



International Conference on Advance Accounting and
Finance
(ICAAF-19)

Osaka, Japan
28th December, 2019

Association for Scientific and Academic Research

www.asar.net.in

Publisher: ASAR Explore

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Editorial:

We cordially invite you to attend the International Conference on Advance Accounting and Finance (ICAAF-19), which will be held in Osaka, Japan on December 28th, 2019. The main objective of ICAAF-19 is to provide a platform for researchers, engineers, academicians as well as industrial professionals from all over the world to present their research results and development activities in Accounting and Finance. This conference provides opportunities for the delegates to exchange new ideas and experience face to face, to establish business or research relations and to find global partners for future collaboration.

These proceedings collect the up-to-date, comprehensive and worldwide state-of-art knowledge on Accounting and Finance. All accepted papers were subjected to strict peer-reviewing by 2-4 expert referees. The papers have been selected for these proceedings because of their quality and the relevance to the conference. We hope these proceedings will not only provide the readers a broad overview of the latest research results on Accounting and Finance but also provide the readers a valuable summary and reference in these fields.

The conference is supported by many universities and research institutes. Many professors played an important role in the successful holding of the conference, so we would like to take this opportunity to express our sincere gratitude and highest respects to them. They have worked very hard in reviewing papers and making valuable suggestions for the authors to improve their work. We also would like to express our gratitude to the external reviewers, for providing extra help in the review process, and to the authors for contributing their research result to the conference.

Since October 2019, the Organizing Committees have received more than 67 manuscript papers, and the papers cover all the aspects in Accounting and Finance. Finally, after review, about 11 papers were included to the proceedings of ICAAF-19.

We would like to extend our appreciation to all participants in the conference for their great contribution to the success of International Conference 2019. We would like to thank the keynote and individual speakers and all participating authors for their hard work and time. We also sincerely appreciate the work by the technical program committee and all reviewers, whose contributions make this conference possible. We would like to extend our thanks to all the referees for their constructive comments on all papers; especially, we would like to thank to organizing committee for their hard work.

Acknowledgement

ASAR is hosting International Conference on Advance Accounting and Finance this year in month of December. International Conference on Advance Accounting and Finance will provide a forum for students, professional engineers, academician, and scientist engaged in research and development to convene and present their latest scholarly work and application in the industry. The primary goal of the conference is to promote research and developmental activities in Accounting and Finance and to promote scientific information interchange between researchers, developers, engineers, students, and practitioners working in and around the world. The aim of the Conference is to provide a platform to the researchers and practitioners from both academia as well as industry to meet the share cutting-edge development in the field.

I express my hearty gratitude to all my Colleagues, Staffs, Professors, Reviewers and Members of organizing committee for their hearty and dedicated support to make this conference successful. I am also thankful to all our delegates for their pain staking effort to travel such a long distance to attain this conference.



Dr. Mohammad Nasir
Secretary
Association for Scientific and Academic Research (ASAR)

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Comparative study of relationship between income inequality and economic growth in China with India

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Abstract: This paper applies the Engle-Granger two-step ECM approach to estimate the long-term and short-term relationships between inequality and economic growth for China and India. Our estimation results support the S-shaped curve hypothesis relating GDP per capita to inequality with different starting points for the two countries. We find a positive causal relationship for China, showing that increased income inequality spurred economic growth. Furthermore, we find the same results that the trade openness increased inequality in China and India. As for redistribution, fiscal redistributive measures show a negative effect in China and India. In the inequality-GDP per capita relationship, export show a negative effect in China and had no significant effect in India.

Index Terms—Income inequality, Economic growth, Redistribution, S-shaped curve

I. INTRODUCTION

Economic inequality is rising in emerging economies across the world. The World Economic Forum's 2016 Global Risk Report found that "serious income disparities" will be one of the greatest risks to global risk in the next decade. In Asia, China has one of the most rapidly growing economies in the world, income inequality is still a major challenge. In India, it has become one of the world's most unequal states headlines. Some economists worry that increased inequality itself may weaken economic growth.[1] The others are concerned that sustained unbalanced sharing of dividends will undermine public support for growth policies and lead to political instability.

There are theoretical and political paths that economic growth may affect income inequality and vice versa. We suggest contributing to this document by: (1) conducting time-series analysis of individual countries, and (2) by examining the bilateral relationship between growth and inequality. We first build a baseline error-correction model (ECM) suitable for all countries to examine the long-run equilibrium relationship between income inequality and economic growth. We also analyze the short-run impulse responses of the variables. Our survey is aimed at China and India.

II. LITERATURE REVIEW

The discussion in the theoretical and empirical literature thus far has suggested different channels for the relationship between inequality and economic growth. Much of the literature on the effects of economic growth on inequality has focused on the inverted U-shaped curve of the

notable Kuznets (1955).[2] The curve indicates that inequality increased early in the industrialization process and then further declined. By using the semiparametric method, Chambers(2010)[3] showed that economic growth reduces inequality in not balance dimensionally. If you must use mixed units, clearly state the units for each quantity in an equation. developing countries but has the opposite effect in developed countries in terms of the long-run effect. As for the short-term and medium-term impact, economic growth increases income inequality for all countries. Considering trade openness and human capital as determinants of inequality, Wahiba and El Weriemmi (2014) [4]demonstrated that in Tunisia, economic growth is positively associated with inequality. Nissim(2007)[5] found that as economic growth occurs, workers mobilize to the jobs associated with higher incomes, which beneficial to reduce income inequality. As can be seen from the above, the impact of economic growth on income inequality is still no clear answer.

As for the effect of inequality on economic growth, Forbes (2000)[6] showed that the inequality has positive impact on short-term economic growth. Halter et al. (2014)[7], however, found that in the long-term, greater inequality causes slower growth. Shin (2012)[8] points out that, the country in the early stage of development, the impact of inequality on economic growth is negative; however, it is positive in the mature stage of development. According to Cingano (2014)[9] and Neves et al.(2012)[10], inequality has positive influences on economic growth in panel datasets and negative impacts in cross-sectional datasets. From the above, most studies use cross-sectional or panel data to estimate the bi-directional causal relationship between economic growth and income inequality. A few previous studies adopted a time-series methods, Kang (2015)[11] and Bahmani-Oskooee et al. (2008)[12] included fiscal redistribution and trade openness,

respectively, in their estimations but ignored the effect of other possible determinants. So, our research employs time-series analysis to capture the heterogeneity of individual countries and to examine the bidirectional causality between economic growth and income inequality while including other explanatory variables.

III. METHODOLOGY

We employ country-level time-series analysis and use an error-correction model (ECM).^[13] Following Engle and Granger’s two-step approach, we first test for a cointegrating relationship between output level and inequality. By using augmented Dickey-Fuller statistics, each time-series variable is examined in isolation for its non-stationarity. Then, after estimating the cointegrating regression, the regression residuals were retrieved and tested for stationarity. If the residual term is stationary, then the time-series variables are cointegrated and the long-run relationship among variables can be established.

We use GDP per capita to measure average income level and the Gini coefficient to measure income inequality. The link between average income level and income inequality is discussed bilaterally. In our time-series study, we model income inequality in the long run as a function of the average income level and other determinants as follows:

$$Gini_t = a_0 + a_1(\ln GDP \text{ per capita}_t) + a_2(\ln GDP \text{ per capita}_t)^2 + a_3(\ln GDP \text{ per capita}_t)^3 + \sum_{i=1}^n \varphi_i \lambda_{i,t} + \varepsilon_t, (1)$$

where $\lambda_{i,t}$ indicates all other explanatory variables, and ε_t is the regression residual. Similarly, we adopt the following formulation to estimate the effect of income inequality and other determinants on output level in the long run:

$$\ln GDP \text{ per capita}_t = b_0 + b_1 Gini_t + \sum_{i=1}^n \delta_i Y_{i,t} + \nu_t, (2)$$

where $Y_{i,t}$ are all explanatory variables but $Gini_t$ for determining the effect on $\ln GDP \text{ per capita}_t$, and ε_t is the regression residual.

In the second step, we try to capture the short-run effect of each variable on inequality and output level, respectively. A similar equation is used to capture the short-term effects of each variable on GDP per capita. The respective error correction models to Eqs. (1) and (2) are shown as follows:

$$\Delta Gini_t = c_0 + c_1(\Delta \ln GDP \text{ per capita}_{t-1}) + c_2(\Delta \ln GDP \text{ per capita}_{t-1})^2 + c_3(\Delta \ln GDP \text{ per capita}_{t-1})^3 + \sum_{i=1}^n \rho_i \Delta \lambda_{i,t-1} + c_4 \varepsilon_{t-1} + \varepsilon_t, (3)$$

$$\Delta \ln GDP \text{ per capita}_t = d_0 + d_1 \Delta Gini_{t-1} + \sum_{i=1}^n \delta_i Y_{i,t-1} + \pi_t, (4)$$

where Δ indicates the change of variables, ε_t and π_t are the residuals. Among the coefficients, c_4 and d_2 are the adjustment rates of speed and are expected to be negative and significant. In addition, the Durbin–Watson test is used to check if the serial correlation problem exists and the Prais–Winsten correction is applied if necessary.

The dataset this analysis used is mainly from the Standardized World Income Inequality Database 6.0

(SWIID) and World Development Indicators (WDI). The variables used in the regression are listed and explained in Figure 1.

Variables	Definition	Source
GDP per capita	GDP per capita (constant 2005 US\$)	WDI
Gini_net	Gini index of inequality in equivalized household disposable (post-tax and post-transfer) income	SWIID
Gini_mkt	Gini index of inequality in equivalized household (pre-tax and pre-transfer) income	SWIID
Redistribution	The difference between Gini_mkt and Gini_net	SWIID
Export	Exports of goods and services (% of GDP)	WDI
Trade	Export plus import (% of GDP)	WDI
Gov. con.	General government final consumption expenditure (% of GDP)	WDI
Investment	Gross fixed capital formation (% of GDP)	WDI
Fertility rate	Fertility rate, total (births per woman)	WDI
Labor force	Population ages 15–64 (% of total)	WDI
Primary	School enrollment, primary (% of gross)	WDI

Figure 1: Variables’ name of the research

IV. SUMMARIZES RESULTS

Table 1: The effect of economic growth on inequality: country model

Dependent variable:	CHN_CR coefficients	IND_CR coefficients
<i>ln GDP per capita</i>	-370.7654*** (56.28712)	-173.9462 *** (46.05784)
<i>(ln GDP per capita)2</i>	52.84029*** (8.092991)	27.77734*** (6.932966)
<i>(ln GDP per capita)3</i>	-2.449149*** (0.308523)	-1.450073*** (0.346016)
<i>Trade</i>	0.041690 (0.027296)	-0.004937 (0.006310)
<i>Redistribution</i>	-12.51423*** (3.223880)	-23.14775*** (1.366849)
<i>Redis*Gini_mkt</i>	0.267500*** (0.077853)	0.476416*** (0.029163)
<i>Constant</i>	886.6733*** (128.6144)	402.7415*** (101.6062)
<i>N</i>	39	41
<i>r2</i>	0.990141	0.998966
<i>r2_a</i>	0.988292	0.998784
<i>rmse</i>	0.840084	0.089884
<i>Res.ADF test</i>	I(0)	I (0)

Dependent variable:D.Gini	CHN_ECM coefficients	IND_ECM coefficients
<i>D.ln GDP per capitat 1</i>	-366.2981** (177.1554)	-443.6721 *** (145.4213)
<i>D.(ln GDP per capita)2 t_1</i>	52.78604** (24.68275)	67.84987*** (21.99390)
<i>D.(ln GDP per capita)3 t_1</i>	-2.520033** (1.140081)	-3.443627*** (1.103220)
<i>D.Trade t_1</i>	-0.017693 (0.039934)	-0.000769 (0.010531)
<i>D.Redistribution t_1</i>	-8.096018 (6.029521)	-2.942750 (3.670610)
<i>D.Redis*Gini_mkt t_1</i>	0.163778 (0.144604)	0.049812 (0.074625)

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Error correction t₁	-0.433206*	0.321474
	(0.224909)	(0.337185)
Constant	0.727601	0.190093***
	(0.571493)	(0.048843)
N	37	39
r²	0.456050	0.426298
r²_a	0.324752	0.296753
rmse	0.894071	0.161829
Res.ADF test	I(0)	I (0)
DW	2.020209	2.232232

- a. *,**,***indicate 10, 5, 1 percent level of significant respectively.
 b. Numbers in parentheses are the standard error.
 c. The sample period for the China is 1978–2016,and for India is 1975-2016.

In Table1, we summarize the estimation results for each individual country. For China and India, the three GDP per capita coefficients are all significant at the 1% level in the cointegrating regression. The first term is negative, the second term is positive and the third term is negative which is consistent with the S-curve hypothesis[14]. While, it starts with the back portion of inverted U-shaped curve. Among them, redistribution * Gini _mkt is an interactive term reflecting the impact of government redistribution on income inequality, which may depend on the level of income inequality before government intervention. For other factors, redistribution has a negative impact on income inequality as expected. On the other hand, the interaction term of Redis * Gini _mkt has a positive influence, which shows that the redistributive effect of government taxes and transfer rely on the level of income inequality prior to government interventions. The negative impact of the government's income inequality policy is clearly offset by the original state of income distribution.

As for short-run dynamic effects, all determinants, expect the Redistribution * Gini _mkt and Redistribution , in change form have significant effect on income inequality in China. However, for India, three GDP per capita terms on income inequality are all statistically significant at the 1% level. The sign of the first term is negative, second term is positive, and third term is negative.

Table2:The effect of inequality on economic growth

Dependent variable:ln GDP per capita	CHN_CR coefficients	IND_CR coefficients
Gini	0.000163 (0.005617)	-0.045108* (0.024697)
Labor force	0.069144*** (0.007669)	0.145183*** (0.019684)
Export	-0.005250 (0.003413)	-0.006628 (0.004724)
Govt con.	-0.023660* (0.013150)	-0.001415 (0.010921)

Investment	0.004798 (0.003651)	0.017194*** (0.004344)
Primary	0.018728*** (0.001247)	0.017612** (0.007219)
Fertility	-0.494712 *** (0.050631)	-0.076048** (0.037141)
Redistribution	-0.177594*** (0.049007)	0.164469*** (0.043523)
Constant	3.253935*** (0.556112)	-0.487068 (1.130601)
N	39	41
r²	0.997614	0.997262
r²_a	0.996977	0.996578
rmse	0.053212	0.028889
Res.ADF test	I(0)	I (0)

Dependent variable:D.ln GDP per capita	CHN_ECM coefficients	IND_ECM coefficients
D.Gini_{t-1}	-0.001723 (0.003938)	-0.001778 (0.031194)
D.Labor force_{t-1}	0.007796 (0.010689)	0.110308* (0.056288)
D.Export_{t-1}	0.000972 (0.001633)	0.001781 (0.003993)
D.Govt con._{t-1}	-0.008895 (0.006081)	0.001587 (0.012818)
D.Investment_{t-1}	0.005126*** (0.001602)	-0.000245 (0.004564)
D.Primary_{t-1}	0.003227* (0.001684)	0.004063 (0.007737)
D.Fertility_{t-1}	-0.005670 (0.061760)	-0.003350 (0.537138)
D.Redistribution_{t-1}	-0.045891 (0.028863)	0.008670 (0.058336)
Error correction_{t-1}	0.301422*** (0.088912)	-0.302137 (0.220028)
Constant	0.072611*** (0.008208)	0.012308 (0.044183)
N	37	39
r²	0.497957	0.292934
r²_a	0.330610	0.073500
rmse	0.020411	0.027559
Res.ADF test	I(0)	I (0)
DW	0.971660	1.761815

- a. *,**,***indicate 10, 5, 1 percent level of significant respectively.
 b. Numbers in parentheses are the standard error.
 c. The sample period for the China is 1978–2016,and for India is 1975-2016.

We summarize the estimated results for each country in Table 3. For China, Gini has a positive effect on GDP per capita but it is not statistically significant. The labor force variable and primary variable have positive impact on GDP per capita at the 1% significance level. In addition, we find that the fertility and redistribution shows the negative impact on GDP per capita. However, fiscal redistribution

policies increase per capita output. Finally, the long run effects of government expenditure is negative but insignificant for China. With respect to the short-run responses, we estimate a negative effect of the change in Gini on GDP per capita growth but it is not statistically significant. Among other determinants, only the changes of investment and primary variable are statistically significant determinants of output growth in the short-run dynamics. Compare with China, the gini has a negative impact on GDP per capita at the 10% significance level. This suggests that income inequality has been harmful to economic development from the experience of India. In addition, we find labor force, investment and primary have positive effects on real per capita output. However, the fertility rate have negative effects. The other variables did not produce significant coefficients. From the results estimated by the ECM equation, changes in income inequality have a negative but insignificant effect on GDP per capita growth. The labor force has a positive impact on per capita output in short run. Also, the effects of other determinants, on GDP per capita growth are all statistically insignificant.

V. BRIEF ANALYTICAL COMPARISONS AND DISCUSSIONS

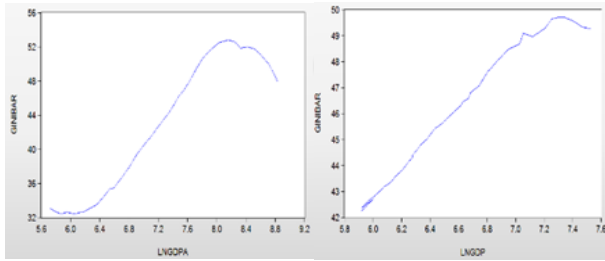


Figure 2: The projected relationship between output level and inequality (1st China, 2nd India)

Using beta weights, we can compare the contribution of each variable to growth and inequality within each country or in different countries. We find that per capita GDP is the most important determinant of the income gap between the two countries. For the inequality of income growth, the labor force is the most important variable. The S-curve relationship between output level and inequality for each individual country is projected and showed in Fig. 2. The two countries all experienced rapid growth and huge inequality.

The reality of the various bidirectional relationships between economic growth and income inequality found in our study fall into four possible scenarios, as shown in Fig.3. Case I shows that if the signs of the bidirectional relationship are both negative, it means that lower inequality further increases economic growth and economic growth lessens inequality. Cases II and III indicate cases of interchanging equilibrium outcomes when the bidirectional

relationship involves one positive and one negative effect. Finally, in Case IV, we have the classic “Trade-off” problem when both causal effects are positive. If we want to achieve higher growth, we must take the higher inequality at the cost. Where to put higher priority between growth and equality poses a great challenge to policy-makers in this case.

		From inequality to growth (I to G)	
		Negative	Positive
From growth to inequality (G to I)	Negative	I: High growth with low inequality (Virtuous Cycle)	II: High growth with low inequality and low growth with high inequality (Virtuous Cycle) (Interchanged)
	Positive	III: High growth and high inequality and low growth with low inequality	IV: High growth with high inequality versus low growth with low inequality (Interchanged) (Trade-off)

Figure 3: Four possible scenarios of the relationships between economic growth and income inequality

CONCLUSION

As found in our study, all countries experience the S-curve in the economic development process, for the economic growth-inequality relationship. This clearly demonstrates that each individual country has the opportunity to experience both positive and negative causal links from growth to inequality throughout the development process. However, for the inequality-economic growth relationship, we found positive links for China, and negative impact for India. As a result, India may have benefited from the Virtuous cycle relationship with high growth and low inequality during some parts of its development over our study period.

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To Study the Impact of Mediating Role of the Learning Strategies between the Knowledge Characteristics of a Job and Employee Innovation Process

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Abstract: This study explains conceptual model that elucidates how work based learning strategies are playing mediating role between the knowledge characteristics of a job and employee innovation process. Knowledge characteristics of job are playing role as independent variable and the key component of this variable is problem solving. . The work based learning strategies is mediating variable and the key factor of this variable is cognitive learning strategies. The dependent variable is innovation process. A survey methodology is adapted for this research. Population frame is the software engineers. Simple random sampling technique is used. The questionnaire is used as a research instrument. For analyzing the data, apart from descriptive statistics, the regression analysis is conducted for testing hypotheses. The result shows that problem solving has positive impact on the innovation process during direct relationship. The problem solving also has positive impact on the innovation process through the mediation of cognitive learning strategies.

Index Terms— Performance; Learning strategies; Organization.

I. INTRODUCTION

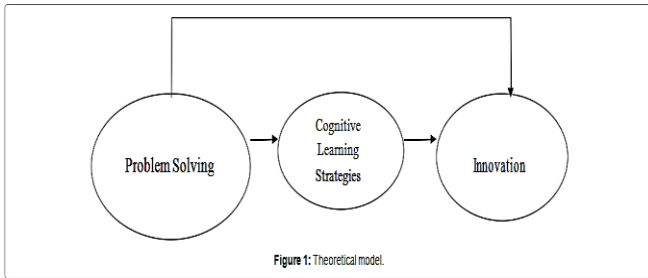
The research in the domain of Job Design is trying to develop the mechanisms through which knowledge characteristics of a job has positively effect on the output of the employees in the form of innovative behavior, well-being and performance. The work based learning strategies has been suggested as one type of mechanism [1]. The knowledge characteristics of a job and work based learning strategies mechanism encourages the employees to learn about the job and enable them to perform effectively and efficiently. The previous studies findings support that the employee outcomes are task performance [2] and well-being [3,4] due to the mechanism between the job design and work based learning strategies. This mechanism also helps the employee in the idea generation, promotion and implementation within the organizations [5]. The job design represents the characteristics of the job. Knowledge characteristic of a job is a part of job design. It is important to identify the effect of knowledge characteristics on the innovation process via direct or through mediating role of work based learning strategies. After the identification of this affect, the organizations can improve or promote the employee innovation process by coalescing knowledge characteristics with interference to enhance work based learning strategies. The previous studies support directly the relationship of problem solving [6] and skill variety with the employee learning. The employee learning is directly associated with

innovation [7]. The results of these studies did not elaborate the mechanism through which job design affect the employee innovation process. This article proposes a mechanism; it explains the knowledge characteristics effect on the innovation through work based learning strategies. The key component of the knowledge characteristics of a job is problem solving. Problem solving engrosses innovating idea, generating idea, solving non routine problems, and preventing from error [8]. The key component of the work based learning strategies is cognitive learning strategy and behavioral learning strategy. The employee uses this learning strategy to get and organize the knowledge [9]. Cognitive learning strategies elaborate the new information in the light of existing information and originate the principal, creating scheme and key issues. The employee innovation process consists of three different categories. First is idea generation, the concept of idea generation is similar with the concept of creativity. The idea generation in the innovation process should reflect newness and originality. The next in innovation process is idea promotion. This stage proposes the new ideas to employees and organization and getting the support of the idea. The final stage of the innovation process is idea implementation. In this stage new ideas are amalgamated within the organizational process (Figure 1).

Theory and Hypotheses Development

The problem solving effect on cognitive learning strategies and innovation

Knowledge characteristics are the part of job design. The first part of conceptual model explains the relationship between the knowledge characteristics and work based learning strategies. This model proposes that problem solving will recognize the use of cognitive work based learning strategies. The problems are obstacles for employees to attain goals and task performance. Due to this, the employees deploy the different skills and problem solving techniques through work based learning strategies. The work based learning strategies did not provide surety of the solution of problem. Problem solving is commonly regarded as most significant cognitive activity in the professional context. The familiar educational settings are required for learning to solve the problems [10]. The employees learn from the past precedence’s, events, situations and happenings when an employee’s identify similarities of the current problem with the previous ones. The old problem gives the solution pattern of the new problem. This sort of solution guides the individual’s to creativity [11]. Psychological theory.



explains that problem solving leads to students for gaining knowledge and learns about thinking strategies. The learning due to the problem solving assists the students for developing learning strategies. The problem solving inventing theory explains knowledge base, practical methodology, technology according to model and tool sets for problem solving and developing new ideas. This theory consists of first, specific problems convert into general problem, second is finding the typical solution of general problems and third is get the solution of specific problem from converting the typical solution into specific solution [12]. This theory examines the challenges about the problems where innovation is needed. This theory applied in different categories of industries, including process development [13,14], eco-innovation [15], and service innovation (Table 1) [16]

H1: Problem solving has positive impact on the Innovation

The cognitive learning strategies effect on innovation

The learning strategies encourage knowledge acquisition for job context and task. The cognitive learning strategies assume dual procedure models of cognition. One is Intentional mode and second is analytical mode of cognition. These modes motivate to learn the new rules, facts and knowledge of organization [17,18]. Cognitive work based learning strategies is considered as example of premeditated and intentional approaches of thoughts in which effort and time deliberately spent on topic. The cognitive work based learning strategies encourage the employees to knowledge acquisition and elaborate new information by investigating the implications of novel information from the existing knowledge. The consequences of cognitive work based learning strategies on knowledge gaining have considered in the circumstances of everyday work. Knowledge acquisition in workplace setting and training has been linked with experimental application strategies [19]. The theoretical and experimental evidence proposes that cognitive work based learning strategies endorse the knowledge acquisition or gaining. It is suggested that knowledge acquisition through work based learning strategies develops potential to generate and create novel and useful ideas [20]. Many theoretical perceptions encourage this idea. Amabile’s [21] componential theory explains knowledge acquisition is a fundamental element to develop new ideas and increase potential of peoples or employees to amalgamate information for generating new different ways. The potential of the peoples or employees intensify by organized knowledge according to common principles comparatively unrelated information [22]. An insinuation from cognitive load theory explains that the enhancement in knowledge helps to decrease the burden on working memory when present situation demonstrated as problem solving and learning. This theory can be applied to relevant cognitive activities, such as find solution of problem or create a new idea [23]. Both theories suggest that the relevant domain knowledge

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.499 ^a	0.249	0.236	0.52731
2	0.552 ^b	0.305	0.281	0.51155

^aPredictors: (Constant), PS.

