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Journal writing is a voyage to the interior.
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Relationship between Electricity Generation Mix and Market Prices

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Abstract

The Paris agreement leaves no hesitation that the world is now standing at the beginning of new era of clean energy technologies. European Energy Strategy implies a wider and constant spread of clean energy technologies implementation. The current situation and future insights of European Union Member States still differ. To some extent, it is tightly related with some fear that spread of clean technologies could cost more than that a country or individual could afford. The investigation of the significance of relationships between electricity generation mix in each participating country and electricity market prices in the Nord Pool region given in this paper shows that the composition of overall Nord Pool Spot electricity generation mix made no significant influence on the NPS day-ahead market price. Therefore, in case when the growth of total amount of electricity production makes positive influence on the market price, the wider use of renewable energy sources can result in market price reductions.

Keywords: Electricity Generation Mix, Market price, RES, Correlation

I. Introduction

The history of our world shows that it exists usually at certain period of time that one particular energy fuel is a dominating one. At the very beginning of energy production, wood was a preoccupying energy source, after that coal became a dominant one. Despite the fact that coal is still very important (46 % world net electricity generation; EIA, 2013), it could be stated that now we have oil and gas period especially in regards of political importance of these kind of fuels (Pažėraitė et al, 2014). The Paris agreement made on 12th of December the year 2015 leaves no hesitation that the world is now standing at the beginning of new era of clean energy technologies. Decisions made in Paris UN climate conference 2015 will come into effect in 2020. All countries are involved and responsible in tackling for climate change. The deal says that the world will aim to stabilize global warming well below two degrees above pre-industrial levels, and even less if possible. This direction of future energy development is not a new one – Kyoto protocols, lots of other agreements were made. European Union (EU) has its own perspective on clean development and corresponding requirements. These requirements are only for minimum level and they are stated in "Energy 2020: A strategy for competitive, sustainable and secure energy"– to reduce greenhouse gas emissions by 20 %, rising to 30 % if the conditions are right, to increase the share of renewable energy to 20 % and to make a 20 % improvement in energy efficiency (EU, 2010).

European Commission explores the long term challenges and major changes in EU energy sector in the Energy Roadmap 2050 (EC, 2011). This document provides a pattern of energy production and use in order to perform decarburization and efficient use of renewable energy. It implies a wider and a constantly spread of clean energy technologies implementation (Pazeraite et al, 2014). Despite the fact what EU with its main strategic documents gives a clear direction, a current situation and future insights in EU Member States still differ. There are several reasons: different customers' attitude towards sustainable consumption, distinctions in corporate behavior towards consumption and production of clean energy, State policies etc. To some extent, all of these reasons are tightly related with some fear that spread of clean technologies could cost more than country or individual could afford.

II. Research Methodology

The core aim of this research is to investigate the significance of relationships between electricity generation mix in each participating country and electricity market prices in the Nord Pool region. In order to perform the research answering the question how significance are relationships between electricity generation mix in each participating country and electricity market prices in the

Nord Pool region, theoretical analysis, based on results and conclusion of various scientific papers, a systematic analysis, correlation, evaluation, generalization, comparison, abstraction were utilized.

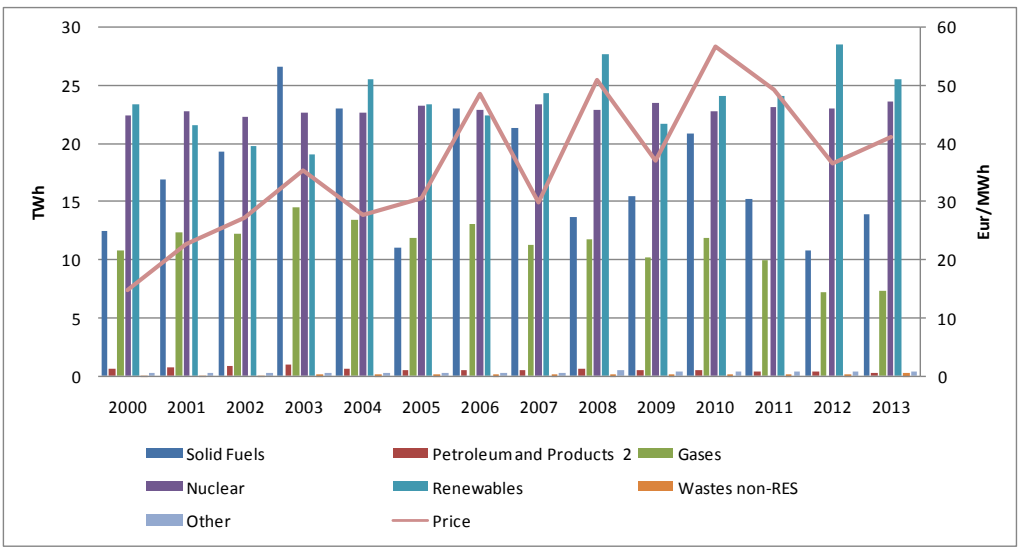
The data mainly was collected from Nord Pool Spot (NPS) which runs the leading power market in Europe, offering both day-ahead and intraday markets to its customers, and from Lithuanian National Commission for Energy Control and Prices which is an independent national regulatory authority (in the European Union law's sense) regulating activities of entities in the field of energy and carrying out the supervision of state energy sector.

