracting both from house hold and Industrial setups. The improper handling of garbage not only encourages environmental degradation but it attracts many communicable diseases in the surrounding. An estimated study shows the declining health among the Indian city inhabitants and the reason is drastically shameful as it held polluted and poor sanitation living conditions responsible for it. This paper will present the background and will imply some concrete formulae for the proper dumping of solid waste. The research study will also delve into the causes and effects of improper, immature negligence of the subject of sanitation.

KEYWORDS

sanitation, environmental degradation, recycled waste products, dry and wet dumping.

INTRODUCTION

The luxurious, comfortable life style and considerable good earning opportunity in the cities has over exhausted the life of city and results in hampered municipal rearrangement. The real portrait of an Indian city appears favorably in monsoon, where the solid waste getting accumulated in sewage tanks thus blocking it and the surrounding gets overwrapped with all sorts of dirt and varieties of solid wastes.

Solid waste materials such as household garbage and commercial trash from retail, apartments, offices and warehouses have traditionally presented problems of disposal. These problems have become increasingly critical in recent years as a result of a promptly increasing population and a dramatic increase in the per capita production of solid waste.

In response to these waste disposal problems, both the government and the public have necessitated that wherever possible recycling be employed both to conserve material resources and to reduce pollution problems. Attempts have been made to recover treasured resources such as glass, plastic, paper, aluminum and ferrous metals from waste products.

A BACKGROUND ON CHALLENGES AND DIFFICULTIES

One important contribution to the difficulties related to waste management is that which can be achieved by providing objective, reliable, and useful information to professionals in developing countries and to those from industrialized countries who may be called upon to provide assistance to those countries.

Additional disposal problems have been created by the change in character or composition of municipal waste as a result of the movement away from metal, wood and glass packaging currently, solid waste is disposed of by incineration and/or land fill. Incineration is rapidly becoming a non-viable alternative in heavily populated areas. The public outcry against air pollution from the burning of waste materials has halted nearly all new incinerator construction. Similar problems surround new landfills. Environmental restrictions as well as land usage demands for housing have reduced the number of sites available for landfills.

The assemblage, transport, treatment, and disposal of solid wastes, particularly wastes produced in medium and large urban centers, have become a relatively difficult problem to solve for those responsible for their management. The problem is even more acute in economically developing countries, where financial, human, and other critical resources generally are scarce.

The primary difference between wastes generated in developing nations and those generated in industrialized countries is the higher organic content characteristic of the former. The extent of the difference is indicated by the data in which is presented information relative to the quantity and composition of municipal solid wastes generated in several countries.

Ideally, solid wastes need to be isolated from other waste constituents so as the waste solid in form could be well carried further for recycling process; The policy makers must frame some strict regulation to monitor any flaws therein. Solid waste collection in a manner create nuisance with respect to environmental health as when human excretion are mixed with household wastes. Sorting of liquid wastes, medical wastes, industrial wastes, e-wastes in association with household wastes necessarily be detached. Certainly, without awareness and proper introspection among the inhabitants with system negligence could dismantle this mechanism in Indian context.

A COMPREHENSIVE SOLID WASTE MECHANISM IS A DAMN NEED

Beyond all these above mentioned challenges and difficulties lay a clean and enlightened future. In an attempt to accelerate the pace of its industrial development, an economically developing nation may fail to pay adequate attention to solid waste management. The negligence on this front will invite a serious health hazard resulting in loss of lives and poor physical appearance for the rest of life. The penalty is neither avoided nor lessened by a resolve to do something about the waste at a later time, when the country may be in a better position to take appropriate measures. This is true because, as is indicated by the data in the rate of waste generation generally increases in direct proportion to that of a nation's advance in development.

➤ **Environmental and health impacts**

According to a health survey conducted by a medical association of international repute has come up with an astonishing causes and effects of poor health in under developing nations. Not only it points out the unbalanced and improper diets responsible for the depleting health but the major factor that excelled was poor living conditions in the surveyed countries. The laws, policies and regulations were not taken into account seriously and strictly. The waste products excreted from industrial set ups were not dumped properly and no further plans and execution taking place in an attempt to neutralize the solid wastes.

The clean and green environment is not possible without comprehensive dumping of solid waste including medical and household wastes at large. The study also revealed the possible health hazards and probable epidemics that may spread in days to come if the situation still prevails.