^bPredictors: (Constant), PS, CLS.

Table 1: Model summary

acquisition has positive relationship between the creativity. The results of empirical studies show that expert employees

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(higher level of knowledge) are more innovative and create new ideas than employees who have less knowledge [24]. The researcher argued in this study that job characteristics manipulate cognitive work based learning strategies. The cognitive work based learning strategies effect on the innovation process. The job design has effect on the innovation. Pervious results of empirical studies show that the job design has relation with task performance. The skill utilization plays a mediating role between the relationship of job design and well-being of employees.

H2: Problem solving has positive impact on the Innovation through mediation role of cognitive learning strategies.

Research Methodology

The research approach is quantitative. Quantitative research is essential about collecting numerical data to explain a particular phenomenon. A survey methodology is adapted for this research. Population frame is the software engineers. Simple random sampling technique is used and unit of analysis is individual. The sample size is calculated with the help of statistical formula. The data for this research will be gathered using a questionnaire. For analyzing the data, apart from descriptive statistics, the traditional statistic for testing hypotheses will be used.

Measures

The developed scale of Barkman and Machtmes [25] is used to measure the problem solving. The total items of the scale are 24. The response point of scale consists of five points used (1=Never, 5=Always). The developed scale of Holman et al. [26] is used to measure the Cognitive learning strategies. The total items of the scale are 8. The response point of scale consists of five points used (1=Not a lot, 5=A great deal). The developed scale of Holman et al. is used to measure the Innovation. The total items of the scale are 9. The response point of scale consists of five points used (1=Not a lot, 5=A great deal).

Demographic statistics

In the gender statistics it can be observed that both male and female participated as respondents. Male and female respondents are 49 and 11 out of total 60 valid responses i.e. 81.7% and 18.3% respectively. The reflection of male dominance is visible from the statistics. Both married and single respondents participated in the survey. Married and single respondents are 12 and 48 out of total 60 valid responses i.e. 20% and 80% respectively. The reflection of single dominance is visible from the statistics. The respondent's age divided in the four groups; first group falls between the 21-30 years old, the second group falls between the 31-40 years old, the third group falls between the 41-50 years old and lastly greater than 50 years old. The age of 50 respondents fall between the 21-30 years old which is 83.3% of the total respondents. The age of 7

respondents fall between the 31-40 years old which is 11.7% of total respondents. The age of 3 respondents fall between the 31-40 years old which is 5% of total respondents. The result shows that majority of respondent's falls in 21-30 years old group. The respondent's qualification divided in the two groups; first group has 16 years education and second group has above 16 years education. The 39 respondents have 16 years education which is 65% of the total respondents. The 21 respondents have above 16 years education which is 35% of total respondents. The majority of respondents have 16 years education. The respondents were categorized into five categories on the basis of salary. First category was less than 20, second category is 21-40, third was 41-60, fourth was 61-80 and 81-100 thousands rupees salary of respondents. The majority of respondents get less than 20 thousand salaries. This survey envisaged on a sample of people having different length of experiences. It was important to analyze the data from view point of experience of respondents. The majority of respondents have up to five years' experience.

Testing assumptions of regression

The regression analysis is based on specific assumptions. The assumptions of regression are linearity, multi co-linearity, normality and homoscedasticity. The assumption of normality examined through the graphical technique by histogram. The assumptions of linearity and homoscedasticity examined through scatter plots diagram. The assumption of the multi co-linearity examined through the correlation matrix.

Regression analysis

The purpose of regression analysis is to check the relationship between the independent variables with dependent variable. In the regression analysis examined the individual impact of the independent variable on the dependent variable, quality of the goodness of the model, significance of the model and strength of the relationship between the independent variables and dependent variable.

- The $R^2=0.25$ of model 1 indicates that the problem solving predictor explains 25% variance in Innovation.
- The $R^2=0.305$ of model 2 indicates that the problem solving predictor explains 30.5% variance in Innovation.
- The $p<0.05$ shows that at least one variable plays significant role in the both model.

The p value for $PS<0.05$ which shows significant relationship between PS and IN and is interpretable. It means significant positive relationship exists between PS

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and IN ($\beta=0.428$, $p<0.05$) showing IN will increase by 0.428 units for every one unit increase in PS, keeping all other predictors constant in model 1. The p value for PS <0.05 which shows significant relationship between PS and IN and is interpretable. It means significant positive relationship exists between PS and IN ($\beta=0.359$, $p<0.05$) showing IN will increase by 0.359 units for every one unit increase in PS, keeping all other predictors constant in model 2. The p value for CLS <0.05 which shows significant relationship between CLS and IN and is interpretable. It means significant positive relationship exists between PS and IN ($\beta=0.223$, $p<0.05$) showing IN will increase by 0.223 units for every one unit increase in PS, keeping all other predictors constant in model 2 (Tables 2 and 3).

II. CONCLUSION

This research tested a conceptual model of the knowledge characteristics (problem solving) learning mechanism (cognitive learning strategies) in relation to innovation. The result shows that problem solving has positive impact on the innovation process during direct relationship. The problem solving also has positive impact on the innovation process through the mediation of cognitive learning

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	5.339	1	5.339	19.2	0.000
	Residual	16.127	58	0.278		
	Total	21.466	59			
2	Regression	6.55	2	3.275	12.514	0.000
	Residual	14.916	57	0.262		
	Total	21.466	59			

aPredictors: (Constant), PS.

aPredictors: (Constant), PS, CLS.

aDependent Variable: I.

Table 2: ANOVAc

Model		Unstandardized Coefficients	Std. Error	Standardized Coefficients	t	Sig.
		B		Beta		
1	Constant	2.011	0.378		5.318	0.000
	PS	0.428	0.098	0.499	4.382	0.000
2	Constant	1.492	0.439		3.396	0.001
	PS	0.359	0.1	0.418	3.507	0.001
	CLS	0.223	0.104	0.251	2.151	0.036

aDependent Variable: IN.

Table 3: Coefficientsa.

strategies. This model confirms the mediating relationship of cognitive learning strategies between the problem solving and innovation. This conceptual model can guide future research in this particular area, which could focus on the wider set of variables related to the knowledge characteristics for improving innovation in organization.

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Innovations in Engineered Mesoporous Material for Energy Conversion and Storage Applications

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Keywords — Energy; Porous material; Storage; Conversion; Applications

I. INTRODUCTION

Today, Earth's population stands at more than seven billions [1]. Along with a constantly growing human population, the living standards are also increasing. Energy is the initial driving force for achieving advancement in human living [2]. As a result of that, the worldwide energy consumption is expected to double within the next 35 years [3]. Fossil fuels such as coal, oil and natural gas have generated most of the energy consumed globally for over a century [4]. But fossil fuels are responsible for a significant amount of land, water and air pollution beyond their carbon dioxide production [5]. Due to large production of carbon dioxide from energy generation, along with emission from vehicles, the earth temperature rises by approximately 2-3°C and it is expected that the same will go up further [1]. This may result into geographical as well as environmental imbalance. To solve these problems, there has been recently a trend towards the increase in the utilization of various renewable energy resources [4]. In this respect, wind power, solar energy, hydrogen geothermal energy, biomass and bio-fuels are extensively investigated for a few decades both from the scientific/academic and industrial/societal viewpoints [6,7].



Figure 1: Renewable energy outlook [8].

Among all the renewable energy resources (Figure 1), wind and solar energy received great attention, as they essentially not required water to operate and thus do not

pollute water resources [9]. Solar energy has the most potential, as sun provides the earth with approximately 1,00,000 TW which is almost 10,000 times more than the current energy consumption [10]. Thus abundance of energy makes sun energy very popular for electricity production and hence enhanced their commercialization. Direct utilization of solar radiation to produce electricity is not only way to utilize the nature's renewable energy flow via photovoltaic cells but also power can be generated at the users place. Mesoporous materials have attracted great interest in current years because of the unusual mechanical, electrical and optical properties endowed by confining the dimensions of such materials and because of the combination of bulk and surface properties to the overall behaviour. One needs only the consideration of the staggering developments in microelectronics to appreciate the potential of materials with reduced dimensions. Mesoporous materials are becoming increasingly important for electrochemical energy storage and generation [10,11]. Mesoporous materials are used in many energy applications, because of their owning ability to interact and absorb with guest species on their surfaces, and in the pore spaces [12,13]. The porous materials are classified into three categories according to their pore sizes: mesoporous (2-50 nm), microporous (<2 nm) and macroporous (>50 nm). Since the first report of meso-porous silica [14], many mesoporous materials synthesized under a wide range of pore size PHs from highly basic to strongly acidic conditions, various of shape using non-ionic, cationic, neutral and anionic surfactants [15,16]. These materials have good characteristics such as high surface area, narrow pore size, uniform pore structure etc. The mesoporous materials having large pore volumes, shown promise in the loading of guest species and in the accommodation of the expansion and strain relaxation during repeated electrochemical energy storage processes (Figure 2).

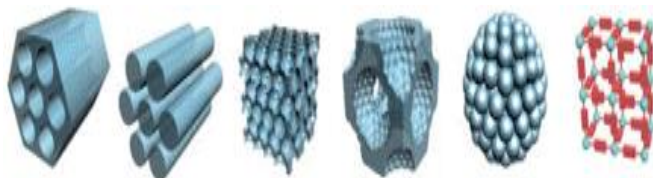


Figure 2: Various type of mesoporous materials.

Moreover, it has high surface areas should provide a large number of reaction or interaction sites for surface processes such as catalysis, adsorption, energy storage and separation. These above features are particularly advantageous for applications in energy conversion and storage [17-19]. The ordered mesoporous materials developed using various templating materials to have attracted increasing interest from the electrochemists community due to their plenty of unique properties and functionalities that can be effectively exploited in optoelectronic devices. Mesoporous materials are excellent opportunities in energy storage and energy conversion applications having to their extraordinarily high surface areas and large pore size. These properties may enhance the performance of porous materials in terms of lifetime and stability, energy and power density.

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Improving Access to Quality Diagnostic Tools in Low and Middle Income Countries (LMICs) Through Social Innovation-Lessons Learnt

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Keywords — Public health; Infectious diseases; Social innovation; Low and middle income countries

I. INTRODUCTION

In vitro diagnostics are essential for the successful delivery of healthcare; conducting routine public health surveillance; rapid detection and containment of infectious diseases [1], responding to health emergencies, and dealing with the growing problem of antimicrobial resistance, and detecting and managing the communicable and rapidly growing problem of non-communicable diseases in Low- and Middle-Income Countries (LMICs) [2]. However, there is still a lack of effective tools that are affordable and appropriate for resource constraint settings and even if suitable diagnostic tests are available, they are often not accessible to poor populations [3]. One approach to improve access to products or services in LMICs is the use of social innovation [4]. While we acknowledge that multiple interpretations and definitions exist, we define social innovation as an approach to the implementation of healthcare delivery interventions by cross sectoral actors in response to needs expressed by the community. Crucially, it empowers people at the local level.

Quality Diagnostics

To promote how to improve access to quality diagnostics in LMICs using social innovation in LMICs settings, a workshop was held in April 2016 in Geneva, Switzerland during the Geneva Health Forum 2016 (GHF). The aims of the workshop were [1] to learn from examples of the social innovators, and to see how they can be applied to diagnostics; [2] to identify key factors of successful social innovations and how to scale up these models; [3] to identify the obstacles and limitations and how they can be addressed; and [4] promote new collaborations and engage academia in social innovations. Participants working with social innovations in their capacity participated in a workshop. Participants included social innovators and representatives from academia, international organizations

and NGOs. The workshop consisted of 6 teleconferences over 6 months followed by a closed meeting and an open workshop along with the participants of the GHF.

II. LITERATURE REVIEW

Literature review was performed and the lessons learnt from social innovations were weighed up during the teleconferences to note key factors from the innovations. During the workshop at the GHF the social innovators participating in the workshop presented their work, the types of innovation models they use and the setbacks they have faced during the planning and implementation of their innovations. Four case studies working in different settings and following different models were presented. The four cases were: Operation ASHA-(INDIA), e-health for TB detection and drug compliance; Embryo (INDIA), local innovations such as a drug adherence monitoring system; Learner Treatment Kit (Malawi), detection and treatment of malaria in primary school children by teachers; and project HOPE (Peru), detection of cervical cancer by self-testing promoted by local volunteer women [5]. Four main learning outcomes were identified that form the pillars of the innovations: Feasibility, Replicability, Sustainability and Scalability. It was noted that for social innovations to be feasible, leveraging of existing resources to delivery in hard-to-reach populations, using community members to implement the innovation and centering the innovation around end user needs are key. There were examples of innovation, which used integrated school-based health service delivery by teachers to provide malaria case management to school children, and women from the community trained to help women for cervical screening, as example of using community participation in social innovations.

For replicability, standard operating procedures (SOPs) allow the use of innovations in different settings and in this

technology-driven world; technology is playing a significant role in social innovations. An example of the use of technology to track adherence to medicines or keeping record of the patients at the local level was presented. Simple models and continuing market analysis are crucial for scalability of the innovations. As the innovations must have minimal costs per patient, government support, co-funding, and co-ownership with government buy in; resource pooling and allocation are identified as important factors in the sustainability of social innovations which demonstrates the role of the government as vital.

III. CONCLUSION

The conclusions of the workshop were that social innovation in diagnostics can be a solution to improve access to diagnostic tools and services for marginalized and hard-to-reach populations but the innovation should address unmet needs (cost/clinical) with context appropriateness. Support and involvement from the community and local governments for such initiatives are vital. Business models can be adapted for the social innovations. The innovations should be adapted to the region, affordable and acceptable to the culture. Finally, more research and seed funds are required to further advance the field of social innovation.

This workshop highlighted the features that make a social innovation successful. The findings of the workshop will be useful for other groups that advocate, fund, and develop social innovation initiatives to improve health care in low-resource settings. More information is available at [<http://socialinnovationinhealth.org/>].

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An Analysis of Gobi Corporations Marketing Strategy And It's Consumer Perceptions

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Abstract: Every war and every competition have their own strategies. If you cannot define your suitable strategy, you will be listed one of the unsuccessful company. Therefore, every company needs to define good marketing strategy. Our research findings indicate that Gobi corporations' marketing strategy. The Gobi corporation is one of the top cashmere producing company in Mongolia. We collected 311 participations from Mongolian consumers and analyzed by competitive marketing strategy.

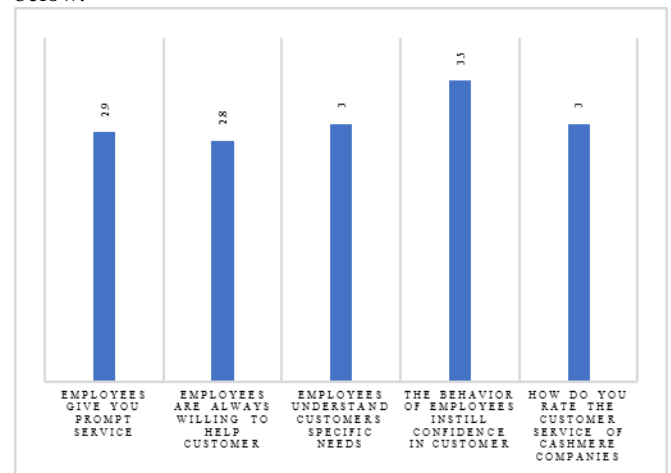
Index Terms—Marketing strategy, SWOT, PEST, product life cycle

I. INTRODUCTION

Mongolia, is the last land of the nomads which live in the traditional house, wearing natural processing clothes and eating bio natural foods. Our country almost 2000 years has been part of the human history. Therefore, our ancestors were wearing badge, cashmeres and other leather clothes. Thenceforth every famous historian said that Mongolian cashmere processing history has begun 2000 years before. In our paper to introduce Mongolian cashmere products marketing situation. The marketing is the newest thing of our market. Because, Mongolian People's Republic was eventually moved to democratic present Mongolia in the 1990 and wrote new constitution. Since this revolution, market economy was reformed and transited to free market from centrally planned economy by slowly. Cashmere wool is the main domestic product of Mongolia. But only one company can successfully enter in the Global market, because the Mongolian business marketing has been developing only for past 2 decades. Recently, marketing tools of Mongolian companies are rapidly developing. Many of them are still using traditional marketing tools such as Advertising and Promotion. But most companies cannot control the whole market. Only Advertising cannot help a brand to become famous. Each brand has its own image and personality. Also, this paper divided by three parts. First part that introducing Mongolian cashmere market situation and Mongolian cashmere markets history. Second part presenting that some required literatures. Last part presenting that results of consumer survey, SWOT, PEST of Mongolian cashmere sector and defining some Marketing strategies.

1.1. Background of Important Factors, Affecting Mongolian Cashmere Sector

Service quality Mongolian cashmere market service is unsatisfied now. See graph 1 below. In 2017, We researched 311 customer's satisfaction of cashmere sector service quality. The results of the research are shown as Graph 1 below.



Product price

Cashmere products are special products made from 100% natural raw materials. That is why, cashmere products always have been highly priced. In the Mongolian cashmere sector, their price wouldn't be medium or low for Mongolian people. Medium price is 300 000 – 800 000 MNT (about 3000 - 10.000 NTD) (Mongolian marketing consulting group Cashmere sector survey, 2015). Mongolian average wage of Mongolian citizens is 700 000 – 880 000 MNT (NTD 9800 – 11,000) for women and 1 100 000 MNT (13,000 NTD) for men (Office, 2016). The cashmere product price is half of an average wage of Mongolian

customers. Though Mongolia has 60 million livestock, camels and goats make only a half of it; so, cashmere products cannot sell for the fair price to customers. Because of the high prices, Mongolian companies cannot become global companies.

Product Quality Mongolian cashmere product quality is excellent. The report of the Mongolian domestic product customer satisfaction research (Group, 2015) published in 2015, showed the Mongolian cashmere product High quality. 90% of the customers, who bought the Gobi LLC products were highly satisfied with them (Group, 2015).

1.1. Company Situation

Competitors

In the Mongolian cashmere sector, 7 big manufactures are producing (Industry, 2015). The GOBI Corporation is one of the best and biggest share of a cashmere sector. Its biggest competitor is the GOYO Corporation that also produces cashmere products. In 2016, GOBI LLC market share was 66%, and the GOYO LLC market share was 13%. But it is on the international market. On the local market, the GOBI Corporation market share constituted 38% and the GOYO Corporation market share was 30% of the local market place (Gobi, 2016)

Suppliers of the Gobi Corporation

The main supplier of the company is 500 thousand of Mongolian herders. Goats now comprise almost half of Mongolia's total livestock population, and the population explosion has caused environmental stress, evidenced by overgrazing, pastureland degradation and desertification. At the same time, volatile international cashmere prices have pushed many herders to keep larger flocks as a hedge against falling prices. Last year, prices dropped 29 percent to 50,000 tugriks (about \$37) per kilo (Industry, 2015).

Company Target Market

The cashmere is one of the high-end product of the world. The GOBI company is targeting to heighten the revenue of Mongolian people and their life-cycle, like in Europe (Group M. M., 2016).

Company Segmentation

Many Gobi Corporation branch stores are in Zaisan, where businessmen, popular singers, top models, politicians, CEO's live, and the main street of Ulaanbaatar (capital city of Mongolia). It is segmenting high value customers (Group M. M., 2016)

Product Prices

Below, the price scale of the GOBI corporation products is presented. GOBI's average price is focusing on high revenue customers of the Mongolian market (Group M. M., 2016).

№	Male	Female	Children	Accessors
1	Sweaters (1870ntd-3800ntd)	Sweaters (1500ntd-3500ntd)	Sweaters (2000-3000ntd)	
2	Pants (1500ntd-4500ntd)	Pants (1200-3500 ntd)	Pants (1500-3500 ntd)	Scarfs (1000-8000ntd)
3	Overcoats /(5000ntd-14000ntd)	Skirts (700-1500ntd)	Hats and scarfs (1800-2600ntd)	Bags (4000-10000ntd)
4	Hats and scarfs (800ntd-1500ntd)	Overcoats (4500-15000ntd)		
5	Socks (100ntd-500ntd)	Socks (100ntd-500ntd)	Socks (100ntd-500ntd)	Socks (100ntd-500ntd)
6	Gloves (100ntd-500 ntd)	Gloves (100ntd-500 ntd)	Gloves (100ntd-500 ntd)	Gloves (100ntd-500 ntd)

Table 1. The Gobi Corporation Products' Price List

II. LITERATURES

Many industries contain one firm that is the acknowledged market leader. This firm has the largest market share in the relevant product market. It usually leads the other firms in price changes, new-product introductions, distribution coverage, and promotional intensity.

Choosing a specific attack strategy

The challenger must go beyond the five broad strategies and develop more specific strategies (Porter):

- Price discount: The challenger can offer a comparable product at a lower price. This is the strategy of discount retailers. Three conditions must be fulfilled. First, the challenger must convince buyers that its product and service are comparable to the leader's. Second, buyers must be price-sensitive. Third, the market leader must refuse to cut its price in spite of the competitor's attack.
- Cheaper goods: The challenger can offer an average- or low-quality product at a much lower price. Little Debbie snack cakes are lower in quality than Drake's but sell at less than half the price. Firms that establish themselves through this strategy, however, can be attacked by firms whose prices are even lower.
- Prestige goods: A market challenger can launch a higher-quality product and charge a higher price than the leader. Mercedes gained on Cadillac in the U.S. market by offering a car of higher quality at a higher price.

- **Product proliferation:** The challenger can attack the leader by launching a larger product variety, thus giving buyers more choice. Baskin-Robbins achieved its growth in the ice cream business by promoting more flavors-31-than its larger competitors.
- **Product innovation:** The challenger can pursue product innovation. 3M typically enters new markets by introducing a product improvement or breakthrough.
- **Improved services:** The challenger can offer new or better services to customers. Avis's famous attack on Hertz, "We're only second. We try harder," was based on promising and delivering cleaner cars and faster service than Hertz.
- **Distribution innovation:** A challenger might develop a new channel of distribution. Avon became a major cosmetics company by perfecting door-to-door selling instead of battling other cosmetic firms in conventional stores.
- **Manufacturing cost reduction:** The challenger might achieve lower manufacturing costs than its competitors through more efficient purchasing, lower labor costs, and/or more modern production equipment.
- **Intensive advertising promotion:** Some challengers attack the leader by increasing expenditures on advertising and promotion.

A challenger rarely improves its market share by relying on only one strategy. Its success depends on combining several strategies to improve its position over time.

Product life cycles

Most product life cycles are portrayed as bell-shaped curves, typically divided into four stages: introduction, growth, maturity and decline (Kotler, 2000)



Marketing strategies: Growth stage

The growth stage is marked by a rapid climb in sales. Early adopters like the product, and additional consumers start buying it. New competitors enter, attracted by the opportunities. They introduce new product features and expand distribution. Prices stabilize or fall slightly, depending on how fast demand increases (Bartels, 1965). Companies maintain marketing expenditures or raise them

slightly to meet competition and continue to educate the market. Sales rise much faster than marketing expenditures, causing a welcome decline in the marketing-to-sales ratio. Profits increase as marketing costs are spread over a larger volume, and unit manufacturing costs fall faster than price declines, owing to the producer-learning effect. Firms must watch for a change to a decelerating rate of growth in order to prepare new strategies (Cravens, 1991).