III. Electricity Generation Mix and Market Price Interdependencies

The overall development of the energy sector influences behavior of the sector participants. Despite the fact the influence is not so simple to measure, this influence ant its strength can turn into significant customers' behavioral changes. On the other hand, these customers' behavioral changes can make long term influence on electricity generation mix as well. It can be assumed that changes in behavior, in particular, can be determined by changes in market prices. This assumption can be examined using data about price changes in a day-ahead market from NPS and data regarding generation mix from European Commission. Analysis shows that there is no direct positive correlation between prices and the amount of electricity sold in the market during the investigated thirteen years period starting from the year 2000. The reason could be existence of bilateral contracts in the price zones. Therefore, market price still plays a significant role as reference price for the mentioned bilateral contracts, for future trade and for future investments as well.

Investigation of relationships between electricity generation mix and market prices and its significance requires analyzing in more details as the electricity mix in each single country so the overall market situation in NPS. Finland is the country taking its part in the NPS day-ahead market for several decades. As one may see in the Figure 1, there is no prevailing and significant trend of correlation between electricity generation mix components and the market price.

Figure 1. Development of Finish electricity generation mix and market prices, 2000-2013

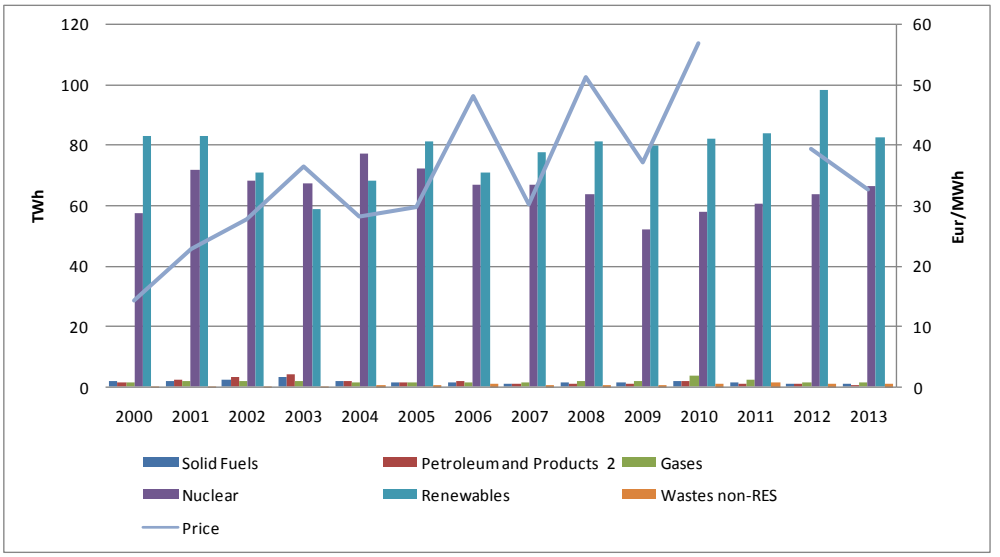


Paying attention to the bigger components and their interfaces with the price, it can be seen the positive correlation only between nuclear energy and between renewable energy and the market price, but the relationship is weak (in both cases the uphill linear relationship rate is 0.3). In other

words, the increase in electricity production of both nuclear, as well as renewable energy sources increases the price of electricity in the wholesale market.

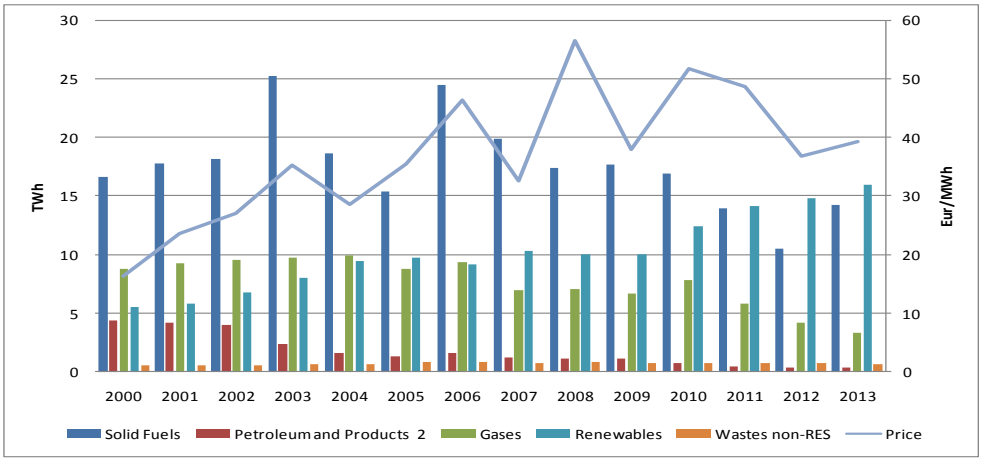
Swedish case in regards the same energy resources is quite different (Figure 2).

Figure 2. Development of Swedish electricity generation mix and market prices, 2000-2013



Increasing the use of renewable resources for electricity production has practically no impact on the market price. Therefore, nuclear output growth makes a weak downhill linear influence (–0.3). It shows that the nuclear production increase slightly reduces the market price. A weak negative correlation (–0.36) between the increase of gas use in the production of electricity and the price in the market can be observed in the Danish case (Figure 3).