➤ **Retrieval and ideal consumption of resources**

A precise estimation is one of the requirements for proper rendering of waste products and composition of the waste input is essential for success in resource recovery. The composition and reliability of the input amount must be assured. Will it not be sufficient the amount be certain but also it should be available at an affordable cost. Consolidated sufficient fund and laborious and skilled manpower is another motivational move for the success of this mechanism.

Conscious care should be fetched to organic (biodegradable) residues. Since, in under developing and poor countries constitutes 45% of the solid waste and rationally it proves a nightmare for sound health.

Improper and poorly managed solid waste and lacking talented supervision making it hard to capitalize on the problem.

1. The unused part remains at last during recycling could be effectively reused further in agricultural practices.
2. Its energy content can be recovered either biologically or thermally. Regaining of biological energy is done by methane production through anaerobic digestion. Combustion is a Thermal recovery procedure to produce heat.

3. Hydrolyzation of the organic content is a profitable alternative for chemically or enzymatically produced sugar. The sugar could be well used as a substrate supplement for protein Production.

The process of hydrolyzation in still developing countries may find a hard root to flourish as it requires a sizeable technical support and sophisticated resources in the form modernized equipment which may hamper the economic viability of the concerned nation. The perfect execution of the process of hydrolyzation will ensure sanitize environment and thus promise a clean future as well.

The stakeholders must identify market opportunities for waste products extracted out and must pay back to its beneficiaries in a way to continuously carry on the mechanism for long.

STRATEGIC PLANNING FOR MANAGEMENT OF SOLID WASTE

Well-defined, calculative and long lasting concrete policies should be in place in order to tackle solid waste extracted from households and similarly hazardous combinations of organic and inorganic wastes from industrial establishments that put forth the catastrophic challenge in terms of managing healthy and sanitize environment all around.

ESSENTIAL INGREDIENTS OF A WASTE MANAGEMENT SYSTEM

A comprehensive municipal solid waste management system includes some or all of the following activities:

- a) Demanding practices for the management of wastes entirely based on the concept of prevention Concrete policy framework should be in place.
- b) Regulations and amendments in regulations in accordance to place and time.
- c) Planning and Estimating municipal activities by policy maker's end-users and other stakeholders.
- d) Adopting waste classification revisions to adjust systems to the types of waste generated
- e) Supervision of waste and extracted materials, including separation, collection, decomposing, incineration, and landfilling.
- f) Promotion of recovered materials to negotiators or to end-users for industrial, commercial purposes.
- g) Imparting training and practical exposure for Municipal bodies.
- h) Carrying out public awareness campaign and inculcating values in children through skits and short plays
- i) Ascertaining financial mechanisms and disbursing funds.
- j) Motivational incentives and encouragement for the NGO's and volunteers deployed
- k) Tough assignments and provision for penalties debarring laws.

Recycling among all these display sincere probability of marching towards prosperous future. Since these wastes are predominantly inert or they can be easily processed to be used in filling, for example in former quarries, as highway construction, or in coastal cities, to gain land at the ocean front or for the construction of levees. Final disposition of construction and demolition still counts for an alternative. Citing landfills is less difficult to its regular landfills since the likely environmental impact in the majority of cases is comparatively small.

CONCLUSIONS, RECOMMENDATION AND POSSIBLE OUTCOMES

The only inevitable reason and must be our top most priority is to control the menace of waste that could be one of the reason of epidemics. The intensity of this issue is so serious to be talked and worked that if neglected, it will be the biggest threat on earth. Some strict measures and regulations has to be enforced and properly implemented. The authorized workforce must carry out awareness campaign in order to sterilize the waste nuisance.

The only effective and result oriented procedure to get hold back the solid wastes is total awareness through conscious level. If at all, the people are aware and execute their duties and responsibilities with utmost care and perfection it would be further no need to allocate huge funds and resources for this problem.

The second most dynamic and probable initiative could be to spread and share the success stories of the cities and small towns among each other in handling wastes. Some motivations in terms of incentive be encouraged so that the people may find some monetary benefits out of it.