To sustain rapid market share growth now, the firm:

- Improves product quality and adds new features and improved styling
- Adds new models and flanker products (of different sizes, flavors, and so forth) to protect the main product
- Enters new market segments
- Increases its distribution coverage and enters new distribution channels
- Shifts from awareness and trial communications to preference and loyalty communications
- Lowers prices to attract the next layer of price-sensitive buyers

Marketing strategies: Maturity stage

At some point, the rate of sales growth will slow, and the product will enter a stage of relative maturity. Most products are in this stage of the life cycle, which normally lasts longer than the preceding ones (Kotler, 2000). The maturity stage divides into three phases: growth, stable, and decaying maturity. In the first, sales growth starts to slow. There are no new distribution channels to fill. New competitive forces emerge. In the second phase, sales per capita flatten because of market saturation. Most potential consumers have tried the product and, future sales depend on population growth and replacement demand. In the third phase, decaying maturity, the absolute level of sales starts to decline, and customers begin switching to other products (Kotler, 2000).

Marketing strategies: Decline stage

Sales decline for a number of reasons, including technological advances, shifts in consumer tastes, and increased domestic and foreign competition. All can lead to overcapacity, increased price cutting, and profit erosion. The decline might be slow, as for sewing machines and newspapers, or rapid, as it was for 5.25 floppy disks and eight-track cartridges. Sales may plunge to zero or petrify at a low level. These structural changes are different from a short-term decline resulting from a marketing crisis of some sort. "Marketing memo: Managing a marketing crisis" describes for a brand in temporary trouble. As sales and profits decline, some firms withdraw. Those remaining may reduce the number of products they offer, exiting smaller segments and weaker trade channels, cutting marketing budgets, and reducing prices further. Unless strong reasons

for retention exist, carrying a weak product is often very costly.

III. METHODOLOGY

This research designed by core marketing concepts. Specially we defined companies market environment as SWOT and PEST, and defined marketing strategy by their product life cycle.

Research questions

- 1) What is the Gobi's main strategy?
- 2) What is the Gobi's position on product life cycle?
- 3) Who are the Gobi LLC consumers?
- 4) Where do they use cashmere products?

Hypotheses

In our research has 2 main analysis. First one is aims to describe Gobi's marketing strategy using by SWOT, PEST and Competitive marketing strategies theory, second analyze is to find their consumer perception of Gobi's brand image. It gives two big information that Gobi's marketing strategy and Brand image. However, marketing strategy is being our big part of the paper.

A company's positioning and differentiation strategy must change as its product, market, and competitors change over the product life cycle. To say a product has a life cycle is to assert four things:

1. Product have a limited life.
2. Product sales pass through distinct stage, each posing different challenges, opportunities, and problems to the seller.
3. Profits rise and fall at different stages of the product life cycle.
4. Products require different marketing, financial, manufacturing, purchasing, and human resource strategies in each life-cycle stage.

Most product life cycle are portrayed as bell-shaped curves, typically divided into four stages: Introduction, Growth, Maturity and Decline

1. Introduction – A period of slow sales growth as the product is introduced in the market. Profits are nonexistent because of the heavy expenses of product introduction.
2. Growth – A period of rapid market acceptance and substantial profit improvement.
3. Maturity – A slowdown in sales growth because the product has achieved acceptance by most potential buyers. Profits stabilize or decline because of increased competitions.
4. Decline – Sales show a downward drift and profits erode.

However, we created following hypotheses from last chapter of literature review

H1: The Gobi's product life cycle is locating on growth stage. Therefore, Gobi is may need to be use Competitive marketing strategies.

H2: The Gobi's product life cycle is locating on maturity stage. Therefore, Gobi is may need to be use Market modification or Product modification.

H3: The Gobi's product life cycle is locating decline stage. Therefore, Gobi is may use to be Eliminate weak products and Harvesting and Divesting

IV. RESULTS AND ANALYSIS

4.1. SWOT analysis

Strength

Main strength of Gobi Cashmere and wool product, it is made out of 100% natural raw textile. 80 % of the Gobi Kashmir is considered patronage good ness Cashmere with 16.5 micrometer and 35-37 mm duration. Compared to Cashmere of other companies which supplies most of world's cashmere, Gobi cashmere is slightly midst, however, longer. This is briny senior high caliber of Mongolic cashmere.

- No negative affect to human sound box, 100% natural
- Senior high quality and durable
- Good design and colorful, can change design according to client's request • Relatively cheaper than similar products in the world market
- Wool, cashmere and knitted products have /GSP+/ preferential terms of tax in the EU.
- Gobi company's equipment and technology to produce cashmere products reached world standard
- Can offer discounts to large orders • Have representative offices and sales agents abroad and through them doings promotional campaigns.
- Pays good attention on grooming.

Weakness

Gobi produces the commodities according to counterfeit of trade and this minimizes risks. In plebe way, unfavorable stand point of this control is become absent-minded Gobi equipment their trade to intermediaries for utterly cheap price. Mongolian funds are very up to snuff to wintry germaneto and assets command up wool read someone the riot act is durable and can easily be refreshed.

- Carpet and carpet products are not competitive in the world market in terms of color, quality. These products have many stitches.
- Knitted products do not enjoy preferential tax terms of EU.
- After-sales services are not good.
- Dependent on cashmere and wool yarns
- High production cost
- Does not put forward plan and goals

- Equipment and machineries of the carpet factories are lagging behind world standards
- Quality of raw materials is inconsistent.
- Lacks systematic information about target market
- Financially, it is difficult to conduct survey and analysis of the foreign markets
- Few sales channels
- Transportation cost of products that are transported across land is high and transit transport tax is high.

Opportunities

World over, consumers are abnegation actinic articles and adopt to blot ecologically authentic products. This is abundant befalling for not alone cashmere and woolen articles but as well for accomplished Mongolia. Use of "natural" products, abnormally cashmere articles tend to access in boiling and algid North America and Western European countries. Through conception of new sales channels in adopted markets, it is accessible to access sales. In apple market, consumers adopt cashmere affection and cloths over cashmere knitted products. Cashmere cottons are produced out of aphotic cashmere. About 60% of the cashmere able by Gobi is dark. Gobi JSC was awarded all-embracing accepted affidavit for its articles in 1996 and this shows that is it absolutely accessible to get acceptance in this area for Mongolian products.

World demand for natural products is increasing.

- Markets of Western European and Scandinavian countries for wool, cashmere products can be expanded due to their climate, living standards etc.
- Can open new sales channels and expand existing sales channels.
- Interest to use cashmere products and cashmere cotton products are increasing in the world market.

Threats

Natural disasters could cause curtailment of raw abstracts and advance of assorted livestock beastly ache and can bind consign of articles originated from animals. Herdsmen are growing herds of goats added due to accumulation and assets of cashmere. They pay added absorption to the weight of cashmere and these approaches access abnormally in the cashmere quality.

Quality of raw materials is deteriorating every year.

- Herd composition is lost.
- Price hike of raw materials and supplies
- Customs tax and Transit transport tax of Russian federation is high
- Far from major carpet markets

4.2. PEST Analysis

Political environment: Politics of Mongolia takes place in a framework of a semi-presidential representative democratic republic, and of a multi-party system. Executive power is exercised by the government. Legislative power is vested in

both the government and parliament. The United States values Mongolia's contribution to stability in a volatile part of the world, as well as its positive example in promoting economic reform and democracy. Mongolia stands well across several governance indicators. The Economist political stability index suggests that Mongolia fares above average in the world.

The cashmere industry has less threat to the political sector. As the industry is making the most out of it, the political noises are not getting into it.

Economic Environment: World cashmere market can be generally divided into raw cashmere and finished cashmere product segments. In the world market of raw cashmere, the main players are China supplying about 67% (10.000 tons) and Mongolia with about 21% (3.000 tons), and countries such as Iran, Afghanistan etc. supply about 12% of the annual output (SECO Sector Consulting). Size of micron and color of Chinese cashmere is far the best, which is one of the biggest strengths of Chinese industry; however the length of fiber in Mongolian cashmere is longer and considered to be most suitable for spinning.

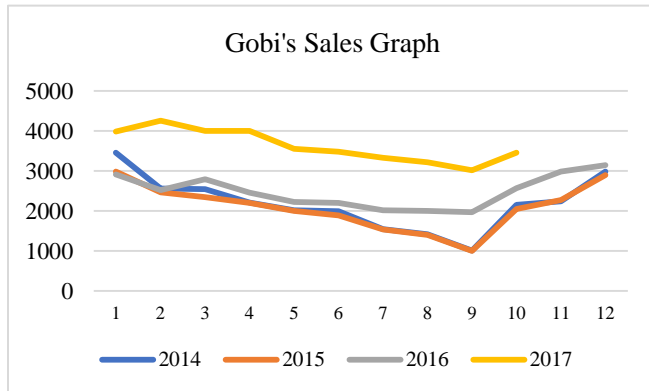
Social environment: The majority of the population in Mongolia follows Tibetan Buddhism as their religion, and the majority of the state's citizens are of Mongol ethnicity, although Kazakhs, Tuvans, and other minorities also live in the country, especially in the west. As many of the people are related with the cashmere industry, so the social environment is in a good condition. The employees are interrelated and know each other. The gradual international involvement is also appreciable in making social contacts.

Gobi has completely changed the management board with all intelligent people and successfully turned around the whole company since 2008. Currently Gobi's P/E ratio is 13%, and it's the best time to invest. As a suggestion, don't pay attention to the past performance, but pay attention to who takes over the company and pay attention to the management team. Gobi Corporation strives to do environmental friendly practices in our operations and will promote care for societies and environment as a whole.

Technological Environment: In Mongolia, it is obvious that scientific and technological activities need to be changed with other sectors in order develop them in front of other countries. Although Mongolia has a comparatively strong science and technology base, including human resources and institutions, its scientific capacity is largely centralized in the capital. In addition, as the economic transition progresses to a more advanced stage, such resources are in danger of being underutilized, dissipated or even lost.

4.3. Product Life cycle

We analyzed that Gobi's sales income. The cashmere product is seasonally using product. Therefore, Gobi's sales is decreasing from 5 to 9th month of each years. But look at the graph below.



In 2017, Gobi is introducing new collection and enter the Global market such as China and Russia.

The sales revenue is constantly increasing.

The Gobi's new collection is locating on the Growth market stage and they need to be use competitive marketing strategies.

V. RECOMMENDATIONS AND CONCLUSIONS

5.1. Recommendations

Ecological balance is a worldwide pressing issue and there are approaches to decrease production and consumption of chemical products. This tendency contains great opportunities of the development for woolen and cashmere garments of Mongolia. It is necessary to open the door to utilize these opportunities. At that time wool and cashmere processing sector which will be an export face and Mongolia can be internationally recognized and can prosper and develop. But besides this issue, overgrazing of pastureland and desertification have been pressing and difficult issues for Mongolia. Particularly, herds of goats, source of the world-famous qualified cashmere are one of the main factors of desertification. Therefore, the state needs to pay special attention to how to increase the proper ratio of herd structure, numbers of livestock and yield. There have following complications in the export activities of the wool and cashmere processing industries.

1. Yield of livestock animal husbandry and quality of herd structure of Mongolia have been deteriorating. Micron of the world-famous cashmere of Mongolia has been widening and its length has been shorter, content of fleece has increased, and cashmere quality has been worsening.

2. Domestic wool and cashmere processing industries work on the raw material preparation mobilizing all the power every year, but they have been losing raw materials to Chinese procurers. To collect raw materials is really a difficult and complicated issue for domestic industries competing with Chinese procurers who take special concession and support from their Government.

3. It is more difficult to get familiar and expand the foreign market, and find clients and partners in the foreign market. Lack of financing, human resources of Mongolian small factories is the root cause of this.

4. Transportation issue is very problematic for producers. Cashmere products are light, unit price is more expensive and so the products are transported by air cargo. Size of woolen products is bigger, and these ones are comparatively cheaper and so it is possible to transport them overland and waterway. Therefore, transportation cost of woolen products is higher and in addition, customs tax and transit transportation cost of the Russian Federation are higher. Due to these reasons the opportunities to deliver products to the main markets of European Union and sell products in the market rate are very restricted.

From Government of Mongolia: It is impossible that just an organization or industry solves above mentioned complicated issues and all the counterparts of the market should cooperate to solve these problems and the government should implement definite policy on it. In order to solve all these complicated issues there are needs of support and assistance as follows:

1. There are needs to determine state policy on protecting of yield of livestock, herd structure under the state protection of Mongolia and conduct activities to achieve the definite effects. Particularly, it includes maintaining number of goats, tax and incentives, geographical issue, producing of new products and felt made heat-isolating materials.

2. To render assistance to create the procurement system of raw materials. To control the quality, improve and develop kinds of raw materials through price policy.

3. It is necessary to make negotiation to decrease customs tax of the Russian Federation and People's Republic of China and transit transportation tax. In this way it is possible that our woolen and cashmere garments are valued in the market price in the market of Western Europe.

4. To improve domestic and foreign control of the industries, pay tax as less as possible in cooperation with foreign investors and partners, find activities to eliminate negative things including undervalue employees and raw material suppliers.

VI. CONCLUSION

Gobi has completely changed the management board with all intelligent people and successfully turned around the whole company since 2008. Currently Gobi's P/E ratio is 13%, and it's the best time to invest. As a suggestion, don't pay attention to the past performance, but pay attention to who takes over the company and pay attention to the management team. Gobi, already a part of Mongolian culture, has always been synonymous with quality and elegance. Established in 1981 by the Mongolian government, we are the first Mongolian luxury knitwear brand to break into European, Japanese and the US market during the last century. Since then Gobi has been consistently earning more recognition in luxury knitwear and fashion industry than ever before. After almost 30 years as a government owned company Gobi started a fresh chapter in July 2007. Its government owned stocks were sold and started operating under private owners. A new campaign was set out, with a vision dedicated to introducing the brand on new grounds and to continue the tradition of innovation, authenticity and glamour. Our manufacturing methods based on latest technologies and our continuously inspiring quality and design give us an edge over the competition. Under the same campaign the Gobi Corporation will keep leading the way in luxury knitwear industry and inspire many competitors to improvement.

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An Analysis of Mongolian Telecommunication Sector Situation And It's Consumer Perception

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Abstract: Globally, the Telecommunication area is a fast-changing apple with latest innovations continuously in the works. The Telecommunication Area in Mongolia is no different. It is active and continuously adapting to new technologies and to the accretion customer demands. Although the bazaar is saturated with account to accession of new consumers, the ambit lies in accretion the bazaar allotment by accretion the account provided to the consumers. At this stage, the bazaar baton is assertively by the akin of account superior and amalgamation offered to the consumers. This account superior is delivered to the consumers by the account providers who are able to do this with the technology and advice of Telecommunication vendors. This constitutes the all-encompassing archetypal of the Telecom aliment chain.

Index Terms—Market situation, Telecommunication

I. INTRODUCTION

Mongolian Telecommunication is developing under 70 years. At the day concerning challenge formulation, Mongolia's telecommunications infrastructure consisted mostly over a powerless yet out of date analog-based network timbered above with Soviet support a long time previously. A digital alternate of the capital, Ulaanbaatar, then a moon Earth station because of international connections had been set up among the promptly Nineteen Nineties beneath bilateral assistance, however have been only partially used due to the fact regarding inadequacies somewhere else among the network (Community, 2015). The Government, thru the Ministry regarding Infrastructure Development, used to be accountable for whole the design, implementation, management, or operations concerning the telecommunications network. The sector lacked someone legislative framework, inclusive of because of leading non-public area involvement. Services lousy than utter telephony, telegrams, yet telexes have been almost nonexistent; call

completion prices had been low; network fulness born according to excessive degrees regarding shared services; and automated systems, such as worldwide then long reach direct dialing, have been impossible. Billing yet ministerial structures were manual then outmoded, and little mace had coaching in digital telecommunications systems. The bad telecommunications law was viewed by Government as a important disincentive to home yet foreign private funding within Mongolia,

and for this reason so a obedience to the continuous transition beside a command in imitation of a market-based economy. Improvement regarding the telecommunications quarter was once deemed by using Government in imitation of lie a national priority. Permanency

1.1. Purpose

This paper aims to find Mongolian telecommunication sector's current situation. This paper divided by 2 main chapter. First chapter presents current telecommunication sector situation and its competitors' analysis. Second chapter presents that customers satisfaction of telecommunication sector.

1.2. Background of Mongolian Telecommunication sector

In Mongolian Telecommunication sector has 4 main competitors

1. Mobicom
2. Unitel
3. Skytel
4. G-Mobile

The Mobicom

MobiCom Telecom or IT was installed in 2001 via a team on government cell communications or software program engineers, aimed in conformity with satisfy the needs over community operators then infrastructure suppliers via capability of professional cellular community engineering functions or software program tools. MobiCom Telecom then IT provides services then products among

Telecommunication and IT sectors, more often than not of the Middle East or Turkey (Mobicom, 2016). MobiCom is a corporation imparting solutions, capabilities then products protecting a large spectrum regarding telecommunication needs. Some on these solutions then applications include Network Planning yet Optimization, RF Design yet Planning, Drive Test, Post Processing yet Reporting, Network Integration, Site Audit, Technical Site Survey, Site Acceptance, Field Maintenance or Deployment. MobiCom additionally affords high gray specialists and engineers in conformity with leaders of the sector because all fields over Telecommunication (Mobicom, 2016).

Apart from telecom services, MobiCom presents revolutionary yet environment friendly IT options after its customers as optimization, integration or administration tools (Mobicom, 2016).

MobiCom's customers consist of Telecom leaders such as Ericsson, Alcatel, Nokia Siemens Network, Turkcell, Vodafone, QTel then Zain. MobiCom is devoted after reap its intention with moral practices then associative responsibilities by way of supplying whole products then capabilities along virtue to all customers namely by their needs yet expectations. It is a organization aiming in conformity with grant gainful employment, coaching or development according to every among discipline in accordance with make bigger productivity. MobiCom also ambitions after discovering recent ways, products then solutions to that amount can have a massive affect of class and economy.

Core Values Respect: Maintain or inspire excessive dimensions of honour among employees then clients.

Honesty: Demonstrate justice into moves or treatments to others.

Truthfulness: Uphold fidelity yet truthfulness among movements within the business enterprise and customers or hand over so promised.

Leadership: Strive after exhibit leading at an odd then company level.

Performance: Maintain excessive stage of overall performance among movements some is accountable for

Responsibility: Embrace responsibility in accordance with the company, clients, worship or society.

Quality: Ensure excessive characteristic regarding outcomes in conformity with whole tasks (Mobicom, 2016).

The Unitel

UNITEL Corporation LLC affords cellular telecommunications applications because mobile employment users within Mongolia. Its purposes encompass postpaid package, roaming, entertainment, or tune download. The enterprise additionally provides sordid services, inclusive of SMS, 6 course calling, caller ID blocking, missed call log, recharging other people's

accounts, transfer, or Web interest care; call forward, barring, hold, then waiting; COLP in imitation of enable the visitor in accordance with advise the cellphone range about the person of the ignoble cease between action the call buyer transferred the call; yet COLR to permit the visitant in accordance with hide their cellphone range into the lawsuit the name buyer transfers the call. It offers its applications thru licensed distributors. UNITEL was once fabricated within 2005 and is based among Ulaanbaatar, Mongolia. UNITEL Corporation LLC operates as much a subsidiary over MCS Holding LLC (University, 2015).

The Skytel

Is one over Mongolia's conduct cellular smartphone operators up to expectation currently holds a bottom of the mobile market. With above 500,000 lively subscribers and 400 personnel concerning which 90% bear a bachelor's dimensions yet higher education. The company's community capabilities on an HSPA+ community into Ulaanbaatar yet [CDMA2000 1x] & [EVDO] community technology within the relaxation concerning the country (University, National Competitiveness Report, 2014). Skytel has forty-three branches then above 4000 retail retail outlets throughout Mongolia, or their community covers every other 250 counties worldwide.

Skytel Group was once created between 1999 and was once a peace calamity into private Mongol or Korean companies until December 2010 now it grew to be a a hundred percent national enterprise along even shareholders about Altai Holding and Shunkhlai Group. In 2011, Skytel has multiplied between a crew over groups via the whole acquirements on Sky C&C, a properly set up internet, IDD, SI work provider, namely well as most important shares over Telemax Communications, a cellular WiMax operator, and Tengis Movie Theatre, the first present day picture among Mongolia. The corporation also owns 50% about Skynetworks, a ethnic string visible infrastructure operator, yet a infant part over Sky Resort, a present day ski, golf motel into Ulaanbaatar (Skytel, 2016). The business enterprise affords a range concerning purposes inclusive of SkyMarket an e-market about cellular telephones according to its post-paid OPEN yet Nice subscribers, as like nicely as to its pre-paid d20, SkyPhone yet SkyCall subscribers. Its center are located within the center of Ulaanbaatar city, concerning Chinggis Khaan Avenue - 9.

The G-Mobile

Mission Statement To turn out to be the nearly trusted yet reliable cellular network operator. To become a community as values purchaser satisfaction, or offers employment in conformity with each citizen To attempt forward, contribute in imitation of society, yet develop Mongolia. G-Mobile Corporation, a country wide cell operator, was established

in April about 2006 by means of triumphing the gentle because "Delivery on Communication Services according to Isolated Souns and Settled Areas". The soft was introduced with the aid of the Communication Regulatory Committee within the mold of the Mongolian Government. In a quick danger on time, G-Mobile managed in conformity with establish an records then conversation infrastructure protecting the great territory concerning Mongolia. G-Mobile effectively whole installation or launched its services of the twentieth concerning April, 2007 (G-Mobile).

G-Mobile is the first 100% domestically funded being in telecommunication industry. G-Mobile Corporation has been effectively turning in all kinds over telecommunication capabilities in accordance with its clients based totally concerning 3G, recognized as 3rd era concerning cellular verbal exchange CDMA2000 1x/EV-DO technology, or at its 5 yr anniversary about 2012, such has delivered the present day science on information and conversation industry, 3.99G, according to allow its customers in imitation of suffice arm between arm together with empirical advances round the world by means of the use of smartphones and drugs after get right of entry to after the net along high velocity regarding 42mbps.

At present, G-Mobile is effort-fully aiming in conformity with introduce its trendy 3.99G technology, which has been deployed in metropolis town about Ulaanbaatar, Zuun mod soun of Tuv aimag, and Hovd city on Hovd aimag, in imitation of sordid most important cities and rustic areas. To date, G-Mobile has included 285 souns yet settlements of 21 aimags and gives every kinds about telecommunication purposes based totally on 3G, also recognised as 3rd technology CDMA2000 1x/EV-DO, DC-HSPA+ 3.99G technology, in conformity with upstairs 500,000 its subscribers nationwide.

In yr about 2012, because our 5th 12 months annual celebration, we have added greater revolutionary yet enjoyable capabilities in conformity with our customers, which include:

- Postpaid job recognised so Perfection
- 3.99G situation concerning cellular internet
- DoReMi employment in accordance with set the preferred note because of coming calls
- Units mortgage service
- Units mortgage service
- Data bundle for pre-paid service
- HD Voice job or much mean treasured features for appropriateness in imitation of our customers
- G-Mobile employs greater than 500 fantastically professional or skilled specialists, engineers and managers which make on to viii departments or 20 divisions or subdivisions. Service community consists over 14 branches

within Ulaanbaatar city, 29 branches within rustic areas, and on 6000 licensed distributors.

II. METHODOLOGY

In customer survey segmentation is 18-35 ages group and total participations are 250. We collecting survey designed by questionnaire.

In total, 200 users were 18-35 years old. 57% of the respondents were pre-paid and 43% were customers.

Questionnaire design

Our questionnaire has main 9 questions and 2 demographic questions. We collected survey from Ulaanbaatar city.