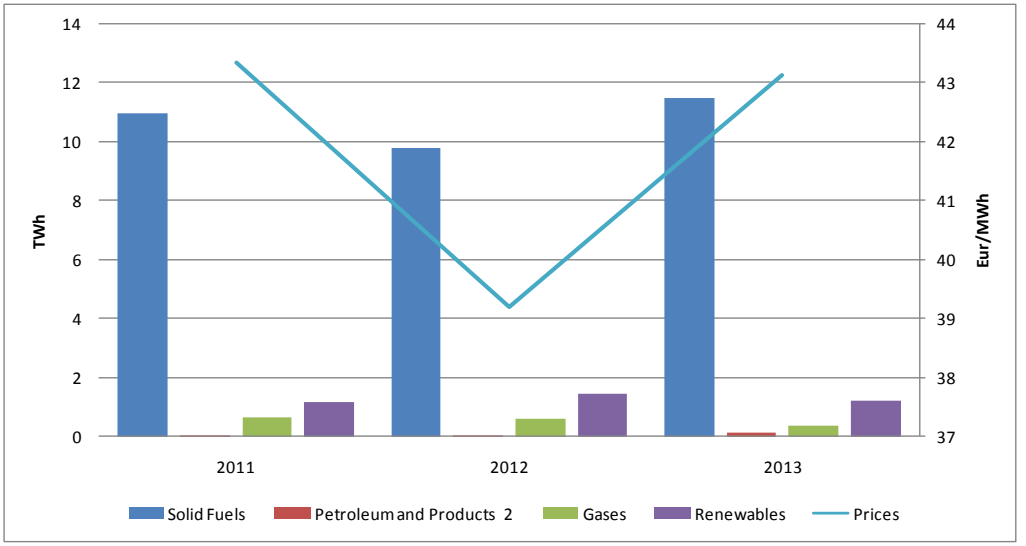
Figure 3. Development of Danish electricity generation mix and market prices, 2000-2013



Interestingly, a strong linear downhill correlation (–0.75) can be observed between the use of petroleum products for electricity production and the market price. However, it is important to note the fact that the use of petroleum products for the electricity production takes an average only of up to 5 % in the whole generation mix during exploration period.

The remaining countries are Norway with its hydro prevailing electricity generation mix and the Baltic States. There is no logic to examine Norwegian electricity generation mix as hydro takes absolutely the biggest part – 96.1 % in the year 2013 (Statistics Norway, 2015) and all the possible fluctuations is because of hydro situation. Price deviation from the average 32.96 Eur/MWh takes 76 % in growth and 63 % downturn during exploration period in different price zones in Norway. Mostly it is the consequence of fluctuation of supply of water from snow melting in the mountains and in filling level in the water reservoirs. Despite the fact that Estonia was the first Baltic country joined Nord Pool Spot, the data covers only several years (Figure 4).

Figure 4. Development of Estonian electricity generation mix and market prices, 2011-2013

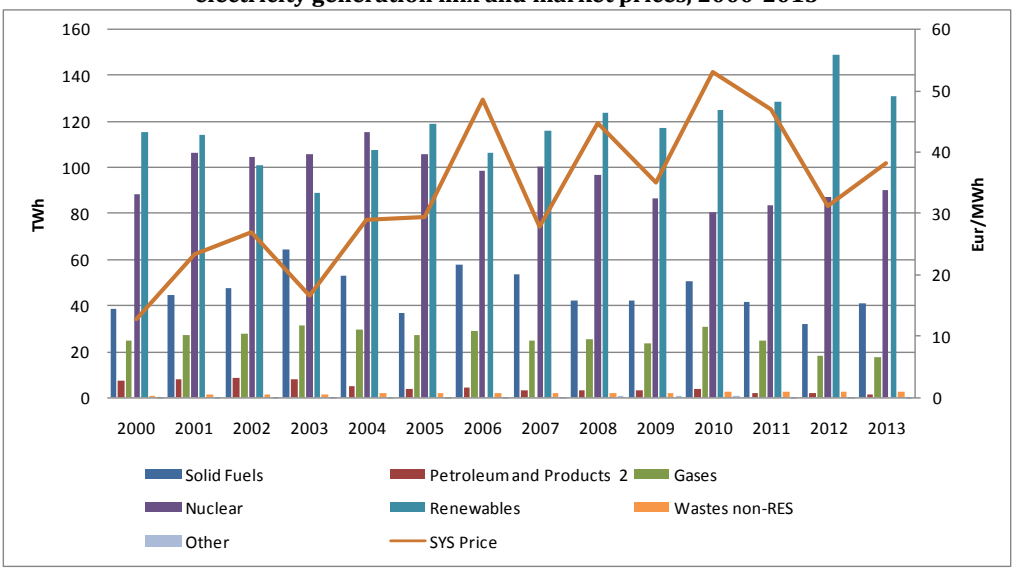


As one may see, the biggest part of the electricity generation mix holds electricity production from solid fuels. No wonder, there can be observed a moderate uphill relationship (0.56) in this case. Longer period of investigation is still needed to draw the appropriate conclusions in regards the relationships between the electricity generation mix and the market price in Estonia.

Lithuanian presence in the NPS market starts from the middle of the year 2012. Latvia is the last new comer from the Baltic States – the middle of the year 2013 is the beginning of NPS price clearing, so a proper investigation is not possible in both cases.

Nevertheless, as can be seen from the examples given, unambiguous and common to all NPS States findings of a significant correlation between the composition of electricity generation mix and the market price of electricity are not detected (Figure 5).