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AN ANALYSIS OF IMPACT OF GDP GROWTH ON HDI: A STUDY OF INDIA

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ABSTRACT

Human development has become an important issue for the entire world. Earlier time people were not giving much attention about it. In today's economic life, the prosperity of the nation is not only related to the economic growth but also to the human development of the nation. Many research has done to investigate actual relationship between economic growth of the country and the its human development progress. The result of developed country and underdeveloped country shows different result. This paper is an attempt to investigate the relationship between human development index and its different component with the economic growth of India for the period of (2000 to 2014). For my analysis I have utilized Pearson correlation analysis to investigate the types of relationship between economic growth of India and the it's human development progress. The result shows that the HDI and EG are very minor correlated. As far as other component of HDI is concerned the situation is same. It means the EG is does not mean that people of the India becoming more and more educative, healthy, intellectual etc.

KEYWORDS

EG - economic growth, HDI- human development index.

INTRODUCTION

Human development index has become a composite parameter which is utilized to measure the overall development of the nation rather than on concentration on the economic growth. The history of human development index started in 1990. Human development index report is prepared by the united nation development program (UNDP). The founder of HDI was Pakistani economist Mahbub ul Haq in 1990. There are three measure component of HDI. These are statistics of life expectancy, education and per capita national income of the respected nation. The main aim of calculation of HDI is to find out over all development of the nation in field of wellbeing of the people (health index), equality of nation (income index) and the knowledge of living person (education index). These countries are classified according to their performance in four ways

- Very High Human Development
- High Human Development
- Medium Development
- Low Human Development

HDI is calculated by following formula

$$1. \text{ Life Expectancy Index (LEI)} = \frac{LE-20}{80-20}$$

$$2. \text{ Education Index (EI)} = \frac{MYSI+EYSI}{2}$$

$$\text{Mean year of schooling index (MYSI)} = \frac{MYS}{15}$$

$$\text{Expected Years of Schooling Index (EYSI)} = \frac{EYS}{18}$$

$$3. \text{ Income Index (II)} = \frac{IN(GNPPC) - IN(100)}{IN(75000) - IN(100)}$$

II is 1 when GNI per capita is \$75,000 and 0 when GNI per capita is \$100

NOW FINALLY

HDI = $\sqrt[3]{LEI \cdot EI \cdot II}$.

LITERATURE REVIEW

Akbar Khodabakhshi (2011): Mr. Akbar khodabakhshi had done the research for investigating the relationship between GDP growth and HDI growth in context of India for the period of (2005 to 2010). He had applied simple analysis of this variable. According his analysis, he found that Indian economy is has performed well but other variable like life expectancy has very few impact on the HDI of the India.

Terfa Williams ABRAHAM, Umar Abdullahi AHMED (2011): There analysis was about the to investigate the short run and long run relationship between the economic growth and human development in Nigeria for the period of (1975 to 2008). For the analysis they had adopted the error correction model. Through their analysis they found that economic growth has negative as well as irrelevant relationship with human development in short run in Nigeria. But in long relationship is positive and significant.

Tulika Poddar, Varun Chotia, Dr. NVM Rao (2014): This research paper was basically focused to explore the relationship between HDI and economic growth of the six measure economy of the world. they had analyzed about (USA, UK, India, Australia, South Africa and Brazil) for the period of 2003 to 2012. They had adopted correlation, student's t-test and multiple regressions model for their analysis. According to their analysis they found that for human development we can not only depend upon the economic growth because other factor also relevant for the human development. They found that in India economic growth and human development are positively related but at the same time rising income also creating the income gap between the people.

Ashish Dhar Mishra and Rahul Chaudhary (2014): There paper was basically related to expose the different factor of the human development. they concentrated in the trend analysis of the human development in India with context of the various Indian state for the period of (2001 to 2012). There research design was Combination of descriptive and explorative research and they had adopted Simple statistical tools like time series cross section analysis etc. study researcher found that some states have good health index and highest ranked like Kerala then Punjab, Maharashtra. Some states have good education index and highest ranked like Himanchal Pradesh had highest rank and after that Tamil Nadu then Kerala. Few states like Haryana, Maharashtra, and then have good income index than other state

Honey Gupta and V.K. Gangal (2015): In their research paper they had tried to find out the relationship between economic growth and the human development in SAARC countries for the period of (2000 to 2012). They had utilized Pearson Correlation model for their analysis. According to their study they found that there is no uniformity in the relationship between EG and HD in all the SAARC nation. They found that only Afghanistan had positive relationship between EG and HD rest of all economy has negative relationship.