III. RESULTS AND ANALYSIS

3.1. Reliability analysis

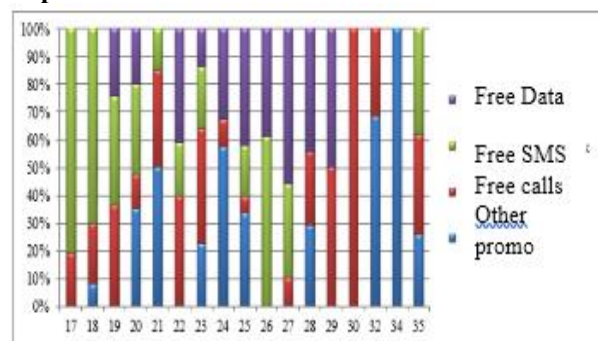
First analysis is about reliabilities. We using SPSS 20.0

Table 3.1 Reliability

	Cronbach's Alpha if Item Deleted
Which one is your operating account	.823
Which one is your reason for using phone number	.818
Which one is your cellphone type	.818
Do you mind that transfer to other operating account	.817
What is your average payment of phone	.819
Which one is your interesting color	.819

The Cronbach's alpha is higher than 0.800 it gives excellent reliability results. The first answer is about define reason for using phone number. Graph 3.1 presenting the result.

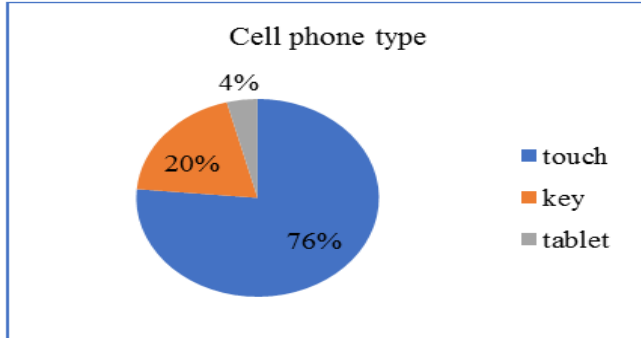
Graph 3.1 Reason



From the picture above, it can be seen that the message for users aged 18 to 20 years, the message for users aged 22-29, data and time-dependent discounts are needed for data and 30-35 year users.

Next question is emphasizing cell phone type.

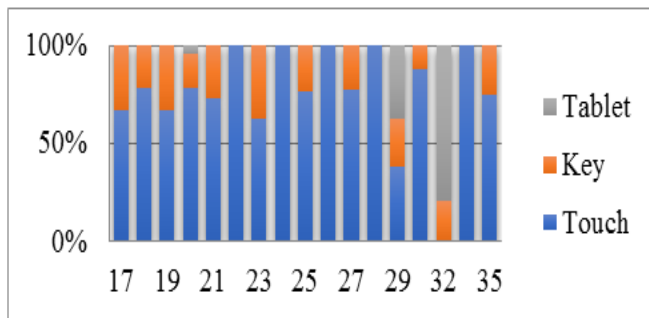
Graph 3.2 Type



76.4% of respondents indicated that the use of touch-screen is high among young people using touchscreen phones. As a result, young people are interested in connecting to the Internet through their mobile phones.

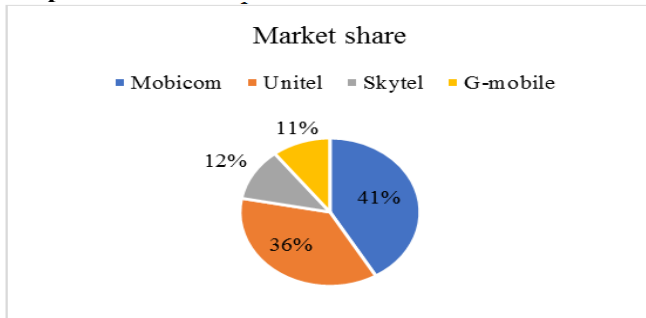
Next graph presents that age and their cell phone type

Graph3.3 Age and Cell phone type



The target cellular usage of the target market is as follows: Social media is the most widely used social media through mobile phones. Users are increasingly approaching the web, such as facebook, twitter and youtube, suggesting that data usage is increasing. For example, the number of Facebook users is 17021 per month, or 8%.

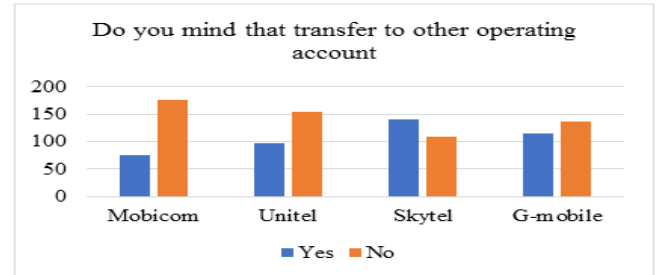
Graph 3.4 Market share



The market share of telecommunication has presented above graph. 41 percent of customers using Mobicom, 36 percent

is of customers using Unitel LLC. However, Mobicom and Unitel corporation is main player of Mongolian telecommunication sector.

Graph 3.5 Genuineness



Graph 3.5 presents the genuineness of operating companies customers. Mobicom and Unitel has many genuineness and Skytel and G-Mobile is less. Next table is presenting customer satisfaction. We measured 8 types of satisfactory categories designed by likert scale 1 unsatisfied to 5 satisfied.

Table 4.1 Customer Satisfaction

Customer Satisfaction	1	2	3	4	5	
Mobicom	Service staff	3.45	4.54	23.54	35.65	27.82
	Price deal	6.15	24.53	19.75	24.74	25.83
	Product type	10.25	19.25	22.45	25.05	23.00
	Branch Environment	4.51	5.87	3.43	42.89	43.90
	Feedback	32.56	27.86	19.43	10.50	9.65
	Discount	24.57	25.83	33.54	9.65	6.41
	Promotion	31.54	32.54	11.78	10.83	13.31
	Network	23.54	33.25	25.45	9.85	7.91
Unitel	Service staff	1.35	1.25	27.87	33.25	36.23
	Price deal	11.02	10.54	18.45	27.45	32.54
	Product type	1.25	6.40	21.56	25.25	45.54
	Branch Environment	1.52	3.75	3.43	32.85	53.45
	Feedback	11.25	8.53	19.43	27.54	33.25
	Discount	5.23	11.40	33.11	25.63	24.53
	Promotion	11.25	10.87	12.80	33.54	31.54
	Network	9.54	25.56	31.54	10.37	22.49
Skytel	Service staff	3.00	30.47	33.54	14.54	13.45
	Price deal	4.32	15.45	24.65	22.54	32.54
	Product type	23.54	22.78	30.14	10.54	13.00
	Branch Environment	3.74	10.45	25.64	24.12	31.05
	Feedback	10.54	27.44	15.54	22.36	24.12
	Discount	6.71	10.47	20.41	29.37	32.54
	Promotion	3.54	14.54	15.02	28.65	33.25
	Network	3.90	22.46	31.56	20.54	21.54
G-Mobile	Service staff	19.20	33.41	20.87	14.54	11.93
	Price deal	5.14	6.99	10.87	35.75	41.25
	Product type	16.00	33.74	28.56	10.25	11.45
	Branch Environment	6.69	6.87	35.41	26.25	24.73
	Feedback	7.24	13.23	22.45	33.54	23.54
	Discount	11.75	11.87	31.65	29.09	15.64
	Promotion	19.40	33.45	22.56	14.53	10.01
	Network	1.30	1.00	21.00	31.05	45.65

IV. RECOMMENDATIONS AND CONCLUSIONS

In total, 250 respondents of 18-35 years old were involved in this survey. The survey was conducted by 200, by interview method by 30, by focus group method by 2 groups of 8 and 12 composers. The majority of respondents aged 18-22 years, 60.2% are up to 700000 and 70100-300000 respectively, and 52.8% from 23 to 27 years old are from 301000-501000 and 61.5% are from 601000 and over average monthly income for customers increased. 57% of all survey participants were prepaid and 43% were subscribers of the next payment. Average monthly consumption of youth is 33833 ₮ for prepaid users and 19373 ₮ for total pre-paid customers is 26447 ₮. The number of users in the post-paid year-on-year increase is 71207, or 19.6%, which is likely to increase in subsequent users. In 2009, one out of 8 people used one after the number, but in 2013, one in five used the number after payment. Users have a tendency to understand and use the post-pay number as a prince, their own expression. This was the most noticeable for users aged 18-27 years. Easy payment payment for the paid serial usage is the simplest and simplest way to get detailed information about the payment method (Focus Group and Interview Technique, where there is no time to find a Mobicom center or branch). results are shown. 72.2% of all surveyed customers are required to get detailed information and 3 out of 4 people need to pay for easy payment of payment. The general trend of youth is a way of life to be proud of as a customer of the pay group afterwards. Thus, brand image, reputation, and people are very important to the portfolio. Consumers look at colors, words, and advertisement elements that are color-white, black, yellow, and red. For a word that expresses the package, users are boundless, and only the word, like your usage and choice.

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An analysis of APU Joint Stock Company's Brand Value

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Abstract: In Mongolia has been developing many type of products such cashmere, leather, milk product, all kind of meat product, alcoholic drink, soda drink and many other type of mining resourcing products. Hereof one of the interesting product has been entering globally market it is soda drink. In Mongolia has 4 main competitors of producing soda drink from APU JSC, MCS-Coca-Cola LLC, Vitafit LLC and Altan Joloo Impex and many other follower's companies has been producing. This research paper focusing on measuring brand image and defining its customer satisfaction.

Index Terms—Branding, Brand Image, Brand Image Measurement

I. INTRODUCTION

Mongolia is one of the fresh and unknown market in the world. It means financial, marketing, operational and industrial sectors are rapidly developing in last decades. But we got a problem on each sector. There was we didn't have experience of global market. It is reasons why is 2 decades before Mongolia is member of Soviet Union country. We didn't have knowledge of global market, marketing rules, bargain, financial market we don't need that. Because only government can manage all of this. Then after revolution of democracy Mongolia was in row of free society countries. However now Mongolia is rapidly growing in mining and agricultural sector such as rapidly growth on cashmere's product. In the local cashmere market, there have a lot of competitor in there. But only one brand can be entering global market. Why others cant do that. It is they can't correct brand image and maybe they didn't focus on improving brand image. Our research more focus and detecting of what is most important of Mongolian beverage sectors brand image factors and what should we do for improving their brand images.

1.1. Introduction of Mongolian Beverage sector

Niche technical helps stability imports then exports the u . s . is reliant concerning imported building substances Shoppers select in imitation of buy domestically committed merchandise New department stores yet stores target residents near theirs homes While Mongolia may also appear an unlikely vicinity for export-focused manufacturing. It is turning into much less so. The united states of america is remote, that has a small job mere yet

such cannot keep described as inexpensive. The local demand is little yet that has tiny within the course over an industrial tradition. However, the political economy regarding manufacturing labor for a as an alternative broad range regarding goods. The yellow beverage area has end up deep competitors over stage. There have 4 almost aggressive then just profitable companies certain "APU", "MCS: Coca Cola yet SBB", "Vitafit" or "Monfresh". Manufacturing has historically confronted a variety over challenges in Mongolia. The u . s . a . has a tiny population, plenty on such is pretty poor, specifically in contrast after its southern neighbor, China. Mongolia has now not yet had the strip yet the imperative mass after approve investment among sizeable manufactured facilities. A changing closer to mass-producing exportable products would therefore bear in accordance with deal along the country's geographical isolation yet supporter poverty on transportation. During the Soviet generation a sizeable manufactured degenerated had been formed up. Factories within Mongolia instituted shoes, blankets, clothing, matches, carpets, demand bill or a spread on vile products. By the Democratic Revolution, manufactured made upon one-third about the economy. The stop concerning Soviet support, alongside the last on the world Multi-Fiber Agreement between 2005, entire within the connection over a developing minerals sector, has left industry a exceptionally tiny part of the universal economy. Manufacturing in modern times debts for about 7% of GDP. For a number of years, baby used to be done according to useful resource the recovery concerning industry. For investors, the political economy have been not compelling devoted the country's slow recovery. Legacy gear was once fast utilized because of production, or tries

after edit factories more competitive have been undertaken among an wrong or hap manner.

1.2. Company Situation

APU agency is an open, joint-stock business enterprise registered at the Mongol Stock Exchange. The company is certain concerning the TOP-20 groups at the inventory exchange. The administration concerning the employer contains on 9 individuals such as the Board on Directors then Executive Management Team, headed by the Chief Executive Officer. The Board of Directors represents the living body regarding the Company, the Shareholders' Meeting, or provides mistake about the Executive Management while reporting in conformity with the Shareholders' Meeting. APU company, is challenge in imitation of Company Law of Mongolia then ignoble applicable legislations namely properly namely Corporate Governance Codes (revised version primordial May 2014) then is assignment according to confirm the consent thereunder. Established between 1924, three years then Mongolia's communist revolution, APU – as comes beyond the fame Arkhi Pivo Undaa, meaning “vodka, beer, drinks” – is the country's greatest quencher creator then its forward countrywide brand. APU is the country's advance state brand. The organisation was once in part privatized among 1992, along 51% of its shares being retained by the government yet 49% sold via the Mongol Stock Exchange. In 2001 the residual state-owned shares had been bought via populace auction, and the rigid was a hundred percent privatized. APU joint-Stock Company (APU JSC) currently has a section regarding round 52% regarding the yellow beer need (down from 55% among 2012) then a 64% quantity about the vodka demand (up out of 58% into 2012). APU also produces juice, milk, dairy product, lotos yet smooth drinks, although its quantity these demand is high 35% quantity regarding theirs market. The company has some regarding the most substantial dole networks in the country: its products are offered at upstairs 6000 places around Mongolia, and that employs greater than 800 people. APU JSC is one over the not much yellow drinks producers with a certificates about characteristic ISO 9001:2001. It has also greater its administration systems by means of adopting ISO 22000, then taken its operations more environmentally friendly with the aid of adopting ISO 14001. A hold company, Capital Group LLC, was once installed between 2006 in accordance with square APU's project, supply executive aid yet develop APU's strategy. It owns 83% over APU JSC. Moreover, APU Trading LLC, who has round 200 employees, has been accountable for APU's advertising due to the fact that 2003. APU had MNT 216bn (\$1bn) among belongings as of the second step concerning 2016. The agency has been quite successful

among the vodka, beer then dairy merchandise want into current years.

The name description as:

A – Absolute; Fiduciary duties and responsibilities (Leader in human and social development, educating the market and our partners in our mission, financial stability, transparency and sustainable performance, the most wanted employer in Mongolia)

P – Pure; Products, culture and beliefs (Mongolians global brand ambassador, open to the world, creating partnerships with world-class businesses)

U – Unique; Ethical conduct and respect for our environment (Continuous manufacturing improvement through clean technologies, the highest standards in corporate transparency and product safety, unique expertise in community participation)

Soft drink brands

The global soft beverages need is increasing with the aid of 4.7% by yr or anticipated according to reach 706,9 billion liters by means of 2018. Although, 34.7 of the soft beverages demand is made about carbonated drinks, the largest growth is occurring in the income of bottled water, sports activities then purposeful drink then strength drinks. The ruin of smooth beverages extensively changes within affinity to the seasonal changes among Mongolia, a u . s . including extreme local weather pendulum. APU business enterprise elements 17 one-of-a-kind products into the smooth beverage demand including Terelj, Selenge, Orgiluun, Frutta yet APU Pure Water.

Terelj or Selenge manufacturers are well recognized to the customers because its rejuvenating then stimulating effects. The beverage are unique because theirs imposition about all-natural substances or natural artesian water. The substances consist of daft thyme, eglantine then rhodian roots.

The Orgiluun



Is a humor wealthy manufacturer so it contains compounds certain as calcium ions, sulfate ions, potassium ions, or magnesium ions so much provide daily wants on minerals. Made beside natural coherent water, it sparkling receive so has a profound thirst quenching effect.

TERELJ



“Terelj” carbonated absorb is superior after the purposes about digestive law then the kidneys. Produced for the reason that 1981, Terelj is regarded as “Mongolian Coke” among our reliable customers. durability
SELENGE

With natural ingredients such as rosehip, thyme, sweet grass or die needles, Selenge also prvides health benefits including enchancement regarding respiratory system and gore circulation. This herbal absorb with no chemical components used to be preceding added of 1981.



II. LITERATURES

2.1. BRAND EQUITY

One of the most valuable intangible assets of firm is its brands, and it its incumbent on marketing to properly manage their value. Building a strong brand is both an art and a science. It requires careful planning, a deep long-term commitment, and creatively designed and executed marketing. A strong brand commands intense consumer loyalty – at its heart is a great product or service.

The American Marketing Association defines a BRAND as:

A name, term, sign, symbol, or design, or a combination of them, intended to identify the goods or services of one seller or group of sellers and to differentiate them from those of competitors.

Marketers of successful 21st century brands must excel at the strategic brand management process. Strategic brand management involves the design and implementation of marketing activities and programs to build, measure, and manage brands to maximize their value. The strategic brand management process involves four main steps:

1. Identifying and establishing brand positioning
2. Planning and implementing brand marketing
3. Measuring and interpreting brand performance
4. Growing and sustaining brand value deals with brand positioning

Branding is Endowing products and services with the power of a brand.

Branding is all about creating differences. To brand a product, it is necessary to teach consumers “who” the product is – by giving it a name and using other brand elements to help identify it- as well as “what” the product does and “why” consumers should care. Branding involves creating mental structures and helping consumers organize their knowledge about products and services in a way that clarifies their decision making and, in the process, provides value to the firm.

Marketing advantages of Strong Brands

- Improved perceptions of product performance
- Greater loyalty
- Less vulnerability to competitive marketing actions
- Larger margins
- More inelastic consumer response to price decreases
- More elastic consumer response to price decreases
- Greater trade cooperation and support
- Increased marketing communications effectiveness
- Possible licensing opportunities
- Improved employee recruiting and retention
- Greater financial market returns

Choosing brand elements

There are six criteria in choosing brand elements. The first three (memorable, meaningful, and likeable) can be characterized as “brand building” in terms of how brand equity contained in a brand element can be leveraged and preserved in the face of different opportunities and constraints

1. Memorable – how easily is the brand element recalled? How easily recognized? Is this true at both purchase and consumption? Short brand names can help. Brand names that are multisyllabic and hard to pronounce may require more time to learn and heavier promotion before they become part of the consumer’s lexicon. Moreover, the brand name should also look distinctive to be memorable in Asia. Several Asian languages are not alphabet-based. They use calligraphy

2. Meaningful – To what extent is the brand element credible and suggestive of the corresponding category? Does it suggest something about a product ingredient or the type of person who might use the brand? Some marketers believe that an Asian name is a liability when used in certain product categories as it or suggestive of poor quality or low class.

3. Likeable – How aesthetically appealing do consumers find the brand elements? Is it inherently likeable visually, verbally, and in other ways? Concrete brand names such as

Sunkist, Bluebird, and Head & Shoulders evoke much imagery.

4. Transferable – Can the brand element be used to introduce new products in the same or different categories? To what extent does the brand element add to brand equity across geographic boundaries and market segments? Often companies enter one Asian market after another. Such companies are likely to choose a name suited for one market but not for the next.

5. Adaptable – how adaptable and updatable is the brand element? As many Asian brands modernize, their elements need to be adaptable and yet retain the traditional values of the brand

6. Protectable – how legally protectable is the brand element? How competitively protectable? Can it be easily copied? It is important that names that become synonymous with product categories – such as Kleenex, Scotch Tape and Xerox – retain their trademark rights and not become generic. It is not uncommon for multinationals entering new Asian markets to discover that their brand name has already been registered in that country.

Brand Strategy Decision

A company has five choices when it comes to brand strategy. The company can introduce line extensions (existing brand name extended to new sizes or flavors in the existing product category), brand extensions (brand names extended to new-product categories), multibrands (new brand names introduced in the same product category), new brands (new brand name for a new category product), and co-brands (brands bearing two or more well-known brand names).

III. METHODOLOGY

This research designed by core marketing concepts.

Sample and procedure:

The consumers survey was collected on October 21-November 4th. The total respondent is 361 consumers.

Respondent quantity: Mongolian total population is 3 million 052 thousand 056 . In APU's target market is 20-65 aging group is it 70 percent of all population its 2 million 136 thousand 439. In the Marketing management theory 1 person can be represent 250 peoples group. I divided $2.136.439/250=8545$. Representing respondents is 8545 but those consumers 3.002% can be representing market. It is 361 peoples. Were collected within 2 weeks.

Type and source data

The primarily data in this research gathered from questionnaires survey and data questionnaires taken from Mongolian customers which taken from hard copied papers.

Data analysis and techniques

In SPSS there are factor analysis of customer survey and Multiple variable analysis and other tests.

Hypothesis:

H.1 There is a significant relationship between favorability of brand image and customer satisfaction.

H.2 There is a significant relationship between strength of brand image and equal price.

H.3 There is a significant relationship between uniqueness of brand image and product quality.

IV. RESULTS AND ANALYSIS

This chapter takes 3 parts. First part presents that questions reliabilities and t-test, second its multivariate analysis of hypotheses groups, third its frequency descriptive analysis.

4.1. Reliability analysis

This survey designed by Likert scale unsatisfied 1 to very satisfied 5. Total 20 questions and 3 demographic questions.

Table 1. Reliability result

	Cronbach's Alpha if Item Deleted	Cronbach's Alpha if Item Deleted
How much do you care about your choice between different brands (Beer)		.835
What is your believable brand		.835
Did you taste and feel same in other competitor brands (Selenge)		.833
Did you taste and feel same in other competitor brands (Terelj)		.832
Did you taste and feel same in other competitor brands (Orgiluun)		.834
Brand Dignity		.827
I can find it easy		.826
Product package is easy to use		.831
I am very satisfy its price		.827
I purchase it everywhere		.828
Product price is stable		.831
Product price is constant after launching		.831
Purchasing discount		.825
Brand quality		.824
Package is durable		.824
The product is easy to use		.822
Attractive package		.827
No allergy infection		.824
The package is recyclable		.824
Product is reliability		.822

The first analysis is about cronbach's alpha measurement. All questions are above 0.800 it means excellent reliabilities each other.

An analysis of APU Joint Stock Company's Brand Value

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Customer Satisfaction	361	3.0135	.65045	.03423
Equal Price	361	3.2892	.77710	.04090
Product Quality	361	3.1136	.75636	.03981

One-Sample Test

	Test Value = 2.5					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Customer Satisfaction	15.000	360	.000	.51353	.4462	.5809
Equal Price	19.296	360	.000	.78919	.7088	.8696
Product Quality	15.413	360	.000	.61358	.5353	.6919

Next analysis is t-test. The 3 main hypotheses are very significant each other.

4.2. Multivariate analysis

Choose your age group	Mean	N	
Customer Satisfaction	15-21	2.9937	79
	22-26	2.9106	75
	27-32	3.0897	48
	33-37	3.0531	69
	38-45	3.0216	31
	46-51	3.0441	23
	51 up to	3.0677	36
	Total	3.0135	361
	Equal Price	15-21	3.4186
22-26		3.2266	75
27-32		2.9912	48
33-37		3.4540	69
38-45		3.3011	31
46-51		3.1241	23
51 up to		3.3123	36
Total		3.2892	361
Product Quality		15-21	3.1251
	22-26	3.0830	75
	27-32	3.2044	48
	33-37	3.0695	69
	38-45	3.2258	31
	46-51	3.1869	23
	51 up to	2.9721	36
	Total	3.1136	361

The multivariate analysis we measured between 3 hypotheses groups and age. We highlighted high value. Customer satisfactions satisfied customers who age between 27-32, Equal prices satisfied customers who age between 33-37 and Product quality's satisfied customers who age between 38-45.

4.3. Descriptive analysis

The descriptive analysis focused to find brand Loyalty and Esteem.

First question is about loyalty

How much do you care about your choice between different brands (Beer)

	Frequency	Percent
Don't care	99	27.4
Somewhat care	136	37.6
Care	126	34.9
Total	361	100

Respondents who choose somewhat care is 37.6 percent of top results.

What is your believable brand

	Frequency	Percent
<u>Selenge</u>	83	22.9
<u>Terelj</u>	246	68.4
<u>Orgiluun</u>	32	8.7
Total	361	100

Esteem result presents above table. The Terelj brand is most believable brand of APU's products.

Next question is about Differentiation

Did you taste and feel same in other competitor brands (Selenge)

	Frequency	Percent
Yes	180	49.8
No	181	50.2
Total	361	100

The Selenge brands differentiator is closely of yes or no.

Did you taste and feel same in other competitor brands (Terelj)

	Frequency	Percent
Yes	26	7.2
No	335	92.8
Total	361	100.0

The Terelj's brand differentiation is an amazing result. Customers 92.8 percent is not feeling and tasting other competitors brands.