Figure 5. Development of Finnish, Swedish, Danish, Estonian, Lithuania and Latvian joint electricity generation mix and market prices, 2000-2013



It is worth to add that natural gas as a fuel in the larger market case is also not notable in affection the market price, although it was possible to expect the contrary. Taking into account all the aforementioned, it is possible to assert that the composition of the overall NPS electricity generation mix made no significant influence on the NPS day-ahead market price. This, in turn, does not constitute justified assumptions for prioritizing any certain technology in order to perceive a positive effect on the market price.

On the other hand, it is important analyzing certain country cases where total amount of the electricity production makes a positive influence on the market price. In this kind of case, it is expected that the wholesale price of electricity will decrease when energy development scenario will be based on a wider use of renewable energy sources (RES) (de Miera *et al*., 2008; Gelabert *et al.*, 2011; Mulder *et al*., 2013; Bobinaite *et al*., 2014). This could happen because lower cost producers (i.e. the producers using RES), will be trading in the market. Following the marginal pricing approach higher marginal cost producers (i.e. the producers using natural gas) will be driven out of the market.

The positive influence of the amount purchased on the market price can be realized through declines in the amount of electricity purchased in the NPS day-ahead market even when producers using RES for production of electricity are not dealing in NPS. In this case the RES purchase obligations will lower the amount of regular electricity needed to meet final electricity needs. Having in mind the positive influence of the amount purchased on the market price, this will lead to lower prices in the day-ahead market.

The research made by Bobinaite *et al* (2015) states that the price pushed upwards because of growing demand in the Baltic States, but decreased because of particularly growing amount of wind electricity. The wholesale electricity price elasticity because of wind power production volumes was (–0.0283; –0.0398) in Estonia, (–0.0370; –0.0418) in Latvia and (–0.0365; –0.0830) in Lithuania. This shows that wind power production increase of 1 % would lead in the wholesale price reductions 0.03–0.04 % in Estonia, 0.04 % in Latvia, and 0.04–0.08 % in Lithuania.

IV. Findings and Conclusions

After the analysis of the relationship between the composition of the electricity generation mix and the market price in the long term period, it is possible to assert that the overall Nord Pool

Spot electricity generation mix made no significant influence on the NPS day-ahead market price. This, in turn, does not constitute justified assumptions for prioritizing any certain technology in order to perceive positive effect on the market price.

Analysis was also made taking into account situation in certain country. The research shows that the increase in electricity production of both nuclear, as well as renewable energy sources increases the price of electricity in Finland. Therefore, the nuclear production increase slightly reduces the market price in Sweden. A weak negative correlation between the increase of gas use in the production of electric quantity and price in the market can be observed in the Danish case. Price deviation is the consequence of fluctuation of supply of water from snow melting in the mountains and in filling level in the water reservoirs in Norway. It is worth to add that natural gas as a fuel in the larger market case is also not notable in affection the market price, although it was possible to expect the contrary. Summarizing the analysis of the relationship between the electricity generation mix and the market prices in the Baltic States price zones, it gives an appropriate base to state that the development of wind energy sector has caused certain, at least in the short term, reduce in wholesale price in the Baltic States.

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Impact of Service Reliability on Student Satisfaction in Newly Established Public Sector Universities in Sri Lanka: Perspective on Undergraduates in Management Faculties

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Abstract

The provision of quality services has been identified as an issue of great significance with the changing business world because service industry has been an area that has drastically changed. Educational sector is also assessed the service quality (SQ) offered by them in order to satisfy the changing demands in the competitive market. Building competitive position comparing other higher educational institutes in the market is the dream of most universities in Sri Lanka as well in the global educational environment. National and global university ranking gives image to them while creating a rigid competition. Reliability is a significant aspect of (SQ) which can determine the student satisfaction. Therefore, this paper was attended to analyze the level of reliability of the service in depth and its impact on students' satisfaction in FMSs of NEPUs from perspectives of management undergraduates. Finding of this study will enable administration of these faculties to identify the service requirements which are to be incorporated to the current service process adopted and makes necessary improvement to enhance the student's satisfaction. For this purpose 625 undergraduates from 05 NEPUs in Sri Lanka were selected as the sample applying stratified random sampling method. Degree programs, gender and academic years were the different strata of this selection. Two dimensions were identified to measure the service reliability (SR) as; accurate service, and dependable service. Findings reveal that service reliability is positively and significantly correlated with the students' satisfaction. Therefore, reliability service offered by faculties is significance to determine the student's satisfaction. Also the results indicated that, accurate and, dependable services are practices in a mediocre level in these faculties. Finally, recommendations were produced to strengthen the SQ on reliability aspect of the service process considering the fact that in these faculties which will enable to increase the long- term students' satisfaction.

Key words: Service Reliability, Student Satisfaction, Accurate Service, Dependable Service