OBJECTIVES OF THE STUDY

The main objective of this paper is study the relationship between the EG and HDI growth as well as the EG and the various component of the HDI growth like (health index growth, income index growth, education index growth) in India for the period of (2000 to 2014).

HYPOTHESIS

- H0 - There is no significant positive relationship between India s EG and HDI growth
- H1 - There is no significant positive relationship between India s EG and health index growth
- H2 - There is no significant positive relationship between India s EG and income index growth
- H3 - There is no significant positive relationship between India s EG and education index growth

RESEARCH DESIGN AND METHODOLOGY

DATA: Secondary

Data source: UNDP data base, World Bank data base

Period of study: 2000 to 2014

Type of Research: Combination of descriptive and explorative research

Tools: Simple statistical approach through Pearson Correlation analysis

For the analysis HDI of India is taken to find out the relationship with its economic growth at the same time I have also considered the different component of HDI like education index, health index and income index to find out the relationship with economic growth. For my research Correlation result equal to 0.5 and above is considered significance.

ANALYSIS

TABLE 1

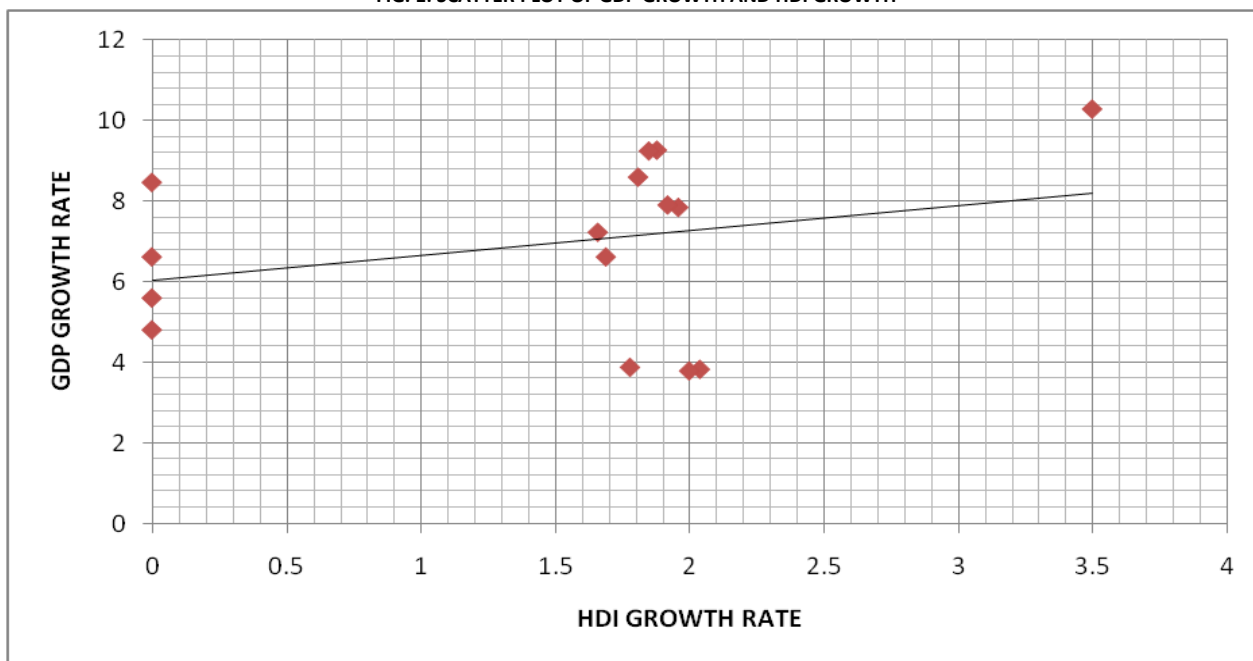
component	correlation	N (number of pairs)	Critical value (5% for two tailed pears ion correlation)	Hypothesis condition
E G and HDI	0.295139526	15	0.514	Accept null hypothesis
E G and health index growth	0.043539271	15	0.514	Accept null hypothesis
E G and Education index growth	0.224672349	15	0.514	Accept null hypothesis
E G and income growth index	0.225576265	15	0.514	Accept null hypothesis

Source: Researchers own calculation

From the above table we can find out that in India the relationship between HDI growths and EG has insignificant positive relationship. The above table also accepts our null hypothesis. There is insignificant relationship is not only between the EG and HDI growth rate but between all the component of HDI like (health index growth rate, Education index growth rate, income index growth rate) and EG in India. It means that we can say that if our economy is growing that over all welfare of public is also taking place in the nation. For easy and detail understanding we can go with the following scatter diagram which will shows us separate view point about it.