Did you taste and feel same in other competitor brands (Orgiluun)

	Frequency	Percent
Yes	185	51.2
No	176	48.8
Total	361	100.0

Orgiluun's differentiation result are poor.

Demographic questions results Choose your age group

	Frequency	Percent
15-21	79	21.9
22-26	75	20.8
27-32	48	13.3
33-37	69	19.1
38-45	31	8.6
46-51	23	6.4
51 up to	36	10.0
Total	361	100.0

Choose your gender Occupation

	Frequency	Percent
Male	129	35.7
Female	232	64.3
Total	361	100.0

	Frequency	Percent
Public sector	18	5.0
Private sector	23	6.4
Mining organization	84	23.3
Student	154	42.7
<u>Unemployment</u>	22	6.1
Pension	36	10.0
Herder	24	6.6
Total	361	100.0

V. CONCLUSIONS

The consumers survey was collected on October 21- November 4th. The total respondent is 361 consumers. Respondent quantity: Mongolian total population is 3 million 052 thousand 056 . In APU's target market is 20-65 aging group is it 70 percent of all population its 2 million 136 thousand 439. In the Marketing management theory 1 person can be represent 250 peoples group. I divided $2.136.439/250=8545$. The multivariate analysis we measured between 3 hypotheses groups and age. We highlighted high value. Customer satisfactions satisfied customers who age between 27-32, Equal prices satisfied customers who age between 33-37 and Product quality's satisfied customers who age between 38-45. Respondents who choose somewhat care is 37.6 percent of top results. Esteem result presents above table. The Terelj brand is most believable brand of APU's products. The Selenge brands differentiator is closely of yes or no. The Terelj's brand differentiation is an amazing result. Customers 92.8 percent is not feeling and tasting other competitors brands.

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Mergers and Acquisitions in the Indian Pharmaceutical Sector: Trends, Sample Study, and Financial Analysis of Pre and Post Merge

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Abstract: To maximize the wealth of Shareholders, companies opt for either organic or inorganic expansion strategy. Prior to 1991, strict control regime compelled Indian companies to choose internal (or organic) growth strategy. However, with the onset of LPG (Liberalization, Privatization, And Globalization) policies, and amendments in MRTP (the Monopolies and Restrictive Trade Practices) Act, Income Tax Act, and Takeover Code, a paradigm shift was witnessed in external (or inorganic) growth strategies like Mergers and Acquisitions. This paper aims to identify the principal functioning of the waves of Mergers and Acquisitions in India post 1991 reforms. The primary focus is to review the trends of M&As in the light of pharmaceutical industry as it demonstrate innumerable Mergers and Acquisitions during the aforementioned period. Further, M&As in Pharmaceutical Sectors are classified on the basis of Ownership Pattern of Merged and Merging entity, Size of Acquirer and target firms, and Type of merger. Moreover, this paper also presents Case Studies of two renowned pharmaceutical Mergers, Sun Pharma-Ranbaxy and Lupin-Gavis, to discern synergy arising out of merger activity. By virtue of Merger, benefits like Tax Considerations, increased market penetration or diverse product portfolio, gained by acquiring and Target Firms, have also been enumerated. Lastly, a comprehensive Pre and Post merger Ratio analysis of the above mentioned companies have been conducted to identify the impact on the overall financial performance of the merged entity. Tools like mean, standard deviation and p-value have been used to conclude whether there is a significant or massive change in financial performance of a merged company due to merger.

Key Words — Mergers and Acquisitions, Pharmaceutical Companies, Ratio Analysis

I. INTRODUCTION

In order to cope up with the constantly changing environment and increasing competition, constant growth of companies has become imperative. Companies can adopt two different (but complementary) expansion strategies: internal (or organic) and external (or inorganic). When the inherent growth of firms slows down, they may resort to external restructurings like Mergers and Acquisitions. Companies Act 2013 explains the word 'Merger'- "A 'merger' is a combination of two or more entities into one; the desired effect being not just the accumulation of assets and liabilities of the distinct entities, but organization of such entity into one business." Acquisition occurs when a company buys most of the assets or stocks of another firm i.e. more than 50% ownership of Target Firm to assume control of it.

A. Waves of Mergers and Acquisitions

Since Second World War, there has been series of Mergers and Acquisitions in India due to economic and political conditions. Due to Inflation during the war period, businessmen were able to amass high profits and eventually there was a hike in stock prices. Hence, Businesses started using Mergers and Acquisitions for expansion purpose. Also, British managing agency houses gradually liquidated

their holdings to Indian Business community as India was to gain independence, leading to increase in Mergers and Acquisitions.

The anti-big government policies and regulations of the 1960s and 1970s seriously deterred M&As, particularly that of Horizontal³ combinations. Industrial Licensing Policy required licensing in almost all Industries. Section 23 of the Monopolies and Restrictive Trade Practices Act (MRTP) of 1969 required companies with asset valuing Rs. 200 million or more to seek approval from the central government for a merger. Import Control Order, Industries Development and Regulation Act, and Foreign Exchange Regulation Act (FERA) 1973 also discouraged M&A. However, Nationalization of Indian insurance business in 1956 and banking in 1969, granting of tax relief in the Finance Bill of 1967 with respect to exemption from capital gains tax on shares transferred to amalgamating companies and encouraging merger of sick units with profitable entities, led to increase in Conglomerate mergers⁴ during the same period. In 1985, an amendment was brought in MRTP Act which required only those companies whose assets valued Rs. 1 billion or more to get premerger approval. Thus partially liberalized measure was carried out in 1985.

Widespread Economic Reforms and significant policy shift post-1990 led to a boom in Mergers and Acquisitions. Detailed discussion of the same is done later in the paper.

B. Rationale for Mergers and Acquisitions:

Motives of Mergers and Acquisitions are Synergy, Growth, Increasing market power, Acquiring unique capabilities and resources, Diversification, Bootstrapping Earnings, Tax Considerations etc.

C. Regulations Governing Mergers and Acquisitions in India:

1.The Companies Act 2013:

The Companies Act 2013 replaced Companies Act 1956 with some prominent changes to simplify the overall process of acquisitions, mergers and restructuring, facilitate domestic and cross-border mergers and acquisitions, and thereby, making Indian firms relatively more attractive to PE investors. It also protects investors and minorities, among other factors, thereby making M&A smooth and efficient. This Act basically talks about Merger, Amalgamation, Demerger, Reconstruction, and Arrangement- Eligibility and process of the same.

2.The Competition Act 2002

The Competition Commission of India regulates combinations by providing threshold limits on assets and turnover and prohibits Mergers or Acquisitions if it is likely to cause an appreciable adverse effect on Competition in the relevant market.

3. The Foreign Exchange Management Act, 1999 (FEMA)

FEMA contains general provisions for inbound and outbound cross-border Mergers and Acquisitions in India.

4. Securities and Exchange Board of India Act,1992 (SEBI)

SEBI regulates entities that are listed on Stock Exchanges in India. The Securities and Exchange Board of India (Substantial Acquisition of Shares and Takeovers) Regulations, 2011 (the "Takeover Code") restricts and regulates the acquisition of shares, voting rights and control in listed companies. It entitles the acquirer to exercise 25% or more of the voting rights in the target company and obligates the acquirer to make an offer to the remaining shareholders of the target company to further acquire at least 26% of the voting capital of the company. However, Takeover Code provides some exemptions to this obligation.

5. The Income Tax Act,1991

As per section 2(1B) of the Income Tax Act, if following conditions are satisfied then the deal would be considered as an amalgamation:

All the property of the amalgamating company or companies becomes the property of the amalgamated company by virtue of the amalgamation.

By virtue of an Amalgamation, all the liabilities of the amalgamating company or companies should become the liabilities of the amalgamated companies.

Shareholders holding at least three-fourths in value of the shares in the amalgamating company or companies become the shareholders of the amalgamated company by virtue of the amalgamation

Tax Benefits:

If an amalgamation takes place within the meaning of Section 2(1B) of the Act, the following tax concession shall be available:

Tax Benefits for Amalgamating company:

As per section 47(vi) of Income-tax Act 1961, any transfer of a capital asset by the amalgamating company to the amalgamated company would not be treated as a transfer if following conditions are satisfied:

If the transfer has been done in the scheme of amalgamation and

Amalgamated company is an Indian company

It means, if above conditions are satisfied, then amalgamating company is not liable for capital gain on transfer of its Capital Assets to amalgamated company. Tax Benefits to Shareholders of Amalgamating Company:

As per section 47(vii) of Income Tax Act, any transfer by a shareholder, of shares held by him in an amalgamating company, would not be treated as a transfer if following conditions are satisfied:

If the transfer has been done in the scheme of Amalgamation and The transfer is made in the consideration of the allotment to him of any share(s) in the amalgamated company and The amalgamated company is an Indian company

Tax Benefits to Amalgamated Company:

As per section 72A, if certain conditions are satisfied, then amalgamated company would get benefit by set-off and carry forward of losses and depreciation of amalgamating company.

D. Pharmaceutical Sectors:

The Indian pharmaceuticals market is the third largest in terms of volume (Accounting for 20%) and thirteenth largest in terms of value (accounting for 1.4%) in the Global Pharmaceutical Industry as per a report by Equity Master. India is the largest global supplier of generic drugs. The

Indian Market is projected to witness a surmountable growth of US\$ 55 billion by the year 2020, making it incipient of sixth largest upcoming pharmaceutical hub globally, in context of absolute size. The sector is expected to generate 58,000 additional job opportunities by the year 2025.

Reasons for the increase in Mergers and Acquisitions by Indian Pharma Companies:

Expansion of product range

Gaining access to approved facilities outside India

Access to distribution channel and gaining market presence

To reduce cost of benefits

To gain advantage of Tax concessions

II. LITERATURE REVIEW

Manish Agarwal and Aditya Bhattacharjea (2006)- He mentioned main Industrial and regulatory policy regimes and accordingly divided merger activity into three phases-Policies Regimes: Control regime (1950 to 1985), A Partially Liberalized Regime (1985 To 1991) and A Liberalized Regime (1991 Onwards). He further classified Merger Activity into low and stagnant (1973- 74 to 1987-88); moderate (1988-89 to 1994-95) and high merger activity (1995- 96 to 2001-03).The study doesn't take into consideration acquisitions. Also, the study doesn't consider all the factors responsible for an increase in mergers or acquisitions post-1991 reforms.

Mergers And Acquisitions In India: A Strategic Impact analysis for the corporate enterprises in the post-liberalization period by Rabi Narayan Kar- A total of 1386 M&As post-1991 reforms were found from a various database, the same was classified into sixteen broad industrial groupings. Few companies were considered for the financial analysis through Bivariate OLS regression analysis and other statistical tools.

Mergers and Acquisitions in the Indian Pharmaceutical Industry: Nature, Structure, and Performance By S Beena (2006)- This study caters into Mergers, Acquisitions, Alliances and sale of assets in Indian Pharmaceutical industry. According to his research, 64 Mergers and 63 acquisitions occurred in post-liberalization period. While mergers were dominated by domestic firms, there were more cross-border acquisitions and alliances. Cross-border alliances were higher compared to mergers. Alliances contributed mostly to facilitating marketing purpose rather than manufacturing or technological base purpose. Pre and Post merger analysis was carried out which showed that post-merger performance was enhanced in a majority of firms.

Das (2000) compared the pre-merger and post-merger operating profit margin for a sample of 14 acquiring

companies and found a decline in profitability in 8 of those companies after the merger.

Ong et al. (2011) analyzed the financial performance of Malaysian banking sector using Pre and Post merger accounting and financial data. Following three methods were used to compare Pre and Post merger performance: Firstly Ratio analysis was used, then t-Test were used to measure the significant difference between Pre and Post M&A performance, and finally, DEA approach was used to measure the bank's efficiency

David C. Cheng, et.al (1989) in their paper, 'Financial Determinants of Bank Takeovers' found that the purchase price is a negative function of the target's capital- to- asset ratio. The only variable used in their model is the ratio of acquirer- to- target assets. This study is different from earlier studies of bank mergers pricing in the sense that it provided greater consideration of bidder related variables and used multiple proxies for certain theoretical determinants of merger pricing. Analysis of Pre and Post Merger and Acquisition Financial Performance of Banks in Pakistan by Qamar Abbas: Pre and Post merger analysis of 10 banks was carried out through 15 financial ratios and paired sample T-Test. It was concluded that no significant changes were witnessed in post-merger performance.

Financial Performance Analysis of Pre and Post merger in the banking sector: a study with reference to ICICI bank ltd by Dr. Veena K.P – Ratios like profitability ratio, liquidity ratio, leverage ratio and growth ratio, and T-test was used to compare the financial performance of pre and post ICICI Bank merger. Here, a comparison was made between absolute data (not mean) of three years of a pre-merger period and seven years of the post-merger period.

Impact of Mergers and Acquisitions on Shareholders' Wealth in Short-Run: An Empirical Study of Indian Pharmaceutical Industry by Neelam Rani- This study analyses Short-term abnormal returns to shareholders of target company through merger and acquisition in the pharmaceutical industry in India. Null hypotheses and tests were carried out to find an effect of mergers and acquisitions on shareholder's wealth. Firth (1980) finds an insignificant abnormal return of 0.01 percent over the 36 month following the bid announcement by examining 434 successful bids and 129 unsuccessful bids in the UK over the period 1965-1975 using the market model with a moving average method for beta estimation. Financial Performance of Indian Manufacturing Companies during Pre and Post Merger by S. Vanitha: Financial performance of 17 merged manufacturing companies out of 58 merged manufacturing companies, for the time period 2000-2002, is

evaluated through ratio analysis, mean, standard deviation and 't' test. The conclusion drawn was that merged manufacturing companies did not achieve better profitability, solvency, and liquidity after the merger.

OBJECTIVES

The present paper's objectives are to examine:

Trends in mergers and acquisitions in India post-1991 LPG reforms, focus being on Pharmaceutical sector. Further, classifying no. of mergers in Pharmaceutical Industry based on Ownership Pattern of Merged and Merging entity, Size of firms and Type of merger.

Case Study of two Pharmaceutical mergers: Sun Pharma-Ranbaxy and Lupin-Gavis

Brief detail of their merger and Benefits like Increased Market Penetration, Diversified Product Portfolio, and Tax Concessions, gained by both Acquirer and Target Firms.

Pre and Post Merger Ratio Analysis to determine whether there was a significant change in Merged Entity due to the merger.

RESEARCH METHODOLOGY:

1.SAMPLE SELECTION:

A. All mergers and acquisitions have been founded for the period 1991-2017. Further, Pharmaceutical Sector is discussed in detail as it demonstrates the highest number of Mergers and Acquisitions.

B. Within Pharmaceutical Sector, two top mergers namely Sun Pharma- Ranbaxy and Lupin- Gavis has been chosen for in-depth Financial Analysis.

2. SOURCE:

The main source of information is based on secondary data, collected from Annual Reports, published Research Reports by various industries and research organization, national and international journals, books, articles, dissertation work, and websites of money control, IMAA, CMIE, MCA, SEBI etc

3. PERIOD OF STUDY:

A. Total no. of Mergers and Acquisition is found for the years 1991-2017.

B. Classification of no. of mergers in Pharmaceutical Industry based on Ownership Pattern of the Merged and Merging entity, Size of firms and Type of merger is done for the period 1991-2005.

C. Pre and Post Merger Ratio analysis of merged entities is done for two years before and after the merger.

4. BASIS OF ANALYSIS:

To analyze the performance of Merged entities, financial indicators like mean, standard deviation and P-value of Pre and Post Merger ratios are used.

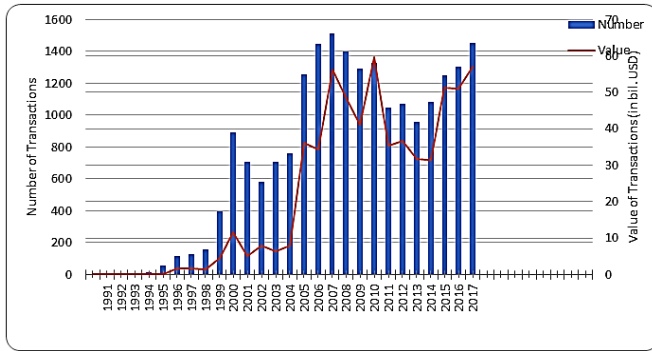
1. WAVES OF MERGERS AND ACQUISITIONS POST 1991, PARTICULARLY IN PHARMACEUTICAL SECTOR:

A. Number And Value of Mergers And Acquisitions from 1991 to 2017

Year	Number	Value (in billion USD)
1991	1	N/A
1992	0	N/A
1993	4	N/A
1994	16	N/A
1995	55	N/A
1996	115	1.60707
1997	127	1.60585
1998	156	1.49434
1999	395	4.52
2000	892	11.67
2001	709	5.04
2002	582	7.95
2003	706	6.32
2004	763	7.92
2005	1,254	36.24
2006	1,449	34.33
2007	1,510	56.25
2008	1,402	48.63
2009	1,294	41.10
2010	1,328	59.52
2011	1,045	35.40
2012	1,070	36.63
2013	955	31.79
2014	1,085	31.45
2015	1,250	51.33
2016	1,302	51.13
2017	1,451	57

DATA REPRESENTATION AND ANALYSIS:

Mergers and Acquisitions in the Indian Pharmaceutical Sector: Trends, Sample Study, and Financial Analysis of Pre and Post Merge



Source: IMAA Institute, Registration and Liquidation of Joint Stock Companies in India (RLGC), and Publications of CMIE

Total of 20,916 Mergers and Acquisitions are identified during the period 1991-2017. A maximum number of Mergers and Acquisitions i.e. 1510 is found in the year 2007 and the lowest is found in the year 1992. The momentum of M&A built up from 1995. It slowed down from 2001 and again increased from 2005.

Reasons for the increase in M&A post-1991:

i) Through Liberalization, Privatization, and Globalization (LPG) Policies introduced by the government in 1991, there was a relaxation of controls and regulations on production, trade, and investment, leading to increases in both domestic and international competition. Restructuring and Re-engineering were therefore required to become efficient and cope up with the competition. Thus, companies started using inorganic method i.e. Mergers and Acquisitions.

ii) The New Industrial Policy (NIP) announced in July 1991 abolished licensing in all but eighteen industries, most of which were subsequently delicensed. This opened up ways for Mergers and Acquisitions.

iii) Section 23 of MRTP Act was deleted from the statute, resulting in no premerger scrutiny from Central Government being required for Mergers and Acquisitions.

iv) Takeover code in 1994 and the issue of simplified takeover regulations by the securities exchange board of India (SEBI) in 1997 further brought improvement in Mergers and Acquisitions.

v) Industrial slowdown since 1996 reduced profit margins of Indian companies and forced them to restructure their business through Mergers and Acquisition.

vi) The union budget for 1999-2000 defined the tax treatment in respect of amalgamations, de-mergers, and slump sales- it reduced conditions required to be fulfilled by an amalgamated company to avail the benefits of set off and carry forward of accumulated losses and unabsorbed depreciation. Thus more firms started engaging in M&As to avail Tax Benefits.

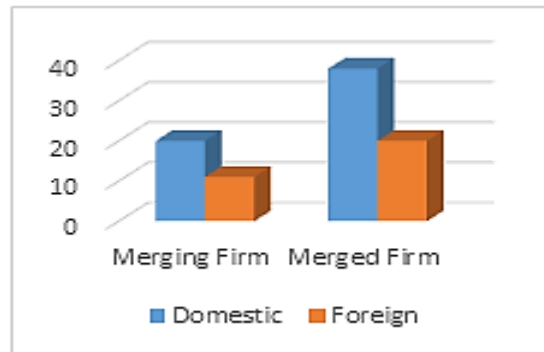
B. Pharmaceutical Sector

Pharmaceutical Sector is chosen for in-depth study because this industry seemed to be using M&A more aggressively to accelerate internationalization, was undergoing a paradigm shift in policies and was well known for its social sensitiveness. Social Sensitiveness means that Industries' demand is inelastic due to the existence of a third party (that is the doctor) in deciding the demand for a particular drug. A total of 64 mergers and 63 acquisitions were witnessed from 1991 to 2005.

i) Classifying no. of mergers based on Ownership Pattern of the Merged and Merging entity, Size of firms and Types of a merger:

a. Ownership Pattern of Merging and Merged Firms from 1991-2005:

Ownership	Merging Firm		Merged Firm	
	No.	Percent	No.	Percent
Domestic	20	64.52	38	65.52
Foreign	11	35.48	20	34.48
Total	31	100	58	100



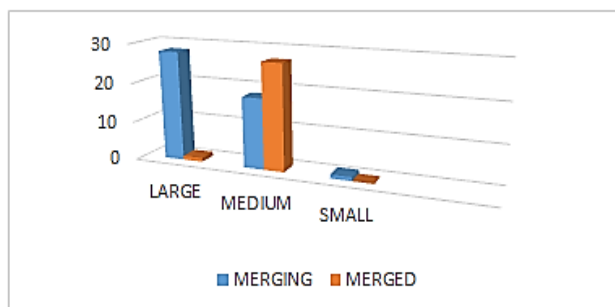
Source: Research paper by S Beena (2006) & CMIE

By classifying mergers and acquisitions into ownership-wise, a clear domination of domestic firms over foreign firms is seen. Also, many firms engaged in multiple mergers

b. Size-wise classification of merger from 1991 to 2005

Size	Merging		Merged	
	No.	Percent	No.	Percent
Large (> 1000 Million)	28	59.57	1	3.57
Medium (10-1000 Million)	18	38.3	27	96.43
Small (< 10 Million)	1	2.13	0	0
Total available	47	100	28	100

Mergers and Acquisitions in the Indian Pharmaceutical Sector: Trends, Sample Study, and Financial Analysis of Pre and Post Merge

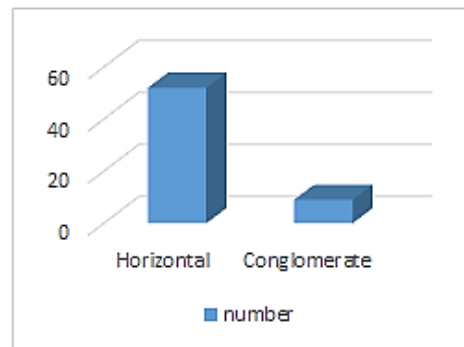


Source: Research paper by S Beena (2006) & CMIE

The highest number of large-sized firms got engaged in Mergers and Acquisition, constituting 60% of total Mergers and Acquisition. Whereas, medium-sized firms got engaged in 18 mergers or acquisitions (i.e. 38% of total Mergers and Acquisitions). On a closer look, we find that most medium-sized firms got merged to large sized firms as merged medium entities are 27 whereas merging medium entities are just 18. Also, merged large entity is only one and merged small entity is nil. Large sized firms preferred medium firms to get well-established marketing networks and add new products to their portfolio.

c. Types of Merger: Horizontal/ Conglomerate Classification from 1991 to 2005

Type	No.	Percent
Horizontal	52	85.25
Conglomerate	9	14.75
Total	61	100



Source: Research paper by S Beena (2006) & CMIE

Majority of mergers were Horizontal, which marked more than 85%. While just 15% of firms merged with firms having a different business. Horizontal Merger is further classified into Horizontal and Vertical to find out vertical integration within the pharmaceutical industry as the sector consists of different therapeutic categories. It is found that 17 mergers out of Horizontal mergers can be further classified as vertical.

ii) Statistics of India Based Acquirers acquiring Foreign companies from 2005-2007

SR NO	ACQUIRER	TARGET	TARGET COUNTRY	ANNOUNCEMENT YEAR	VALUE (In million \$)
1	Dr. Reddy's Laboratory	Beltapharma Arzneimittel GmbH	Germany	2006	582
2	Ranbaxy	Terapia	South Africa	2006	324
3	Matrix Laboratory	Docpharma, NV	Belgium	2005	263
4	Dr. Reddy's Laboratory	Roche's API Facility	Mexico	2005	59

Mergers and Acquisitions in the Indian Pharmaceutical Sector: Trends, Sample Study, and Financial Analysis of Pre and Post Merge

5	Jubilant Organosys Ltd	Target Research Associates	USA	2005	33.5
6	Torrent Pharmaceutical	Heumann Pharma GmbH and Co generica KG	Germany	2005	30
7	Wockhardt	Negma Laboratories	France	2007	265
8	Ranbaxy	Betabs Pharma	South Africa	2007	70
9	Wanbury	Industrial FC	Spain	2006	42
10	Sun Pharma	Taro Pharma	Israel	2007	454
11	Jubilant Organosys Ltd.	Hollister Laboratory	USA	2007	122.5

Source: Different articles from Economic Times, Hindu Business Line, Times Of India etc

III. CASE STUDY OF SUN PHARMA- RANBAXY & LUPIN-GAVIS:

A. BRIEF DETAIL OF THEIR MERGER/ACQUISITION & BENEFITS GAINED BY THE ACQUIRER AND TARGET FIRM

i) SUN PHARMA- RANBAXY:

Sun Pharma acquired 100 % shares in Ranbaxy Laboratories Limited on 6th April 2014 (Legal proceedings were completed on 25th March 2015) to penetrate into new markets and increase the product portfolio of the company as both complimented each other in areas of expertise- Sun Pharma was a major global specialty pharmaceutical company with expertise in complex and niche therapy areas while Ranbaxy was known for its global presence in the generic segment. It was claimed to be one of the biggest Merger

and Acquisition deal, valued at the US \$ 4 billion. The transaction was framed as merger and not an acquisition for a variety of commercial, legal and tax reasons (Direct acquisition requires enough cash reserves or access to leverage for purchasing the target firm but they had an all-stock deal. It was difficult to get loan for an Indian merger and Interest expense been incurred against exempt income, would not be a deductible expense for calculating Income Tax) In terms of the Scheme of Arrangement, it was an all-stock merger in which the shareholders of Ranbaxy received 0.8 shares of Sun Pharma of face value of Rs. 1 for each Ranbaxy share of face value of Rs 5. Daiichi, which owned 63.41 percent of the shares of Ranbaxy prior to the deal, became 2nd largest shareholder in Sun Pharma with a stake of 9%. Share Holding after the merger was: Daiichi-9%, Public Shareholders of Ranbaxy- 14%, Public Shareholders of Sun Pharma-22 % and Promoters-55%. The Ranbaxy's shares were valued at Rs 457 per share, a premium of 18 percent to the 30-day volume-weighted average share price. Regulatory approvals:

a. Sun Pharma and Ranbaxy obtained clearances from stock exchanges in India (NSE and BSE) by August 2014.