I. Introduction

Zeithmal et al. (2009) reveals that one of the basic issues of less performance in service organizations is not understanding and adapting to the customers' requirements and meeting their expectations. Educational sector is also assessed for the quality of service offered by them just like other service industries in order to satisfy the changing demands in the competitive education market. Hence building competitive position comparing other related service establishments in the market is the dream of most universities in Sri Lanka as well in the global educational environment. In order to that offering quality education which is to be match with the market requirement and examining how the universities are using quality standards are debatable and it is timely requirement. Academic authorities are looking the service quality (SQ) of faculties from three perspectives; input stage, processing stage and output stage. According to Cardona and Bravo in 2012, systemic mission to penetrate the inner structure of the interacting elements responding to the student as a partner in the teaching-learning process is a requirement for the institutional success. Also, Zineldin M.,(2007), reveals that the SQ always defend on five quality dimension as; atmosphere, process, communication, object and infrastructure of the universities. Khodayari B and Khodayari F (2011) show that there is a gap between student`s perceptions and student`s expectations and among factors, reliability which is important for university students. Further, some studies (Sander, at.el. 2000) have emphasized that the student retention, reduced drop- out rate, and their academic performance are influenced by the SQ provided by the higher education institutions. Students' perceived SQ in the higher education sector is depending on some factors as Ford, Joseph & Joseph (1999); are intensive competition , internationalization, and the classification of education etc. However Cardona and Bravo in 2012 explains, the most influential variable in explaining students´ satisfaction as the perception of the challenge that students may experience in the assessment of their knowledge. This implies that students need to have confidence with the quality of the learning what they received. Therefore, Sri Lankan universities also require evaluating in details the factors that can explain students' perception

of SQ which determine students' satisfaction. Thus, this study intends to look into the SQ provided by the NEPUs in Sri Lanka giving deep attention to service reliability (SR) and its impact on the students' satisfaction.

Research Problem

University can differentiate their service offering that from the competition is through the provision of excellent service quality. In year 2005, the Quality Assurance and Accreditation Cell (QAAC) in Ministry of Higher Education were established to evaluate the service quality of national universities in Sri Lanka and evaluated existing degree programs based on SQ practices adopted by the degree programs separately in the Faculties. The subject review committee assigned by the UGC under the QAAC has made judgments on to assess the SQ by means of Teaching, Learning and Assessment methods. As NEPUs, all has vital requirement to compete with the well established national universities as well as recently established non government universities in Sri Lanka. Today most of them are committed towards becoming standard national universities by the near future getting accreditation. According Lankan universities web ranking - 2013/14, any NEPUs is no rank earned below 10. Also, with the widespread agreement among academics on the importance of higher education SQ, a consensus on its conceptualization has not been reached yet. Consequently, the best way to 'measure SQ is still regarded an unresolved issue (Dado J.et.al., 2011). When concern these theoretical and empirical issues, Universities are committed in fulfilling the requirements to upgrade the service standard to uplift their competitive position. Therefore, it is necessity to examine in details SQ dimensions and their impacts to the students' satisfaction. Therefore it is timely requirement to investigate the depth discussion on each SQ dimensions in the public sector universities in Sri Lanka.

Objectives of the Study

1. To examine the nature of the service reliability as an approach of functional quality in the FMS of NEPUs.
2. To identify the relationship between service reliability and the student satisfaction in the FMS in NEPUs.
3. Make available recommendations to strengthen the reliable service emphasizing students' satisfaction in the FMS of NEPUs.

II. Service Reliability as an antecedent of Service quality (SQ)

The service is quite different from the offering of physical goods because of the specificity of their nature; intangibility, inseparability, variability and perishability. O'Neil and Palmer (2004) define SQ as the difference between what a customer's expects to receive and their perceptions of actual delivery. According to Kotler at.el., (2014) "service is any act or performance that one party can offer to another that is essentially intangible and does not results in the ownership of anything".

The SQ in higher education researchers have interested to give definition differently compared with SQ of others. Thus, O Neill and Palmer (2004,) define service quality in higher education as "the difference between what a student expects to receive and his/her perceptions of actual delivery". At the same time, Service reliability defined as "perform the promised service dependably and service accurately" Zeithaml *et al.* (1990).

In today's competitive environment, most organizations would agree and recognize that SQ is essential for them to become winners by consistently meeting or exceeding customers' expectations (Konil A. et.al.,2013; Khodyari and Khodyari, 2011; Parasuraman et al., 1985;). Lethinen and Lethinen(1982) as cited by Khodayari, and Khodayari 2011, viewed quality from the customer's perspective and suggested that customers perceive the it on two main aspect; process quality and output quality. According to them process quality refers customer's qualitative evaluation of their participation in the service production process and output quality refers customer's evaluation of the result of a service production process. Therefore, managing services is a challenging for service

providers because quality is multi-dimensional concept Literature reveals that there are different viewpoints to identify the dimensions such as functional quality and technical quality. Six (6) dimensions as per SERQUAL model according to (Zineldin , (2007) reveals 5Qs dimension as; atmosphere, service process, interaction , communication, object and infrastructure. According to Zenedin in 2007, " process" has defined as how to deliver the promised object/ service and how well service activities are implemented. Parasuraman et al. (1988) cited by Zeithaml,at.el.,(2008) suggested that the measure of SQ through SERVQUAL dimensions; tangible, reliability, responsiveness, assurance and empathy. Among most of the models developed SERVQUAL model has defined as the basic approach in measuring SQ. Parasuraman et al. (1988) have developed SERVQUAL model based on functional quality rather than technical quality for measuring of SQ. All of them given emphasized to reliability as an important variable to measure SQ. According to Zeithaml,at.el.,(2008), *Reliability* refers the degree to which employees are executing the promised service dependably and accurately. Service Reliability is defined attending to three aspects as; Accessibility, Continuity and Performance. Accessibility (Service is available when desired and when the customer wants to use it). Continuity (Customer has uninterrupted service over desired duration) and Performance (Meets the customers' expectations). (http://committees.comsoc.org/ assessed 05.08.2015).