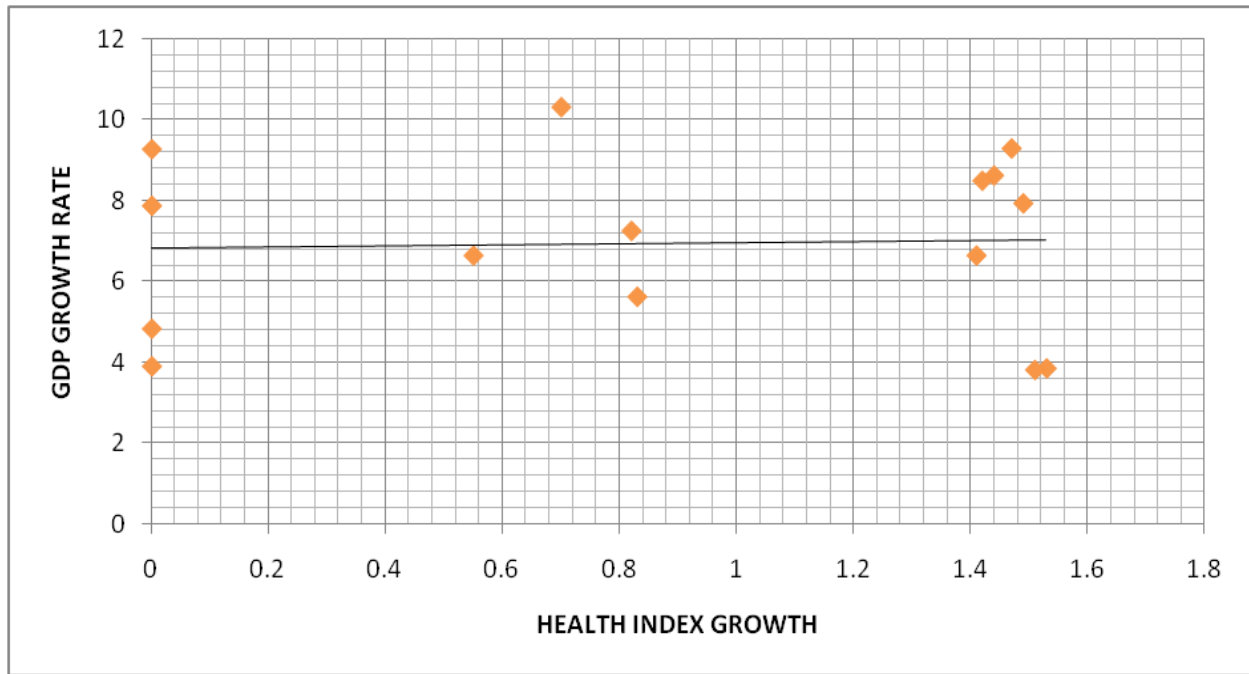
SCATTER PLOT PRESENTATION OF CORRELATIONS