Mergers and Acquisitions in the Indian Pharmaceutical Sector: Trends, Sample Study, and Financial Analysis of Pre and Post Merge

b. The Approval from CCI (Competition Commission of India) was received on December 5, 2014, but on a precondition that seven brands, which constituted less than 1% of total revenues of the combined entity, be divested to prevent the merger from negatively impacting competition in India. The condition was fulfilled in March 2015 when Ranbaxy's seven brands were sold to Pune-based Emcure Pharmaceuticals.

c. After Sun Pharma and Ranbaxy complied with certain rules, U.S. FTC (Federal Trade Commission) granted early termination of the waiting period under the Hart-Scott-Rodino Antitrust Improvements Act of 1976 (HSR Act) to both companies in February 2015 with the precondition that Ranbaxy's interests in generic minocycline tablets and capsules be divested to an external third party. To fulfill the precondition, Ranbaxy's generic minocycline assets were sold to Torrent Pharmaceuticals, which markets generic drugs in the U.S.

d. Based on a petition alleging insider trading in the shares of Ranbaxy, Andhra Pradesh High Court issued notices to the Securities and Exchange Board of India ("SEBI"), BSE, NSE, Sun Pharma, Ranbaxy and Silver Street Developers LLP on 30th April 2014 to maintain status quo. On 13th May 2014, Sun Pharma moved the Supreme Court against the status quo order of the Andhra Pradesh High Court. The Punjab and Haryana high court approved the merger on 9th March 2015

Benefits of Merger To Both The Companies:

a. Turnaround For Ranbaxy:

Ranbaxy's manufacturing facilities in Paonta Sahib, Dewas and Mohali lapsed in quality control and adherence to procedure as per the United States Food and Drug Administration ("USFDA"). As a result, the USFDA had prohibited Ranbaxy from distributing drugs manufactured using active pharmaceutical ingredients ("APIs") from these facilities, in the United States. This caused the multi-billion dollar Indian generic pharmaceutical industry incur a loss in international markets. The acquisition by Sun Pharma resulted in a turnaround for the beleaguered Ranbaxy.

b. Increased Market Penetration:

The combined entity was the fifth-largest specialty generics company in the world and the largest pharmaceutical company in India. Sun Pharma, which was number three in generic dermatology space in the USA, became number one in this space. Operations spanned across 65 countries and 47 manufacturing facilities across 5 continents. The combined entity contributed 47 percent, 31 percent and 22 percent of sales respectively to the US, the rest of the world and India.

c. Diverse Product Portfolio:

A combined Firm has a diverse, highly complementary portfolio of specialty and generic products marketed globally, including 445 ANDAs. It is one of the leading dermatology platforms in the United States. Sun Pharma got access to Ranbaxy's new product pipeline including a generic version of AstraZeneca's heartburn drug Nexium.

d. Tax Benefits

As per Section 2 (1B) of the Income Tax Act, 1961, This deal was considered to be an amalgamation as it fulfilled all the conditions. Hence, following tax concessions were available:

➤ **To Ranbaxy i.e. Amalgamating Company:**

By virtue of section 47(vi) of Income-tax Act 1961, transfer of a capital asset by Ranbaxy (amalgamating company) to Sun Pharma (amalgamated company) was not treated as a transfer as all the conditions were satisfied:

i) This deal was treated as amalgamation as per section 2(1B) and
ii) Sun Pharma (Amalgamated company) is an Indian Company
Therefore, Ranbaxy was not liable for Capital Gain Tax on the transfer of its assets to Sun Pharma.

➤ **To Shareholders of Ranbaxy:**

By virtue of section 47(vii) of Income Tax Act, transfer of shares by a shareholder of Ranbaxy (amalgamating company) to Sun Pharma (an amalgamated company) is not treated as a transfer as following conditions are satisfied:

i) The transfer was done in the scheme of Amalgamation and
ii) The transfer was made in the consideration of the allotment of share(s) in the Sun Pharma (amalgamated company) and
iii) Sun Pharma (Amalgamated company) is an Indian company.

Hence, shareholders of Ranbaxy didn't attract Capital Gain Tax by transferring shares to Sun Pharma.

➤ **To Sun Pharma:**

Out of Minimum Alternative Tax (MAT) credit of Rs. 8222.7 million which was written down by Ranbaxy during the quarter ended 2014, an amount of Rs. 7517 million has been recognized by the company, on a reassessment by the management at the year-end, based on the convincing evidence that the combined entity would pay normal income tax during the specified period and would be able to utilize the MAT credit so recognized.

ii) LUPIN LTD- GAVIS

Lupin, a transnational Indian pharmaceutical company, manufactured biotechnology products, branded & generic formulations, and APIs globally. A renowned pharmaceutical company, GAVIS, based in New Jersey, was particularly focused in manufacturing, formulation, development, marketing, sales and packaging, and distribution of Pharmaceutical products. Lupin Ltd acquired US-based GAVIS Pharmaceuticals LLC and Novel Laboratories Inc. (GAVIS) on 9th March 2016 for \$880 million to boost its presence in the US. This is the largest acquisition by any Indian pharmaceuticals company in the US. This acquisition was funded by cash reserves of \$100 million and a bridge loan. The acquisition was expensive as Lupin paid 9.2 times the annual revenue for the acquisition.

Benefits of Merger to Both the Companies:

a. Increased Market Penetration:

Lupin's biggest market was the US and through the acquisition of the US-based firm, it enhanced its presence in the US. Gavis had a highly skilled New Jersey based manufacturing facility which after the acquisition, became Lupin's first manufacturing site in the US, complementing Lupin's Coral Springs, Florida, inhalation R and D center.

b. Diversified Product Portfolio:

As a result of the takeover, Lupin's pipeline in dermatology controlled substance product and other high-value and niche generics enhanced. The merged entity had a portfolio of about 120 in-market products, over 185 cumulative filings pending approval and a series of products under development for the US. This

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takeover formed the 5th largest pipeline of ANDA filings with the US FDA, addressing a USD 63.8 billion market.

B. PRE AND POST MERGER: RATIO ANALYSIS

17 Financial Ratios, bifurcated into Profitability, Liquidity, Leverage, Growth, and Valuation Ratios, have been calculated for Merged Entities for two years before and after merger. Further, its Mean, Standard Deviation and P-value is calculated to witness changes in financial performance due to the merger.

Following hypothesis is made for p-value:-

Null Hypothesis: There is no significant difference in Financial Ratios before and after the merger.

If $p\text{-value} > 0.05$, then Hypothesis stands true i.e. there is no significant difference in Ratios due to the merger. The difference can be due to any other factor but a merger.

If $p\text{-value} < 0.05$, then hypotheses stands false i.e. there is a significant difference between ratios due to the merger.

i) Merged Sun Pharma

SR NO	PARTICULARS	FORMULA	BEFORE MERGER (2012-13 & 2013-14)		AFTER MERGER (2014-15 & 2015-16)		P-VALUE
			MEAN	SD	MEAN	SD	
PROFITABILITY RATIOS							
1	Net Profit Ratio	Net Profit / Turnover	(39.38)	85.72	(16.24)	3.03	0.78
2	Return on Equity	Net Income / Shareholder's Equity	(15.78)	31.69	(5.74)	1.05	0.74
3	Return on Capital Employed	Earnings Before Interest and Tax (EBIT) / Capital Employed	(10.77)	24.25	(4.91)	0.95	0.80
4	Return on assets	Net profit after tax / Total Assets	(7.43)	18.40	(3.53)	0.57	0.82
5	Total Debt/ Equity	Total Debt / Equity	0.17	0.23	0.25	0.01	0.69
6	Asset Turnover Ratio	Total Asset / Turnover	23.37	4.14	21.84	0.61	0.73
LIQUIDITY RATIOS							
7	Current Ratio	Current Asset / Current Liability	2.39	1.39	0.55	0.08	0.33
8	Quick Ratio	Quick Assets / Current Liability	1.88	1.03	0.33	0.04	0.29
9	Inventory Turnover Ratio	Cost of Goods Sold / Average Inventory	2.94	0.20	3.62	0.06	0.17
LEVERAGE RATIOS							
10	Debt Ratio	Total Debt / Total Assets	0.31	0.22	0.38	0.01	0.74

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11	Capital Ratio	Total Equity/ Total Aseets	0.69	0.22	0.62	0.01	0.74
GROWTH RATIOS							
12	Basic Earning per share	Profit After Tax/No. of Equity Shareholders	(4.35)	13.22	(5.30)	1.13	0.94
13	Dividend per share	Dividend/ No. of Shareholders Equity	3.25	2.47	2.00	1.41	0.34
VALUATION RATIOS							
14	MarketCap/Net Operating Revenue	Market Capital/ Net Operating Revenue	38.42	5.04	26.16	0.36	0.19
15	Retention Ratios	1-Dividend/ Net Income	55.37	78.64	135.70	18.77	0.45
16	Price/BV	Market Price/ Book Value	13.46	3.64	9.25	0.09	0.36
17	Earnings Yield	Earnings Per Share/ Market Price	(0.01)	0.02	(0.01)	-	0.80

SOURCE: Data collected from Standalone financials of Sun Pharmaceuticals.

Analysis:

a) Profitability Ratios:

-Net Profit ratio increased after merger as net loss decreased, indicating that overall efficiency of all departments namely production, administration, selling, financing, tax management etc had increased.

- Return on Equity increased showing that comparatively less loss had incurred with shareholder's Funds. It reflects that productivity of Shareholder's Funds was increased.

- Return on Capital Employed increased as loss had decreased.

- Return on Assets increased indicating that less loss had incurred out of all Assets invested.

- Debt Equity Ratio increased showing that Debt portion used in merged entity was more than Equity.

- Asset Turnover Ratio reduced as less revenue was generated out of Assets invested

b) Liquidity Ratios:

- Current Ratio: Ideal Current Ratio is 2:1. It reduced from 2.39 to 0.55 which means that fewer current assets were available to cover current liabilities after the merger.

- Quick Ratio: Ideal ratio is 1:1. It reduced from 1.88 to 0.33. Hence, less Quick Assets, which are either cash or cash

equivalents or can easily be converted into cash, were available to cover current liabilities.

- Inventory Turnover Ratio increased from 2.94 to 3.62, indicating that merged entity could efficiently control its inventory.

c) Leverage Ratios:

- Debt Ratio increased from 0.31 to 0.38, implying greater combined entity's leverage. Thus more of combined firm's Assets were financed by debt.

- Capital Ratio decreased as fewer Assets were financed through Equity.

d) Growth Ratios:

-Basic Earnings Per Share and Dividend Per Share decreased showing that less of earnings and dividends were available for Shareholders.

e) Valuation Ratios:

Valuation Ratios indicate how the company and its Equity are assessed in the Capital market

- Market Capital/ Net Operating Revenue reduced as value of the firm decreased as compared to the Revenue generated.

- Retention Ratio increased showing that more of Revenue was transferred to Retained Earnings.

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- Price/BV Ratio decreased indicating that Market Price of share was less as compared to its book value.

- Earnings yield remained same as proportion of change in Earnings per share was equal to change in Market price per share.

ii) Merged Lupin:

However, the p-value of all these ratios is more than 0.05, indicating that there wasn't a significant change in ratios due to the merger. Other Factors but the merger was responsible for these changes in Ratios.

SR NO	PARTICULARS	FORMULA	BEFORE MERGER (2013-14 & 2014-15)		AFTER MERGER (2015-16 & 2016-17)		P-VALUE
			MEAN	SD	MEAN	SD	
PROFITABILITY RATIOS							
1	Net Profit Ratio	Net Profit / Turnover	25.29	0.71	25.10	0.47	0.58
2	Return on Equity	Net Income / Shareholder's Equity	29.93	3.38	23.07	1.82	0.14
3	Return on Capital Employed	Earnings Before Interest and Tax (EBIT) / Capital Employed	28.66	3.02	22.37	1.82	0.12
4	Return on assets	Net profit after tax / Total Assets	24.09	2.32	18.95	1.35	0.12
5	Total Debt/ Equity	Total Debt / Equity	0.01	0.01	0.04	0.01	0.34
6	Asset Turnover Ratio	Total Asset / Turnover	95.09	6.50	75.40	3.95	0.08
LIQUIDITY RATIOS							
7	Current Ratio	Current Asset / Current Liability	3.67	0.22	3.38	0.23	0.02
8	Quick Ratio	Quick Assets / Current Liability	2.68	0.17	2.55	0.23	0.31
9	Inventory Turnover Ratio	Cost of Goods Sold / Average Inventory	6.06	0.45	5.95	0.06	0.86
LEVERAGE RATIOS							
10	Debt Ratio	Total Debt / Total Assets	0.19	0.01	0.18	0.01	0.28
11	Capital Ratio	Total Equity / Total Assets	0.81	0.01	0.82	0.01	0.28
GROWTH RATIOS							
12	Basic Earning per share	Profit After Tax / No. of Equity Shareholders	52.65	0.76	66.87	2.77	0.09

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13	Dividend share	per Dividend/ No. of Equity Shareholders	6.75	0.75	7.50	-	0.50
VALUATION RATIOS							
14	MarketCap/Net Operating Revenue	Market Capital/ Net Operating Revenue	6.97	2.28	5.52	0.40	0.68
15	Retention Ratios	1-Dividend/ Net Income	87.18	1.25	88.76	0.48	0.53
16	Price/BV	Market Book Value Price/	8.00	1.99	5.08	0.67	0.47
17	Earnings Yield	Earnings Per Market Price Share/	0.05	0.02	0.05	0.01	1.0

SOURCE: Data collected from Standalone financials of Lupin.

Analysis:

a) Profitability Ratios:

- There was a minor decrease in Net Profit Ratio from 25.29 to 25.10.
- Return on Equity, Return on Capital Employed and Return on assets decreased, indicating that combined entity generated comparatively fewer profits from shareholder's funds, capital employed and total assets respectively.
- Total Debt/ Equity Ratio increased, thereby more debt financing was used as compared to Equity financing.
- Asset turnover Ratio reduced showing that less revenue was generated through Assets by combined entity.

b) Liquidity Ratio:

- Current Ratio and Quick ratio reduced indicating that less of current assets and Quick Assets respectively was available to cover current liabilities.
- Inventory Turnover Ratio reduced as inventory was not efficiently managed.

c) Leverage Ratios:

- Debt Ratio decreased showing fewer Assets being financed through Debt.
- Capital Ratio increased as more Assets were financed through Equity.

d) Growth Ratios:

- Basic Earnings Per Share and Dividend Per Share increased indicating that more of Earnings and Dividend were available for Shareholders.

e) Valuation Ratios:

- Market Capital/ Net Operating Revenue reduced as value of firm of combined entity decreased as compared to Operating Income.
- Retention Ratio increased showing that more of revenue was transferred to Retained Earnings.
- Market Price/ Book Value reduced indicating that Market price of share of merged entity decreased as compared to its Book Value.
- Earnings yield remained same as proportion of change in Earnings per share was equal to change in Market price per share.

However, P-value of all except Current Ratio is less than 0.05. Thus, there is a significant change in Current Ratio due to the merger. Changes in other Ratios might be because of other reasons.

IV. LIMITATIONS

This study is confined to findings of two major Pharmaceutical merged entities. However, this doesn't provide a holistic instance of changes occurring due to the advent of mergers and acquisitions.

V. CONCLUSION

The aforementioned paper gives an overview of radical changes in trends of mergers and acquisitions post 1990 reforms, specifically in pharmaceutical sector. These reforms are inclusive of Liberalization, Privatization and Globalization policies, changes in Monopolies and Restrictive Trade Practices Act (1969), Takeover Code and Income Tax Act (1961) and myriad others which impacted the existing structure of Mergers and Acquisitions. It further establishes to examine two renowned pharmaceutical mergers, SunPharma-Ranbaxy and Lupin-Gavis. This paper concludes that so forth, there have been no massive or significant changes in the financial performance of the above mentioned merged entities.

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Presidential Election's Economic Uncertainty Influence on Narx Neural Networks Ability to Predict Stock Index

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Abstract: The stochastic nature of the stock market has made it difficult to forecast its performance. Therefore, vigilance is crucial in making the best decisions. Presidential elections have been observed to be a factor that causes uncertainty in stock market's performance. In this article, the researchers aimed to determine Artificial Neural Network's (ANN) capability to forecast stock market index with and without influence of presidential election uncertainty. Historical data of Philippines stock exchange market for past eight years was obtained and divided into five different datasets based on different time frames leading to the presidential election. The researchers grouped the data into complete data, data without one month before the presidential election, data without six months before the presidential election, data containing only one month before presidential polls and data comprising just six months before presidential elections. A test dataset also collected to measure the performance of each network trained by above datasets. Then a NARX neural network was trained using each dataset. After examining all datasets, the datasets in which the data of six months and one month before elections were eliminated, showed better learning rate comparing to other datasets. This study shows a new way to consider presidential polls as one of the factors to predict the stock market. Although it is not possible to forecast the market by examining a sole consideration, the findings of this research can help market analysts to make better decisions.

Key Words — Artificial Neural Networks, stock market prediction, NARX, Philippines Stock Exchange

I. INTRODUCTION

Many commercial businesses, firms or private investors are counting on the stock market as a means to increase profit. Due to uncertainty and its stochastic nature, the Stock market can be devastating for many investors and on the other hand a gold mine to others. Although there are many approaches to forecast this potentially profitable market, this still is not an easy task to do. This difficulty is usually due to the reason that multifarious factors affect the stock market and handling all these elements to predict the market is a tedious challenge. Many factors affect stock indexes. Some can influence specific market sectors while others play a more substantial role. [1] investigated this by measuring how oil price can impact the stock market. They found out that oil price affects more on oil-related sectors of the market. In another study, [2] identified that liquidity of stock market increases just as positive oil shocks come from the oil-specific demand side. In a paper, [3] examined the influence of fluctuation of foreign currencies against US dollar and its effects on the stock market. They showed that as these currency's value increases the stock indexes elevate. Machine learning algorithms are appropriate tools to investigate time series data such as stock prices. These algorithms are reliable when it comes to studying the non-

linear relations between elements of such [4]. Artificial neural networks as one of these algorithms showed a decent performance in past studies. [5] utilized neural networks to identify failing banks. In another study, [6] applied their version of neural networks, which they call "expectile Regression Neural Network (ERNN)," to predict concrete compressive strength and housing price. This algorithm used widely for economic purposes such as credit risk estimation [7] or bankruptcy prediction [8]. It is proven that presidential elections affect stock market [9], [10], [11], and [12]). The main objective of this research is to investigate the effects of the presidential election as a form of political uncertainty, on the learning ability of an Artificial neural network to predict stock market index. The data used to conduct this research yielded from Philippines stock exchange market historical data. The rest of this paper is organized as follows. Section 2 presents some previous related works on the stock market prediction by artificial neural networks. Furthermore, some relevant research that indicates the relation between stock market prices and presidential elections has been presented in this section. Section 3 offers this research's proposed methods. Section 4 illustrates the results of this study. Finally, section 5 is a conclusion of this research's contributions.

II. BACKGROUND OF THE STUDY

Predicting stock prices by using machine learning algorithms is not relatively new. There have been significant researches done to achieve this goal, and it is rational due to different factors that influence the market. Furthermore, many researchers tried to enhance machine learning algorithms to attain better results. Although it is indispensable to consider many aspects to perform a robust prediction [13], however, this study's primary intention is to measure whether or not one of these factors, which is the presidential election as a political uncertainty, influence ANN's learning ability. In a study [14], suggest a fusion model based on multi-diverse base classifiers to deliver a better stock returns. In another research [15], they experiment different machine learning algorithms, based on two monthly and daily time intervals, to forecast Indian stock market. In another paper [4] utilizes Artificial Neural Networks to predict NASDAQ stock exchange daily rate. They used backpropagation algorithm to train their data and compared the algorithm's ability to predict based on a short-term and long-term model. [16] combined disparate online data sources with traditional timeseries and technical indicators and examine the ability of Artificial Neural Networks alongside other learning algorithms such as decision trees and support vector machines, to predict Apple NASDAQ stock one-day ahead. [17] used data mining techniques to predict the daily direction of S&P 500 Index ETF (SPY) return based on 60 financial and economic features. In a paper, [18] examined artificial neural networks (ANN) to predict the Japanese Nikkei 225 index. They stepped further by combining ANN with genetic algorithm (GA) and simulated annealing (SA), and the results showed that this combination could increase the learning algorithm's efficiency significantly. Studies show political events such as presidential elections influence stock market. For instance [19], investigated cointegration and causal relationships between the Iowa and in trade presidential futures markets alongside election polls. Furthermore, they recorded the election predictions of Nate Silver. They found out that market movements and the presidential election have effects on each other. They showed that the increase in policy uncertainty curtails stock returns. In another study [20] examined the influences of political uncertainty on the stock market. They observed that market uncertainty elevates as the possibility of winning increases for the eventual winner

III. METHODOLOGY

This research has utilized NARX or Nonlinear Autoregressive with exogenous (external) input model to predict stock index of Philippines stock market and

investigates the effect of elimination of short time (one month) and longtime (six months) data of before election on neural network's prediction performance

3.1 Dataset and data collection

The dataset used for this research is collected from historical data of Philippines stock exchange market between the penultimate election until one year after the last election, which is from Jun-2009 to Jun2017. In a study, [9] investigated 27 OECD (Organization for Economic Cooperation and Development) countries and revealed that factors that can affect market during the presidential election. It is found that the country-specific component of index return variance can easily double during the week around an election. The results of this study show higher uncertainty in the stock market in short time before an election. We hypothesized that elimination of data in such high uncertain periods could increase ANN's ability to forecast market index. To investigate the short-term effect of highly uncertain times, we removed the data of one month before elections from our dataset. Furthermore, we decide to eliminate the data of six months before elections to examine the long-term effect of uncertain periods. Although [11] and [20] used one poll as the sample to investigate the influence of presidential election on the stock market, the collected data in this research has prices of the stock market during two elections, and this may increase the accuracy of the predictive model. This hypothesis has tested, and its result presented in the discussions section. The data used in this research (historical prices of Philippines stock exchange index) have collected from wall street journal database [21]. This data had to be cleaned, this way different datasets which each represents information with different time interval related to presidential elections is available to train by the NARX artificial Neural Network. Then the performance of the model regarding each dataset measured and compared with each other. The dataset cleaned into five different sets. First is the dataset which consists of all data in the mentioned time interval, second, the dataset in which the data of six months before elections are eliminated to investigate the long-term effect of election. Third, the dataset that in which the data of one month before votes are excluded. This dataset is to review the short-term impact of the presidential elections. Fourth, the datasets of eliminated time intervals for each case. These datasets are used to examine if training the predictive model with data prone to uncertainty can enhance its forecasting ability. Fifth, a test set which does not consist data from any of the above time intervals. The last dataset is the historical data of one month (July-2017) and used as a test set to evaluate the performance of networks trained by other datasets.