1. Service reliability and Student satisfaction

Many researchers (Aldridge & Rowly ,1998, Gremler and McCollough ,2002, Mai ,2005. Voss et.,al.,2007) regards students as the main customers in the education sector when measuring quality though there are number of stakeholders who are entitle to view the quality of the service delivery process. Also, Customers play an important role determining the success of any organization with regard to the perception of effect on quality of service delivered. Perception of quality found to be an important influence on students' satisfaction. (Khodayari F. and Khodayari B., 2013). Further, Kotler, et.al.,(2014) explain the requirement of meeting and serving customer needs and satisfying them, since they are the only reason for building company survival. Customer satisfaction occurs when one's experience of a service offering matches the expectations (Cina, C.,1989). because customer satisfaction is assessed through the comparison of what services were expected versus what customers perceive that they have actually received (.Thus, it is revealed that the need for delivering a quality service. As Kotler at.el, (2014) defined customer satisfaction as person's comparative judgment resulting from a product's perceived performance in relation to his/her expectation. Anyhow, majority of researchers (Cronin et al., 2000; Gruber *et al*., 2010) have been considered SQ as an antecedent to customer satisfaction. Hence, it is assumed for the basis of this study that service reliability as an antecedent of customer satisfaction and in this study refers the student satisfaction. Also most of the literature (Parasuraman,at.el.,(1998), Waugh (2001), Jusoh at el., (2004), Shaari (2014), Koni A. at.el.,(2013)), shows the significance impact of service reliability as an antecedent of SQ to enhance the customer satisfaction in most of the industries including education sector. Service reliability in the context of services means the degree to which a service is fault-free. Parasuraman et al.(1988), emphasized that reliability as the ability to provide the pledged service on time, accurately and dependably (Ghobadian et al., 1993). Anyhow, Aldridge and Rowley (1998) explain that good quality education provides better learning opportunities and it has been suggested that the levels of satisfaction or dissatisfaction strongly affect the student's success or failure of learning. Students' perceived quality is an antecedent to student satisfaction (Browne et al, 1998, cited in Letcher D.W.& Neves J.S.2010). It is noted that positive perceptions of SQ can eventually lead to student satisfaction thus satisfied student would attract more students through word-of-mouth communications. Students' perceptions of SQ have become a main issue in the management of higher learning institutions as students are deemed to be their customers (Koni A., at.el.,2013, Pourghahreman K at.el., 2013, Pathmini MGS et.al.,2014, Letcher D.W.and Neves J.S.2010, Owlia, M.S., Aspinall, E.M. (1996).)

H1: There is a significant relationship between reliable service (SR) and Student Satisfaction.

III. Methodology

According to Sekaran U. & Bougie (2011), studies may be either exploratory, descriptive or hypotheses testing. Hence, the study was concern as descriptive and hypotheses testing since it was tried to build deep analysis and discussion on the phenomenon of service reliability as an antecedent of SQ and evaluate its relationship with students' satisfaction. Two dimensions used to measure the service reliability were accurate service and dependable service. Preparation for future studies, achieved objectives, marketable degree, intention to recommend and overall satisfaction were used as measures of the student satisfaction. Study was carried out in the natural environment in non-contrived setting which was the data collected in actual university environment. The research approach of this study was deductive method and cross sectional. Unit of analysis was individual male and female management undergraduates. Population of the study covers all undergraduates from different management degree programs in NEPUs. Stratified random sampling method applied considering study programs, and academic year. The data collection process went through 01 month of time period .The sample size was 625, but the response rate is 568. Both primary and secondary data was gathered for the study. Structured questionnaire with the format of 5 point Likert scaling ranging from 1 (strongly disagree) to 5 (strongly agree) was used to measure responses to each item and administrated for collecting primary data. Pilot survey was conducted through 30 undergraduates in RUSL to test the accuracy of the questionnaire representing 3 academic years in 3 degree programs considering both male and female. Reliability of the measures used to test the goodness of data. Thus the reliability statistics obtained (table 3) shows that no values of Cronbach's α were less than 0.700 for the variables excluding accurate service. Cronbach's α for this variable was 0.656 and according to Sekaran & Bougie, 2011 at least it is to be 0.600 (Sekaran & Bougie, 2011 reveals; $\alpha, < 0.60$; poor, $\alpha = 0.70$; acceptable and $\alpha > 0.80$; good). Therefore, internal consistency of the measures used considered being acceptable. The face validity was checked by reviewing literature since it is rather subjective criterion. Collected data were processed using SPSS 16 version and values obtained from the survey were grouped according to the 3 range continuum developed for the study as; 1.00 -2.33; Low/Poor, 2.34 -3.67; Moderate and 3.68-5.00; High/ Good.

Table 1- Reliability results of pilot survey

Dimension	Cronbach's α
Service Reliability	0.813
Accurate service	0.656
Dependable service	0.734
Student Satisfaction	0.869

IV. Results and Discussion

Sample profile

Though the sample is 625, total number of respondents was 568 and intern around 90% response rates were shown. 503 questionnaires were able to get for the analysis, since there were missing values for some variables in some questionnaire and 38 outliers were extracted from the analysis focusing the results of box plot and normal Q-Q Plot. Accordingly, it was reveals that, the highest number of undergraduates were from Sabaragamuwa University (32.1%) minimum number from Rajarata University (21.6%). Also it is worthy to noted that majority of respondents are female (65.8%) where the male were 34.2%. With regards to the Race, Sinhalese were 94.1% and the rest Tamils and Muslims were equal portion (2.9%). Medium of instruction of these respondents mainly were English (97.8%), followed by Sinhala (1.8%) and the rest 0.4% in Tamil medium. Further the highest number of respondents was from Dept. Tourism and Hospitality Management while 26.4% Accountancy and Finance, 24.3% from Business Management and minor amount 0.6% was from

Business Information Technology. Also highest number of respondents recorded from 3rd year (47%) followed by 4th year (31.3%) and the lesser amount from 2nd year (21.6%).