FIG. 1: SCATTER PLOT OF GDP GROWTH AND HDI GROWTH



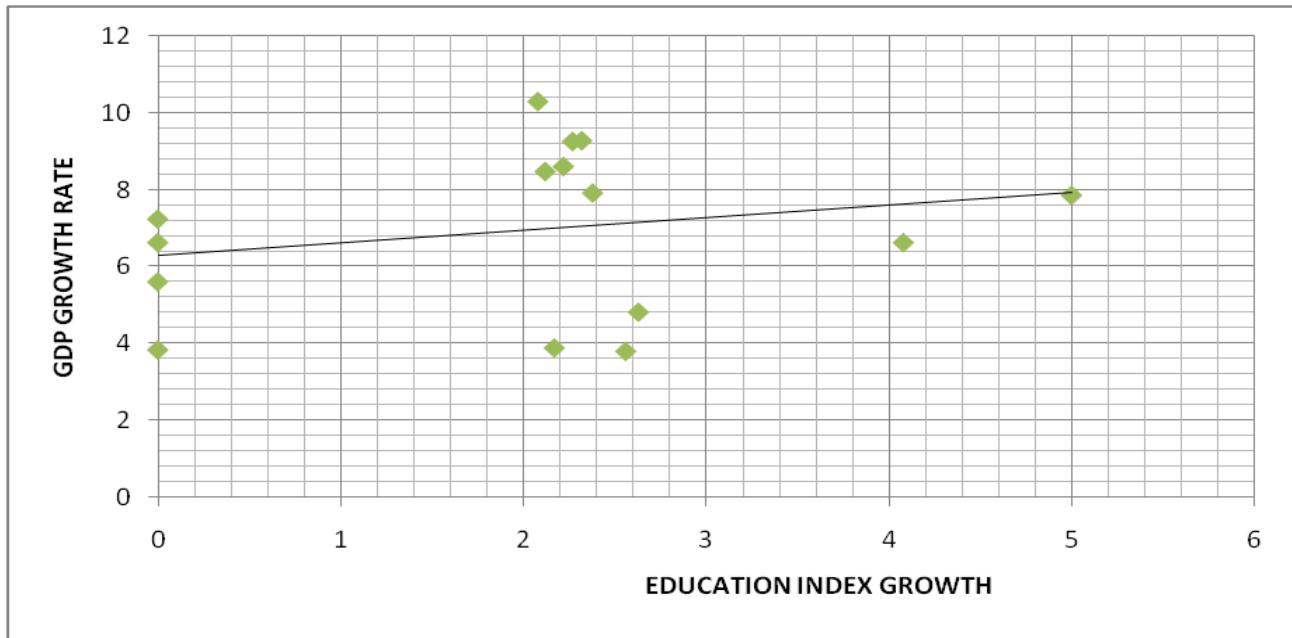
Source: UNDP

FIG. 2: SCATTER PLOT OF GDP GROWTH AND HEALTH INDEX GROWTH



Source: UNDP

FIG. 3: SCATTER PLOT OF GDP GROWTH AND EDUCATION INDEX GROWTH



Source: UNDP

FIG. 4: SCATTER PLOT OF GDP GROWTH AND INCOME INDEX GROWTH



Source: UNDP

Explanation

- **GDP growth and HDI growth:** as per as EG and HDI growth is concerned my analysis says that there is very minor positive correlation exist between them. in my calculation it only 0.295 which is less my criteria for significance level. It means that if our economy is growing fast we cannot be sure about quality of life of our population. So it becomes necessary for the government to adopt such policy so that quality of life of our population could enhanced together with economic growth
- **GDP growth and health index growth:** in India GDP growth and health growth are not related to each other. According to my analysis the coefficient of correlation is 0.435 which is considered absolutely minor. It means in India economic prosperity is not the guarantee that people will health condition is enhancing with increase in income. the scatter diagram of GDP and health growth is somehow horizontal
- **GDP growth and education index growth:** According to my analysis there is no any correlation between EG and education growth in India. The correlation value is 0.224 which is considered as minor. It means that education growth of the country is not related with economic prosperity. We can also see it through scatter diagram GDP and education growth is positive but slope is very less.
- **GDP growth and income index growth:** there is a general phenomenon that if the economy is growing fast than every body's income will also grow. But this not true because according to my analysis as we can see from table the correlation coefficient value is 0.22 which is also considered as minor. The slope of scatter diagram is also very less positive slope.

SUGGESTION

According to the finding of this paper would like suggest the government of India that we need structural changes for the overall development of the people. There should be more and more policy reform is need for it. Government should try to find out why our HDI growth is less and lesser than compare to the EG and how can we tackle down the situation. There for government should formed a committee of social expert and take the opinion from them about this issue.

CONCLUSION

Through the above analysis of HDI and EG I found some important conclusion. According to this study the HDI and EG are very minor correlated. it means if our economy is growing fast our HDI is not moving as fast as our economy is moving that's why the condition of India in term of human prosperity in the world is still low and on the other hand we have become the world's third largest economy in terms of PPP. As far as other component of HDI is concerned the situation is same. It means the EG is does not mean that people of the India becoming more and more educative, healthy, intellectual etc.

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