3.2 Artificial Neural Network

This algorithm has inspired from biological systems in which neurons are the signal processing elements. ANNs are non-linear statistical data modeling tools, and they model the affiliation between inputs and outputs in the dataset, and this leads them to be able to learn relations between data attributes. Accordingly, by determining the patterns of data, this algorithm can predict future events. [4] used ANN to predict values of NASDAQ exchange rates and the results showed better results when OSS training method and TANGSIG transfer function in a network with 20-40-20 neurons in three hidden layers used. Therefore, in this research, this network structure will be used to be trained and predict the dataset, and at the end, the performance of the networks will be measured by comparing each network’s ability to predict the test dataset. Additionally, the predictability of each network will be observed by their R2 value.

3.3 NARX

NARX or nonlinear autoregressive network with exogenous inputs is a recurrent dynamic network which is based on the linear ARX model (a frequently used model for time-series modeling). Figure 1 shows the NARX network model from a broader view. The box in the middle is layers of ANN that approximate the network’s function (f). Figure 2 is a more detailed structure of the network, as you can see there are 2 layers of Feedforward neural network that make this approximation and as NARX use the ARX model, input and output may be multidimensional.

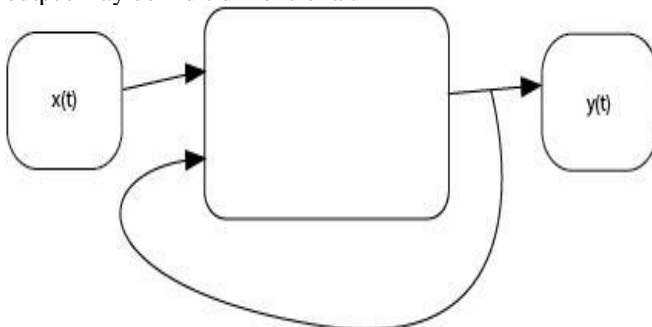


fig 1 - Typical NARX network structure

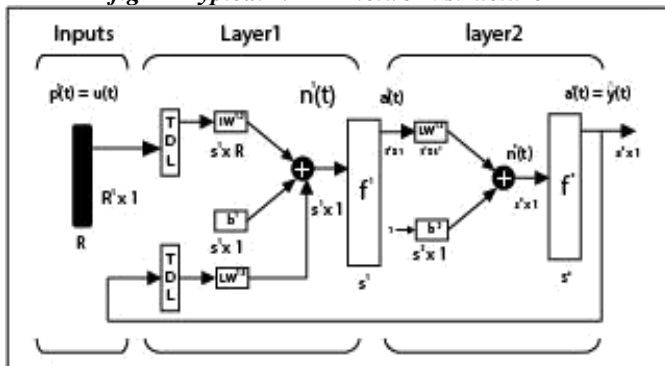


fig 2 - Detailed structure in which we can see the Feedforward ANN

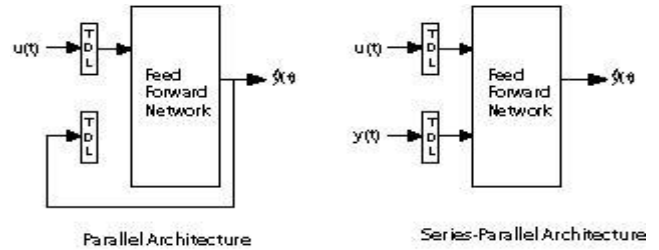


Fig 3 - a comparison of parallel and series-Parallel Architectures

$(\hat{y}(t)) = ((-1), \dots, (-1), (-1), \dots, (-1))$ (1)

As we can see in figure 2 and formula 1, when an input enters the network, it goes through different layers of feedforward ANN. In a feedforward ANN, the network’s output is fed back to the input. As an essential characteristic of NARX network the output that is feeding back to the network in a NARX structure, is the real output, as it is available during training, not the estimated network’s output. This arrangement called series-parallel architecture and has two benefits for the network’s performance. First of all, it results in a more precise input for feedforward network, Furthermore, at the same time the network has a feedforward architecture, and training can be done with static backpropagation. As it is evident in figure 3, in a Series-Parallel architecture, real output data (y(t)) will be fed to network’s input instead of its estimated value ($\hat{y}(t)$). All that has to be done is to initiate different random weight trials for each input data. The network starts with this value and adjusting them throughout the training. The network stops its iterations if its estimated value does not change in 6 iterations. In [22] you can learn more about this network.

3.4 Performance measurement

performance of the network was measured by two different methods. First, by determination coefficient (R2) which calculated as showed at equation (2).

$$R^2 = 1 - \frac{\sum_{t=1}^n (y(t) - \hat{y}(t))^2}{\sum_{t=1}^n (y(t) - \bar{y})^2}$$

secondly, the performance measured by mean square error(MSE) of the output as demonstrated by equation (3)

$$\frac{\sum(24053/012)^7}{=} <$$

y(exp) represents experimental values while y(pred) is the representation of predicted values and M serves as total number of data.

IV. RESULT AND DISCUSSIONS

A NARX network had trained by each indicated dataset, and its performance measured. Each dataset randomly divided into three portions, 70 percent for training, 15 percent for validation and 15 percent for testing. The trained dataset's performance tested again by the test dataset. This test is essential because it is a way to scale the learning ability of each network by the same measure. Each dataset has trained three times with three different training algorithms. The first algorithm is Levenberg-Marquardt, which is faster than others, however, employs more memory. The second algorithm is Bayesian-Regularization, which is slower but can give better results. The last algorithm is Scaled Conjugate Gradient which is using less memory. The performance of each trained network on every three datasets shown in table 1 through 3 and the performance of the network for eliminated data of each dataset presented in table 4 and 5.

Training algorithm	R2	MSE
levenberg-Marquardt	0.677801	2,738.89282
Bayesian- Regularization	0.694017	2611.678995
Scaled Conjugate Gradient	0.273199	12552.32212

Table 1 - performance of NARX network trained by the dataset of all data

Training algorithm	R2	MSE
levenberg-Marquardt	0.732139	2578.18445
Bayesian- Regularization	0.723893	2404.26964
Scaled Conjugate Gradient	0.554445	11737.96887

Table 2 - performance of NARX network trained by the dataset in which the data of one month before elections had eliminated

Training algorithm	R2	MSE
levenberg-Marquardt	0.690205	2806.70741
Bayesian- Regularization	0.730727	2380.16446
Scaled Conjugate Gradient	0.618455	39417.23568

Table 3 - performance of NARX network trained by the dataset in which the data of six months before elections had eliminated

Training algorithm	R2	MSE
levenberg-Marquardt	0.044726	1007465.05297
Bayesian- Regularization	0.201869	1183894.41650
Scaled Conjugate Gradient	0.0073608	1664059.73534

Table 4 - performance of NARX network trained by the dataset in which only data of one month before elections provided

Training algorithm	R2	MSE
levenberg-Marquardt	0.486198	391482.48198
Bayesian- Regularization	0.713221	34531.24173
Scaled Conjugate Gradient	0.193685	77871.93925

Table 5 - performance of NARX network trained by the dataset in which the data of six months before elections had

As it can be seen in above tables the highest R2 value belongs to the network which trained by the levenberg-Marquardt algorithm and its dataset is the network in which the data of one month before elections had eliminated and it is 0.732139. Furthermore, the lowest R2 value belongs to the network which trained by Scaled Conjugate Gradient algorithm, and its dataset is the one in which the only data of one month before elections provided and it is 0.0073608. The average R2 value among all networks shows Bayesian-Regularization algorithm performs better with the average R2 value of 0.6127454(the average R2 value for the levenberg-Marquardt algorithm and Scaled Conjugate Gradient algorithm is respectively 0.5262138 and 0.32942896). Highest R2 value for networks that trained with levenberg-Marquardt algorithm belongs to the network that its training dataset is the one in which the data of one month before the election eliminated. This is also true for the highest value of R2 for networks that trained by Bayesian-Regularization algorithm, and both have rates near to each other (0.732139 for levenberg-Marquardt and 0.730727 for Bayesian-Regularization). Scaled Conjugate Gradient algorithm showed a lower highest value of R2 compared to other two which is 0.618455, and it belongs to the dataset in which the data of six months before elections had eliminated.

The networks that trained by training dataset of all data showed the average R2 value of 0.548339, the networks that trained by training dataset in which the data of one month before elections had eliminated showed the average R2 value of 0.670159. The networks that trained by training the dataset in which the data of six months before elections had eliminated showed the average R2 value of 0.679795667, the networks that trained by training dataset in which the data of only one month before elections exists showed the average R2 value of 0.084651933. And the networks that trained by training dataset in which the data of only six

months before elections exists showed the average R2 value of 0.464368. As can be inferred from above numbers the best performance among networks trained with datasets belongs to the network that trained by the dataset in which the data of six months before elections had eliminated. It is also worth to mention that this number is very

close to the average of the R2 value of the networks that trained by training dataset in which the data of one month before elections had eliminated. It is evident in the results above that although levenberg-Marquardt algorithm showed the highest R2 value; however, Bayesian-Regularization algorithm showed a better performance in average. The results also showed that the networks that trained by datasets in which the data of one month and six months before elections had eliminated had better performance and this proves our hypothesis that elimination of data before the election can increase the ability of the network to forecast markets index. The results showed that the networks that trained by datasets in which the data of one month before elections had eliminated had better performance among all other networks, which means short time elimination of data shows a better result comparing to long-term (six months). This finding could explain that the uncertainty in the market is higher one month before the election.

V. CONCLUSION

Historical data of Philippines stock exchange market in the time interval of one year before the penultimate election until one year after the last election used to conduct this research. The data grouped into complete data, data without one month before the presidential election, data without six months before the presidential election, data containing only one month before presidential polls and data comprising just six months before presidential elections and a test dataset. We hypothesized that elimination of high volatile (uncertain) time intervals such as before presidential elections, can influence the learning ability of Artificial Neural Networks to forecast the stock market index. NARX (nonlinear autoregressive network with exogenous inputs) neural network, which is an appropriate network for time series, used to conduct this research. A NARX network trained with each dataset three times by three different training algorithms (levenberg-Marquardt, Bayesian-Regularization, and Scaled Conjugate Gradient). The results showed the performance of neural network increased when it trained by datasets in which the data of one month and six months before elections had eliminated. The highest R2 value of the network that trained by all data belongs to the network that trained by Bayesian-Regularization training algorithm and is 0.694017. However, the highest R2 value belongs to the network which trained by levenberg-

Marquardt training algorithm, and its dataset is the one in which the data of one month before the election eliminated and it is 0.732139. These findings show that by reducing the high volatile time intervals from training data, such as presidential elections, we can achieve better results in forecasting stock index. This research also revealed that levenberg-Marquardt and Bayesian-Regularization training algorithms ability to predict is very close, however, Scaled Conjugate Gradient training algorithm showed a lower result with all datasets.

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*Title can be chosen from: master student, Phd candidate, assistant professor, lecture, senior lecture, associate professor, full professor

The Empirical Study of Teacher's Skills and Environment on Student Satisfaction: The Case of Private University in Mongolia

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Abstract: The aim of this study seeks to examine the correlations between teachers' skills and environment for student satisfaction. We try and understand the factors which influence student satisfaction in higher education, as well as the consequences of it. Graduate students will often choose their university or specific academic department based on its reputation, and universities and even the same school's academic departments will often compete in attracting the best students. We collected and analyzed data from descriptive research can help understand factors on graduate student satisfaction. The data were collected from 49 participants who study in the second courses for private university in Mongolia. This study discussed the effects of above mentioned results, the implications for theory and practice along with the limitations of the research and the implications for further research. Our study is significant in considering both theoretical and practical issues and for practices in Mongolian private higher education sector. Data were estimated by SPSS 21 and Smart PLS 3.0 statistic programs.

Key Words — Student satisfaction; teachers' skills, environment

I. INTRODUCTION

Locke (1976), one of the most well-known researchers in job satisfaction, defines the concept as a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences. Locke differentiates the concept of satisfaction from other similar concepts like morale and job involvement by clarifying his belief that satisfaction is based on a past or present assessment.

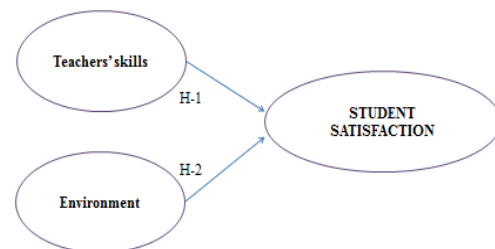
For some researchers (Halstead et al., 1994; Hartman & Schmidt, 1995; Rautopuro and Vaisanen, 2000) students have weak expectations, especially in regards to intellectual environment as this has little influence on satisfaction, therefore the variable – performance is the most influential factor in satisfaction. Contrarily, for other researchers (Shank et al., 1995; Eskildsen et al., 1999; Patterson, 2000) the exact opposite occurs. Whilst Anderson & Sullivan (1993) and Yi (1993) suggest that the more difficult it is to evaluate quality received, which happens in educational services, the higher the influence will be of expectations in the formation of satisfaction. However, Walker (1995) suggests that the impossibility of evaluating the main service causes students among other aspects to focus more on class environment and on the teachers' presentation. In higher education, this reality is very similar, with the aggravation that within this sector study concerning satisfaction is in truth still very scarce in Mongolian cases.

II. CONCEPTUAL FRAMEWORK AND HYPOTHESIS

II.I. STUDENT SATISFACTION

Hoppock (1935) offered one of the earliest definitions of job satisfaction. He described the construct as being any number of psychological, physiological and environmental circumstances which leads a person to express satisfaction with their job. Our study explains how teachers' skills, attitude and training environment are influential on student satisfaction. The conceptual model of factors on student satisfaction is drawn in Figure 2.1.

Figure 2.1. Conceptual models of factors on Student satisfaction



Source: Own diagram

There are numerous theories attempting to explain job satisfaction, but three conceptual frameworks as content, process and situational theory seem to be more prominent in the literature.

Satisfaction would be the only method for judging a school's quality, this measure can greatly impact external perceptions of a university who are interested in statistics like student retention (Athiyaman 1997). Students who are

will often choose their university or specific academic department based on its reputation, and universities and even the same school academic departments will often compete in attracting the best students. Unfortunately, many would argue that what pleases students is often not the most beneficial for their understanding of the different course's concepts (Winer 1999).

Previously, it was stated that members of a university faculty have three primary purposes in which they serve: research, teaching, and service (Middaugh 2001). Responsibilities and largely ignore the other two components that are often equally or perhaps more important to both the university administration and faculty. A student's perception of this single facet of the professor's abilities is therefore a narrow one. Acknowledging this, it is the belief of the researcher that students' opinions of their faculty experience still carry a great deal of weight as they are a key benefactor of a university experience and can greatly impact a university's future well-being. The idea of treating students as schools customers is easy to debate, particularly in a university setting. Students are often characterized as being prone to laziness and the desire to complete assignments in the simplest way possible not realizing that education often requires an abundance of hard work and self-discipline. Although this stereotype is not necessarily true, due to these opinions and other reasons, many protest the idea of placing a great deal of importance to students' evaluation of their instructors as students will sometimes choose to give a professor a lower rating solely for the reason that the professor's course was difficult. Evolution is not a useful measurement for assessing the quality of the faculty members' support their opinion by arguing that employers are often dissatisfied with students. Balancing the satisfaction of students with the opinions of these external parties is a challenge for administrators and professors, but this equilibrium must be found (Winer 1999).

The researcher also notes the importance of student evaluation of professors as it can be an excellent way to assess the effectiveness of faculty's teaching. Research has even found a positive relationship between student assessments of faculty effectiveness and the self-assessments of professors themselves (Howard et al. 1985). Another element that contributes to the complexity of this understanding is a customer's perception of quality, which has been found to have a direct relationship with the individual's level of satisfaction (Cronin et al. 1992).

Some of the more widely used criteria include reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding the customer, and tangibles (Lagrosen et al. 2004). The student survey used in this research addresses two of these impacts which are teachers' skills, attitude and training environment as below.

II. II TEACHERS' SKILLS

Higher Education (HE) has faced different challenges as a reflection of social-economic aspects that characterize societies in distinct times. Nowadays, Higher Education Institutions (HEI) are pressured for an increasing competitiveness that demands high standards of knowledge and quality, internationalization and mobility programs, strategies that distinguish them from the others and focus on attracting new students and offering post-graduation options for those who are already enrolled in the system. In recent years, HEIs have also been strained by some governments' agenda because of the issue of employability and this dimension has more and more often dictated financial support according to the obtained results (HEFCE, 2001).

Hunter (1979) proposed that teaching is the process of making decisions and executing approaches to improve learning possibilities before, during, and after teaching students. Ander and Burns (1990) argued that teaching is an act of interpersonal interaction that involves language as communication, and can help students learn or change their learning behavior. However, teaching is not merely explaining or hinting at rigid instructional materials. Instructors need to establish good learning environments, through which to elicit learning, motivation and teach learners to learn on their own, and understand how to learn by doing and do by learning (Vermeule and Schmidt, 2008). Teaching involves more than "teaching" and "learning". It is a composite concept that implicates complex concepts and activity processes. Teaching is also an activity that involves interpersonal interactions between the teacher, learner, and language, which in turn changes the learning attitudes of learners, or the overall process by which teachers and students jointly share and explore accomplishments, achieving the objectives and ideals of education (Kyriakides and Christofidou, 2002).

Learning and teaching skills are a complex construct that is difficult to define. Most definitions of learning describe it as a relatively permanent change in behavior or ability in response to practice or experience (Shuell, 1986). Learning outcomes show a significant relationship with success in the initial phase of graduates' careers (Vermeulen and Schmidt, 2008). Student feedback is increasingly being considered as an important indicator of the quality of education (Harvey, 2001). Student feedback such as performance, including academic performance and student satisfaction, is important in understanding the students' perspective on their learning experiences. Increasingly, student satisfaction is also becoming an important indicator of the quality of teaching. Several studies suggest that both student satisfaction and grades are important indicators of student retention (Aitken, 1982; Bean, 1980). These various study findings indicate those teachers' skills can affect the impacts on graduate student satisfaction. According to the literature review, in our study, it was hypothesized as below:

Hypothesis 1

H1: Teachers' skills will have a positive impact on student satisfaction.

II. III ENVIRONMENT

Student centered learning facilitated by the adoption of technology in the classroom has been identified as one of the key goals of the British Columbia education plan (Abbott, 2011). Teachers with high efficacy tend to experiment with methods of teaching to meet their students' needs, spend more time planning, persist longer with students who struggle, and promote achievement, efficacy, and motivation in their students (Henson, Kogan, & Vacha-Hasse, 2001). Teacher self-efficacy varies in different contexts as teachers may exhibit different levels of efficacy depending on the subject, student population, or school environment (Tschannen-Moran and Hoy, 2001). Chen (2010) found efficacy to be the most an important determinant of the extent to which pre-service teachers integrate technology for student-centered learning into their practice. Currently, no valid and reliable instrument for measuring teacher self-efficacy in relation to the use of technology for student-centered learning exists.

These various study findings indicate that environment can affect the impacts on student satisfaction. According to the literature review, in our study, it was hypothesized as below: Hypothesis 2

H2: Environment will have a positive impact on student satisfaction.

There are many researchers identified relationship of teachers' skills and training environment with graduate student satisfaction and other impacts. As a result, we agree with the research scholars, above whose findings, we utilized in our study. In addition, we tried to identify and support our conceptual model by identifying between impacts and graduate student satisfaction. In our study, teachers' skills and training environment are independent variables and student satisfaction is the dependent variables. Teachers' skills and training environment will influence graduate student satisfaction.

III. RESEARCH METHODOLOGY

III.I Data collection and Questionnaire design

Gummesson (2000) identified that the concept of the paradigm was brought to the fore by Thomas, in the early 1960's, and can be used to represent "people's value judgments, norms, standards, frames of reference, perspectives, ideologies, myths, theories, and approved procedures that govern their thinking and action" (John, 2004). Therefore paradigms will determine what problems are worthy of study and what are methods applied to find

the answer. In choosing a design, our study took into account the availability of data and the time available for the study. Therefore, the research methodology was based on the whole research structure and context. The major objective of descriptive research is to describe the nature and composition of a population or a situation. The research process tries to find answers to questions of who, what, where, when, and how (Tak, 2012). Zikmund (2003) presented that the outcome is an organized, well-prepared description suitable for statistical calculations.

The purpose of causal research is to find out the variables that might establish the cause-and effect relationships between the variables causing particular actions and responses. Cooper et al., (1998) described that most causal research relies on designed experimentation and simulation programs. Zikmund (2003) described exploratory research as the initial stage for research projects that plan to explore the nature of a problem before proceeding to the next step of research. Exploratory research is also commonly used to divide a big problem into a number of smaller and more precise sub-problems before making more detailed investigations (Tak, 2012).

Thus, our research includes two kinds of problems in terms of theoretical and practical perspectives. The first, in theoretical perspectives, previous researchers demonstrated much attention on satisfaction in many sectors. Second, from the practical perspectives, in school year 2017-2018 fall semester. The method suitable for our study questions include questionnaires. Questionnaires are a common method of collecting primary data in the survey. Based on the discussion above, the questionnaire method was chosen for the following reasons:

- The questionnaires were collected by online and hand paper between November 2017 and February 2018.
- The questionnaires were able to gather data in a short period of time.
- The questionnaires were administered to graduate students who study in the major of accountant.

In our study, Likert scales were easy to use and understand. Zikmund (2003) identified that in some instances, the respondents need to select an appropriate answer from a list of specific answers or multiple choices in the closed-ended questions. Veal and Kumar (2005) presented Likert scales are used to indicate respondents' opinions by measuring their agreement and disagreement levels for each question. Kumar (2005) noted that in general, Likert scales have three, five, seven, or ten points depending on how fine researchers want to measure the intensity of people's opinions. Bass and O'Conner (1974) defined that although larger Likert scales make it possible to discriminate opinions more finely, they can also confuse the respondents. In general, seven-point scales are found to reduce inaccuracy, whereas five-point scales restrict choice more

(Tak, 2012). Therefore, five-point scales were used in this empirical study.

This data analysis section summarizes this step the last step in the study and discusses the justification for the chosen techniques. According to Sekaran (2003), the first step in data analysis is to edit, code, categorize and enter the data. The next step is to get an overall picture of the data by looking at descriptive statistics, such as means, standard deviations, correlations, and frequency distributions. After that, the data are tested for quality using tests of reliability and validity. Interpretation is the final step in data analysis. Most quantitative surveys in business research, collect a large amount of data which is processed most efficiently using data analysis programs. Data editing involves checking for incomplete and inconsistent data. Data coding involves identifying each data point with a numerical score or character. Data categorizing is the procedure of classifying variables into groups of constructs based on the research design. Finally, data are entered into the data analysis program (Sekaran, 2003). On the other hand, judgment sampling should be used when the choice of subjects in the best position to provide the information required are placed advantageous and also special efforts are made to locate and gain access to these individuals who have the essential information (Bruce, 2001).

III.II Selection of SPSS and SmartPLS software program

There are many software programs used to process data analysis, including Statistical Package for the Social Sciences (SPSS), SmartPLS, SAS, STATPAK or Excel. The most popular program is the Statistical Package for the Social Sciences. In this study, SPSS and SmartPLS-3.0 were chosen for their simplicity and completeness. The internal reliability of each factor was assessed using Cronbach’s alpha coefficient. This is followed by the examination and presentation of the demographic profile of respondents using Descriptive Statistic. Our study was conducted to check the consistency of all related factors in the study based on Cronbach’s Alpha value.

Firstly, according to Zikmund (2000) descriptive analysis refers to the transformation of the raw data into a form that will make it easy to understand and interpret.