Validation of Measurement properties

The validation of measurement properties was established satisfactorily and identified the suitability of data for further analysis using validity and reliability tests. The Cronbach 's alpha coefficient takes values from 0 to 1, its widely acceptable cut-off value is 0,70; although lower thresholds such as 0,60 are deemed acceptable in exploratory studies (Hair *et al*., 2009, Sekaran U. & Bougie, 2011). Cronbach's Alpha coefficient was used to assess the internal consistency and accordingly tested α for each construct was over 0.70 which is indicated in below table 2. Results shows that all of the construct showed above the suggested value of 0.70(Sekaran U. & Bougie, 2011). Therefore, internal consistency and reliability of the measures used in this study considered to be acceptable. Analysis of Box plot and Probability plot (Figure 2(a) and Figure 2(b)) demonstrated that all the dimensions were normally distributed. Also, Kolmogrorov – Smirnov test was employed to assess the test of normality and the results shows (Table -03) residuals can be assumed to be normally distributed. The values of KMO for each factor listed in below table 2 and it explain the adequacy of sample size. Selected sample is is adequate since KMO values are greater than 0.50 and calculated statistic of Bartlett's test of Sphericity is significant.

Table 2- Statistics of Reliability and Sample adequacy

Factor	Dimension	Cronbach's α	KMO and Bartlett's test	Bartlett's Test of Sphericity	df	sig
01	Service Reliability	0.836	0.778	72.39	10	0.000
02	Accurate Service	0.701	0.500	108.63	1	0.000
03	Dependable Service	0.804	0.500	108.63	1	0.000
04	Student Satisfaction	0.891	0.756	136.39	15	0.000

Table 3- Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Satisfaction	.088	503	.000	.982	503	.000
a. Lilliefors Significance Correction						

Figure2(a) -Box Plot

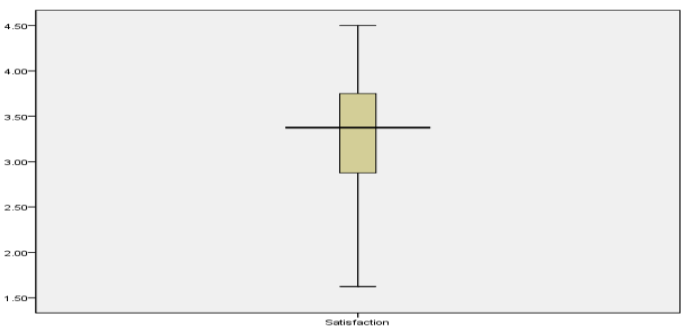

Figure2 (b) Normal Q-Q Plot

Descriptive statistics on Service reliability and Student satisfaction

Descriptive statistics of different variables in the study exhibit in below table 4. According to mean values; student satisfaction (SS), service reliability (SR) and dependable service (DS) except accurate service(AS) were reach mediocre levels . Variability associated with each dimensions except AS were not high since the value of SD is less than 1.00. Standard deviation for accurate service is greater than 1.00 and accordingly, mean can be locate in between 1.64- 3.64 which in turn indicate it can be some were poor to moderate.

Table 4-Descriptive Statistics on SR practices and Student Satisfaction

Dimension	N	Mean	SD	Variance	Md	Range	Mo	Min	Max
Service Reliability	511	3.08	0.819	0.671	3.00	3.80	3.20	1.20	5.00
Accurate service	509	2.62	1.010	1.020	2.50	4.50	2.00	0.50	5.00
Dependable service	511	3.23	0.859	0.740	3.33	4.00	3.33	1.00	5.00
Student satisfaction	511	3.29	0.673	0.453	3.37	3.25	3.62	1.25	4.50

It is clear from above table that, r= 0.505, P< 0.01 indicating that AS and student satisfaction have certain significant correlation (table 5). Also there is a significant positive correlation between dependable service and student satisfaction since r = 0.482, P< 0.01 as in table 6. r which is more than 0.300 is acceptable association according to Chinna et.al.,(2012).

Table 5- Correlations accurate service and student satisfaction

		Satisfaction	Accurate service
Satisfaction	Pearson Correlation	1	.505**
	Sig. (2-tailed)		.000
	N	503	501
Accurate service	Pearson Correlation	.505**	1
	Sig. (2-tailed)	.000	
	N	501	501

**. Correlation is significant at the 0.01 level (2-tailed).

Table 6 - Correlations dependable service and student satisfaction

		Satisfaction	Dependable service
Satisfaction	Pearson Correlation	1	.482**
	Sig. (2-tailed)		.000
	N	503	503
Dependable service	Pearson Correlation	.482**	1
	Sig. (2-tailed)	.000	
	N	503	503

**. Correlation is significant at the 0.01 level (2-tailed).

According to the model summary, R = 0.548 there is a strong correlations between observed variable and the student satisfaction. R^2 = 0.300 and it means 30% of the variation in customer satisfaction is explained by the accurate service and dependable service. The P< 0.01 means both variables; accurate service and dependable service can significantly be used to predict the student satisfaction. Accordingly, the hypothesis is accepted. The low R^2 value (0.300) implies that there are other factors, not included in the model. Also, the results indicate that the multiple regression model (ANOVA table) is highly significant as indicated by the F- value =108.646 and P<0.01. That means customer satisfaction significantly explain by SR dimensions exhibit in the conceptual model. Durbin-Watson (DW) statistics used to quantify the correlations among the residuals. DW values range from 0 - 4 according to Chinna et.al.,(2012), indicate no problem of autocorrelations. Since the DW value closer to 1 as in table 7(a), there is a possibility of positive autocorrelation (DW= 1.716). According to table 7(b), TSS= SS_{reg} +SS_{res} where ; 231.11 = 69.431+161.680.