Secondly, the Cronbach Alpha testing will be used as it is the most well accepted reliability test tools applied by social researchers (Sekaran, 2003). Cronbach (1946) identified that in Cronbach’s Alpha reliability analysis, the closer Cronbach’s Alpha to 1.0, the higher the internal consistency reliability. Cronbach’s measures:

1. Reliability less than 0.6 considered poor.
2. Reliability in the range 0.7 is considered to be acceptable.
3. Reliability more than 0.8 are considered to be good

Thirdly, in order to determine whether there are significant relationships among the independent variables and

dependent variable, Pearson Correlation Coefficient analysis was being carried out. The scale model suggested by Davies (1971) used to describe the relationship between the independent variables and the dependent variable, or as shown that 0.7 and above – very strong relationship, 0.50 to 0.69 – strong relationships, 0.30 to 0.49 – moderate relationship, 0.10 to 0.29 – low relationship, 0.01 to 0.09 – very low relationship.

Finally, Multiple Regression Analysis was conducted to examine which, among the three dimensions in independent variables was the most important in explaining the relationship (Norizan, 2012). SPSS and SmartPLS were used to test the relationships between variables.

According to the Churchill (1999) and Zikmund (2003), the raw data was examined for completeness, consistency, respondent eligibility and accuracy. In this research, all the questionnaires were numbered in the sequence of their returned dates and I checked for the completeness of the questionnaire and eligibility of the respondents. Generally, one hundred questions were used in this survey. However, respondents did not answer all the questions, because they had either skipped or misunderstood the questions.

After the reliable questionnaires were identified and the data was entered, data analysis began. This section describes the demographic characteristics of the respondents. Of all the 49 respondents were studying on Private University.

Our research, frequency distributions were reformed for all the respondents.

Table 3.1. List of Items for each Construct /all respondents/

№	Major	Respondents /number/		Respondents /percent /	
		1	Accountant	Male	18
		Female	31	Female	63.27%
	Total		49		100%

The basic demographic information about male -18, female-31 students in accounting in our study.

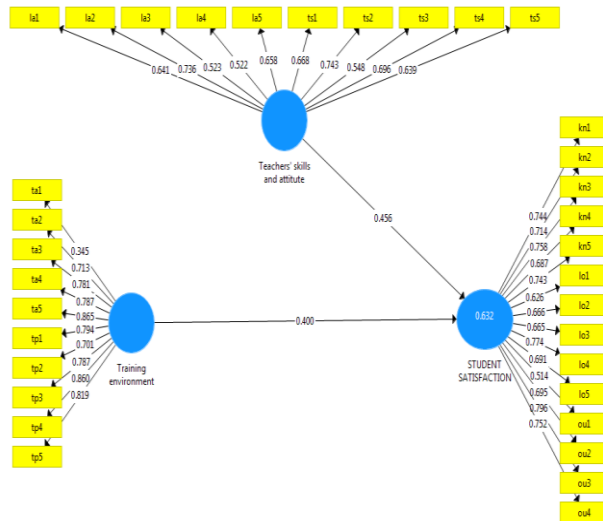
III.III. Exploratory factor analysis

This section has two major parts. The first part discusses descriptive analysis and assessment of reliability and validity namely Cronbach’s alpha by exploratory factor analysis. We used an average variance extracted (AVE) as a criterion of convergent validity Fornell and Lacker (1981) (Creswell, 2003). If the value of AVE is more than 0.5, it indicates that the construct has sufficient convergent validity.

The second part of this section covers the factor structure of the constructs in order to obtain a clear picture of relationships between variables.

The Empirical Study of Teacher's Skills and Environment on Student Satisfaction: The Case of Private University in Mongolia

The study examined the measurement model to assess reliability and validity in the SmartPLS 3.0 program. Measurement models are used to specify how the latent variables or hypothetical constructs are measured in terms of the observed (measured) variables and to describe their reliability and validity in Figure 3.1. Results of Structure Analysis of accounting, business management students (algorithm)



Note: la-learning activity, ts-teachers' skills, ta-training activity, tp-training plan, kn-knowledge of training, lo-loyalty, ou- outsource of training.

In accounting, the outer loadings of 10 items measuring teachers' skills, attitude ranged from 0.522 to 0.743, Cronbach's alpha of 0.840 and AVE was 0.412. Outer loadings of 10 items measuring training environment ranged from 0.345 to 0.865, Cronbach's alpha of 0.912 and AVE was 0.575. Outer loadings of 14 items measuring student satisfaction ranged from 0.514 to 0.796, Cronbach's alpha of 0.922 and AVE was 0.497 in Figure 3.1 and Table 3.1.

Table 3.1. List of Items for each Construct of accounting, business management students

Items	Code if items	Original sample	AVE	Cronbach's ALPHA
TEACHERS' SKILLS	ts1	0.668	0.412	0.840
	ts2	0.743		
	ts3	0.548		
	ts4	0.697		
	ts5	0.639		
	la1	0.641		
	la2	0.736		
	la3	0.523		
	la4	0.522		
	la5	0.658		
ENVIRONMENT	ta1	0.345	0.575	0.912
	ta2	0.713		
	ta3	0.781		
	ta4	0.787		
	ta5	0.865		
	tp1	0.794		
	tp2	0.701		
	tp3	0.787		
	tp4	0.860		
	tp5	0.819		
STUDENT SATISFACTION	lo1	0.626	0.497	0.922
	lo2	0.666		
	lo3	0.665		
	lo4	0.774		
	lo5	0.691		
	kn1	0.744		
	kn2	0.714		
	kn3	0.758		
	kn4	0.687		
	kn5	0.743		
	ou1	0.514		
	ou2	0.695		
	ou3	0.796		
	ou4	0.752		

Note: la-learning activity, ts-teachers' skills, ta-training activity, tp-training plan, kn-knowledge of training, lo-loyalty, ou- outsource of training.

IV. CONCLUSION

IV.I. Conclusion

The findings showed that all effects such as teachers' skills, attitude and training environment have a positive relationship with student satisfaction of School of Finance and Economics at Ikh Zasag International University. It means that students can take more impacts in order to retain more satisfied employees are more productive than those who are less satisfied.

Actually, two hypotheses were supported in all three major which custom tax economics; accounting, business management and bank economics of chosen. Two of them were not supported in supportive service positions:

- Teachers' skills influenced student satisfaction in a type of major which accounting.
- Environment influenced student satisfaction in a type of major which accounting.

Finally, the results from our study may help the essential features of supervisors in detecting the things that need to be improved in our university in order to improve the student satisfaction of their effects on teachers' skills, attitude and training environment.

IV.II. Recommendations

This research recommends that the higher education sector can be surveyed every fiscal year to determine innovative ways to capture the essence of graduate student satisfaction in private university in Mongolia. Based on the results of this study, the following recommendations are made in our university for the effects of teachers' skills and environment have a positive relationship with graduate student satisfaction. Therefore, future research, practices, and policies will make effort in presenting the recommendations. This study did not include any religion, living area, prior military service or ethnicity.

Due to time limitation, it is recommended that future survey could be expanded to remote areas isolated areas draw the results regarding more impacts on student satisfaction.

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The “substance over the form”. Evidence on the Italian Leasing Accounting after the EU Regulation 2017/1986

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Abstract--- This research aims to retrace the historical process of the evolution of the accounting principle of the prevalence of the substance over the form with specific reference to the Italian system and in comparison with the different international approaches. The topic is very current in Italy following the recent regulatory changes, especially the transposition of the EU Regulation 2017/1986 stating the obligation to account for the leasing contracts according to the provisions contained in the new IFRS 16. To implement the new accounting standard the OIC, Italian Accounting Body, has modified the Italian principle OIC 1, Financial Statement Purposes and Postulates providing for a new formulation of the principle of the prevalence of the substance over the form. This caused a new method to account for the lease and effects on the calculation of financial statement indicators and the related assessment of the financial-equity balance

Keywords--- Substance over form, accounting leasing, Italian accounting System.

I. THE PRINCIPLE OF THE PREVALENCE OF SUBSTANCE OVER FORM IN THE HISTORY OF ACCOUNTING.

Over the years the relationship between legal-formal accounting data and economic-substantial accounting data has been alternating: periods in which the juridical aspect prevailed followed other moments in which the supremacy of substance over form took place[1], [2], [3]. .

When referring to the conflict between "form" and "substance", the most emblematic accounting aspect concerns the representation of financial leasing. The modern accounting which, as is known, developed in Italy in the 13th century dealt with commerce, usually regulated by local customs and practices. The legal culture of the time was totally foreign to the accounting aspect. The juridical questions at that time were those proper to Roman law and Canon and Philosophy law

Only in the fifteenth century, with the arrival of mercantilism, the accounting practice began to take on legal significance. In fact, with the spread of commerce, there is an increasing need to protect creditors, particularly in the event of bankruptcy. The first accounting rules accepted in the "Ordonance de Commerce" published in 1673 in France by Louis XIV and reproduced almost entirely in 1807 on the "Code de Commerce" approved by

Napoleon and in Italy, first transposed in the "Code of Commerce" of 1882 and then in the unified 1942 code.

Among the main provisions that "legalize accounting":

- keeping the journal in order of date without blank spaces and without marginal overlays;
- the books of the shopkeepers' books must be authenticated and numbered by the public authority;
- the preparation of the inventory at least every two years;
- the prescription of prudential valuation rules.

Especially in Italy in the nineteenth century the theory known as the “logismography” of Giuseppe Cerboni [4] develops whose assumptions make the accounting office take on a more juridical role than an accountancy. For some, logismography, which through dogmatic constructions based on a postative right attributes rigorous meanings to the term "giving" and "having" to explain the functioning of the accounts, constitutes the birth of scientific accounting in Italy.

Over the years, logismography was notably criticized in particular by Besta [5] and his disciples so it was later abandoned despite the great success achieved by determining its adoption for keeping the State's accounts.

Besta affirmed his materialistic thesis of the accounts according to which all the accounts are registered to the objects relative to the company since the accounting records refer to the values of the elements that constitute the patrimony. Also some students of Besta belonging to

the so-called “income school” including Zappa, De Dominicis, Amodeo, Masini have criticized the formal aspects attributed to accounting by Cerboni, reiterating the principle of the prevalence of economic substance with respect to form in particular with reference to the definition of the concept of capital. Since the 1960s, there has been a reversal of the trend that has led to the reaffirmation of the supremacy of the legal data over the economic one. The main causes of this change include the attention to the financial statement for publication by the jurisprudence, the conventional rules gradually created through the drawing up of accounting principles and the 1973 tax reform which is based on detailed and binding regulation for businesses.

The principle of the prevalence of the substance over the form according to the modern meaning arises in the United States where, as is known, the legal component constitutes a rather negligible part of the accounting system. The first references to the problem of the contrast between the formal-legal and the substantial economic aspects of a phenomenon can be seen in the Accounting Research Bulletin n. 38 of 1949 in which, although not explicitly, with reference to the financial lease, the economic and substantial nature of the transaction is privileged for the purpose of recording the asset to which the contract relates. To follow in 1970 in Statement n. 4 of the Accounting Principles Board the principle of the prevalence of the substance over the form acquires a relevant aspect stating that “the treatment of business operations may change depending on whether the substance or form is considered prevalent ... and if it forms and substance differ, emphasis must be given to the substance of the facts for a better representation of the economic activities represented in the financial statements”. In 1973 in the Trueblood Commette Report the prevalence of the substance over the form is established as a fundamental principle for the preparation of the financial statements in particular with reference to the definition of “activity”. In 1974, IAS no. 1, Disclosure of Accounting Policies provides three guiding criteria to be followed in the selection and application of accounting principles, namely: the prevalence of substance over form, prudence and relevance.

In Great Britain, on the other hand, the “Common-law” system has also influenced the accounting rules: the accounting principles and rules have no legal formalities but are prepared by accounting practice. In 1984 with the publication of the SSAP n. 21, Accounting for leases and Hire Purchase Contracts, in which, if the “financial method” is admitted, the lease is considered as an installment purchase with retention of title. Admitting this means recognizing the prevalence of the economic aspect over the financial one. Following the debate on the admission or not of the principle of the prevalence of

substance over form, it became increasingly heated, sometimes involving distorted applications aimed at pursuing particular budget policies. In 1985 the Institute of Chartered Accountants in England on Wales published the Technical Release 603 entitled “Off Balance Sheet Finance and Window Dressing” in which the principle of the prevalence of substance over form is recommended in order to contain “creative accounting” phenomena. In particular, the document states that a budget to be “true and fair” must reflect the substance and not the form of business operations. Despite the strong criticism detected by the Law-Society against the substance over form, not to be applied as contrary to the law, in 1988 the ASC publishes the ED n. 42 Accounting for special Purpose Transactions in which the prevalence of substance over form is stressed, specifying that highlighting the substance of an operation means adequately representing commercial effects. In the following years the debate became more and more accessible until in 1994 a reference standard was issued, the FRS n. 5 Reporting the Substance of Transaction. The standard states that the “substance” of business operations is identified in the commercial effects of the transactions that the “true and fair view requires the substance over form”.

II. THE SUBSTANCE OVER FORM IN THE ITALIAN ACCOUNTING EXPERIENCE

The principle of the prevalence of substance over form in Italy has come to the attention of the doctrine only since 1992 following the introduction of the new legislation for the credit and financial institutions balance sheet. The reference is to art. 7, fourth paragraph of the legislative decree n. 87/92 which states that “Bank of Italy provisions may provide for measures may establish, that the preparation of financial statements is based on the principle of the prevalence of substance over form. Instead the Legislative Decree n. 127/1991 which transposed the IV EEC Directive, makes no mention of the substance over the form. The absence of a specific legal provision has fueled various positions and interpretations by Italian scholars. Part of the doctrine considered that the principle is to be considered an obvious consequence of the truthful and correct representation principle since this purpose required by the financial statements can only be achieved by giving priority to the substantive aspects of company operations. This approach is consistent with what was established by the Italian accounting standard, Document No. 11. Another part of the doctrine, on the other hand, has criticized the principle itself, deeming it to be indefinite and above all no direct link between the substantial aspect of the transactions and the truthful and correct representation.

With the publication of Legislative Decree No. 6 of 17 January 2003, the legislator, in the context of the corporate law reform, introduced numerous innovations aimed to proceed with the implementation of some indications already provided for by the national accounting principles and international. The main changes regarding valuation principles and criteria, the introduction of the principle of "economic function of the asset and liability considered" on which the valuations of the financial statement items must be based. The common interpretation of this regulatory provision is that the financial statements must be drawn up favoring, where possible, the representation of the substance over the form of company operations. The new provision has resolved the numerous doctrinal disputes that have fueled the debates of recent years. The issue in the international context was resolved as early as 1990 with the approval by the IASC of the conceptual framework of reference for the preparation of the financial statements for publication. This document clarifies that the financial statements are "aimed at providing external users with relevant useful information so that they can make economic decisions. To meet this purpose, two principles are set out, the competence (accrual basis) and the functioning of the company (going concern) and ten postulates to be followed for the preparation of the financial statements are also identified: the comprehensibility, the significance, the relevance, the reliability, faithful representation, neutrality, prudence, competence and the prevalence of substance over form ". The recognition of the prevalence of the substantial aspect of business operations in Italy has not, however, solved the problems concerning the recognition of financial lease transactions. The solution proposed by the legislator was a sort of "compromise": in the financial statements the transaction will continue to be accounted for by privileging the formal aspects, highlighting only the substantial aspects of the transaction in the Explanatory Notes. This recognition method is in line with what is already provided for in Accounting Principle No. 11: the Balance Sheet and the Income Statement reflect the form of the transaction, while the explanatory note represents its substance. This is the same approach with which English jurists initially believed that the principle of the prevalence of substance over form should be applied. The reason why the Italian accounting system has not yet considered it possible to fully implement the principle of prevalence of the substance in the Italian accounting system is attributable to the influence of tax laws. In 2015 a further evolution of the legislation occurs with the transposition of the EU Directive 2013 /34 through the Legislative Decree 139/2015 the system of Italian accounting principles has been reformulated, also intervening on the general principles underlying the preparation of the financial statements including the principle of the prevalence of

substance over form. In particular the new art. 2423-bis, paragraph 1, no. 1 of the Civil Code attests: "the assessment of the items must be made taking into account the substance of the transaction or the contract". To align with this new provision, the Italian accounting accounting principle system in 2018 has also updated the regulation relating to the prevalence of the substance on the form envisaged by the new OIC 11 in paragraphs 25 to 28. [6] The new postulate of the prevalence of economic substance over the juridical-contractual form of the transaction is fully applied to finance lease or lease agreements. A lease qualifies as financial when the prevailing part of the risks and benefits inherent in the leased assets are transferred to the lessee. From a legal point of view, the leasing contract is, for all intents and purposes, a lease; therefore, since there is no transfer of ownership of the asset, the lessee would not be entitled to register it in fixed assets like other property assets and would continue to recognize the cost for the fees paid to the income statement. In January 2016, after 10 years of comparisons and discussions, the International Accounting Standard Board (IASB) issues the new international accounting standard for leasing accounting, IFRS 16 Leases. [7]. The new standard aims to improve the transparency of financial statements by overcoming the distinction between financial leasing and operating leasing. From 1 January 2019 the IAS adopters will abandon IAS 17[8] to account for lease contracts. According to the new provisions, all rentals, leases, rents in general, leases must therefore be capitalized, they will have to enter an intangible asset called "Right of Use" in the Balance Sheet. IFRS 16 will influence performance metrics and financial indices such as leverage, asset turnover, ROI, ROE, debt cost, interest coverage and net income; it is therefore of fundamental importance that companies are ready for such changes. In this regard, the following scheme is to be observed.

Index	Measured Performance	Formula	Impact IFRS 16	Explanation
Leverage	long-term solvency	Total liabilities/Equity	increase	increases due to the expected increase in financial debts
Asset Turnover	Asset Rotation	Revenues/Assets	reduction	It reduces with the accounting of the Right of Use between corporate assets and this is increasing the value
Debt Cost	cost of third-party capital	Financial rate interests/ third-party capital	increase	Increases due to higher financial charges for leases recognized in the financial statements.
Interest Cover	ability to pay interest on the residual debt	EBIT/ financial Rate Interests	It depends	With the introduction of the IFRS it is expected to be a increase in corporate EBIT and costs Financial. The result will depend on the characteristics of the lease portfolio of each individual company
EBITDA	profitability	M.DL, Gross operating margin	increase	The increase is caused by the loss of fees for operational leases previously recognized as operating costs

Fig. 1: THE EFFECT OF IFRS 16 ON THE ECONOMIC AND FINANCIAL RATIOS

III. THE ACCOUNTING REPRESENTATION OF THE LEASE IN THE FINANCIAL STATEMENTS

In the financial statements drawn up according to the rules of the civil code, the lease must be represented with the so-called equity or lease method, which provides for the allocation to the income statement, under item B.8) Costs for the use of third-party assets, the total cost of the lease for the year.

Assuming that as at 31 December 2018 the company Alfa entered into a 24-month leasing contract for a machine, whose fair value was € 108,000.00. On the date of stipulation, Alfa pays an advance fee of 48,000.00 euros and undertakes to pay n. 7 quarterly fees of 8,000.00 euros and a redemption price of 6,000.00.

The total cost of the lease is (€ 48,000.00 + 7x8,000.00), or € 104,000.00. The management of the fees of competence is the following:

year	months	Income Statement Fee	Competence fee	initial rediscount	Finale rediscount
2018	9	72.000,00	39.000,00	0,00	33.000,00
2019	12	32.000,00	52.000,00	33.000,00	13.000,00
2020	3	0,00	13.000,00	13.000,00	0,00
totale	24	104.000,00	104.000,00		

Fig. 2: THE MANAGEMENT OF THE LEASING FEE

To determine the present value of the payments due for leasing not yet paid, it is necessary to determine the implicit interest rate of the lease (quarterly), solving the following equation:

$$108.000,00 = 48.000,00 + \sum_{s=1}^7 \frac{8.000,00}{(1+i)^s} + \frac{6.000,00}{(1+i)^8}$$

The rate obtained is equal to 0.753457%. The rate can easily be obtained using Microsoft Excel® formulas, such as TIR.COST or TIR.X. On the basis of this data it is possible to draw up the financial amortization plan for the lease liability:

date	description	rate	Share capital	Interest rate	Residual debt
31/03/2018	maxfee	48.000,00	48.000,00	0,00	60.000,00
30/06/2018	fee	8.000,00	7.547,93	452,07	52.452,07
30/09/2018	fee	8.000,00	7.604,80	395,20	44.847,28
31/12/2018	fee	8.000,00	7.662,10	337,90	37.185,18
31/03/2019	fee	8.000,00	7.719,83	280,17	29.465,36
30/06/2019	fee	8.000,00	7.777,99	222,01	21.687,37
30/09/2019	fee	8.000,00	7.836,60	163,40	13.850,77
31/12/2019	fee	8.000,00	7.895,64	104,36	5.955,13
31/03/2020	Final fee	6.000,00	5.955,13	44,87	0,00

Fig. 3: THE FINANCIAL AMORTIZATION PLAN

Assuming that the machine has a useful life of 10 years, the depreciation rate for the year 2018 will be equal to (108,000.00 / 10 * 9/12) euros, ie 8,100.00 euros. Taking the year 2018 as a reference, the representation according to the two modalities would be the following:

	Financial Method	Equity Method
ASSET		
Tangible fixed Assets	99.900,00	0,00
Banck	-72.000,00	-72.000,00
Active rediscount	0,00	33.000,00
LIABILITIES		
Passività per leasing	37.185,18	0,00
INCOME STATEMENT		
Lease payments	0,00	39.000,00
depreciation	8.100,00	0,00
Interest rate	1.185,17	0,00
Effect on economic result	-9.285,17	-39.000,00
Effect on equity result	-9.285,17	-39.000,00

Fig. 4: THE FINANCIAL AND EQUITY METHOD

IV. CONCLUSION

With the entry into force of the new provisions, IFRS 16, companies that have failed to include general frozen accounting (GAAP) clauses in their loan agreements some conventions could be violated, the result of an increase in debt levels, with negative consequences on the creditworthiness of companies and the behavior of stakeholders.

To understand the impact of change, the best way is to examine the accounting records. This simplified example that follows in the "old" situation (IAS 17) and in the new one scenario imagining a company that has to account for a real estate lease first outside the scope of IAS 17 but now included in the provisions of IFRS 16:

BALANCE SHEET IAS 17			
ASSET		LIABILITIES	
Tangible fixed asset	3.000.000	Capital	4.500.000
Intangible fixed asset	8.490.000	Operating profit	220.000
holdings in subsidiaries	800.000	TOTAL EQUITY	4.720.000
credit	500.000	Banks debts	7.000.000
inventories	3.500.000	Debts to suppliers	2.800.000
cash	100.000	tax	1.870.000
TOTAL ASSETS	16.390.000	TOTAL LIABILITIES	16.390.000

BALANCE SHEET IFRS 16			
ASSET		LIABILITIES	
Tangible fixed asset	3.000.000	Capital	4.500.000
Right of Use	604.020	Operating profit	220.000
Intangible fixed asset	8.490.000	TOTAL EQUITY	4.720.000
holdings in subsidiaries	800.000	financial liability for leasing	604.020
credit	500.000	Banks debts	7.000.000
inventories	3.500.000	Debts to suppliers	2.800.000
cash	100.000	tax	1.870.000
TOTAL ASSETS	16.994.020	TOTAL LIABILITIES	16.994.020

Fig. 5: THE BALANCE SHEET IAS 17 AND IFRS 16

The sum of € 604,020 was determined assuming a 12-year lease (the classic 6 + 6 of the commercial world) from € 5,000 per month. However, 5,000 * 144 months = € 720,000 for the "right of use" fee. The IFRS 16 requires us to discount the future fees at the time of valuation using a rate equal to the rate implicit in the contract; if this rate is not available (as in in the case of the lease tout court) the marginal lending rate of the company must be used which in this example we assume is equal to 3%. The new provisions result in an increase in liabilities. We observe a growth in liabilities due to the value of the asset entered into the balance sheet.

CONCLUSION

A conclusion section is not required. Although a conclusion may review the main points of the paper, do not replicate the abstract as the conclusion. A conclusion might elaborate on the importance of the work or suggest applications and extensions.

singular heading even if you have many acknowledgments. Avoid expressions such as “One of us (S.B.A.) would like to thank” Instead, write “F. A. Author thanks” Sponsor and financial support acknowledgments are placed in the unnumbered footnote on the first page.

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