To analyze the impact of RS on customer satisfaction, a linear regression analysis was conducted and accordingly ß values indicate that both dimensions: dependable service and accurate service are positively correlated and the relationship is statistically significant to predict the student satisfaction. The regression equation for the student satisfaction is; SS= 1.957+0.303($ß_1$)+0.316($ß_2$). 95% Confidence interval for $ß_1$ = (0.143-0.261) and confidence interval for $ß_2$ = (0.180 - 0.320). That means β coefficients of SR dimensions; accurate service and dependable service indicates a greater influence on student satisfaction.

Table 7 (a)- Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.548[a]	.300	.298	.56527	1.716

a. Predictors: (Constant), dependable , accurate

Table 7 (b)- ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	69.431	2	34.715	108.646	.000[a]
	Residual	161.680	506	.320		
	Total	231.111	508			

a. a. Predictors: (Constant), dependa, accura .
Dependent Variable: Satisfaction

Table 8 - Coefficients on independent variables

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.035	.094		21.548	.000
	Dependable service	.226	.034	.300	6.707	.000
	Accurate service	.212	.028	.335	7.495	.000

a. Dependent Variable: Satisfaction

V. Conclusion and Recommendation

The aim of this paper was to examine the SR as an antecedent of SQ in depth and its impact on student satisfaction in the FMS of NEPUs from perspectives of management undergraduates. The results show that the requirement of a strategic approaches to strengthen the service reliability via promised service accurately and promised service dependably because both of the dimensions were significant to strength the student satisfaction in these universities. Going deeply into SR factors explained in the model were positively correlated. However, the most influential and significant factor in explaining students´ satisfaction was accurate service relatively to dependable service. According to the results it can be concluded that SR is significant to student satisfaction and it was in the level of mediocre and this conclusion was further supported by previous literature (Shaari H, 2014, Pathmini MGS at.el.,2014, Pourghahreman et.al.,2013, Khodayari F & Khodayari B, 2011, Waugh, R.F. , 2001) . Finally, as recommendations it is important to note that the requirement of maintaining and updating the teaching and learning process as what they planned, releasing examination results as planned and releasing evaluations of assignments without delay, handling students complains and adopting some of the students suggestions where acceptable, available advise related to academic matters. Etc. Certainly the administration should invest sufficient time and effort to enhance the service explained above as they promised. Also direction for further studies is recommended; a deep analysis on the impact of other SQ variables separately (tangibility, responsiveness, delivery, empathy and competence) on student satisfaction and made deep discussion on this relationships separately at these universities.

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Scale to Measure attitude of Employees towards Training Programme : A Study on Rourkela Steel Plant, SAIL

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Abstract

Training is an innovative area gaining importance worldwide and became a boon to the areas of organization development in this revolution technique. To perform various activities in a systematic way, an organization requires efficient individual as well as competent individual which can be possible by providing well designed training programs .In this competitive edge, training become an most effective business tool in scenario of steel industries. This article focused on a study of steel industry related to attitude of employees towards training programme in Rourkela Steel Plant, SAIL as the frame of reference by emphasizing that there was no overnight transitions as the evolution of training is an ongoing process where all we participate.

Key words: training, attitude, development, skill, measure etc.

I. Introduction

In this dynamic environment, the development of human resources in putting newer challenges and so far this ,new skills and abilities in required which can be only possible by providing training to respond these changes. Because training in the strong foundation of highly the skilled and motivated manpower that enable to face the future challenges more confidently. Training programmes are also increasingly playing a crucial role in determining long term survival and success for technologically advanced corporations. Steel industries are engaged in transforming their skill base and creating a more diverse workforce. Corporate management has a decisive role in reshaping the steel workforce in the process of exploiting the interactions between different aspects of policy. The new development in the steel industry is not confined only to companies within the same country but often involved in cross border acquisition and mergers. In relate to this, Indian Steel energy prices will continue to promise substantial cost advantages compared to production facilities. It is also expected that Indian Steel industry will undergo a process of consolidation .The deployment of modern production system and by using latest trend in training programmes are also enabling Indian Steel companies to improve the quality of their steel products and thus enhance their export prospects. Training is an integral to the career paths for workers and supports the restructured multi-skilled teamwork structure in Rourkela Steel Plant (RSP). With increasing competition, all types of organizations are experiencing pressure to make fundamental changes in the way they operate. And for this training programme is the concept for integrating various resources to train the individual skills needed to perform the job effectively .For all organizations like RSP, Steel Authority of India Limited (SAIL), Tata Steel and JINDAL, training programme is important to avoid the wastage of resources and for improving productivity and makes employees to know about the work culture. But due to differ in hierarchy level and pattern of the work of organization, the design of training programme differs from other competing organizations namely Tata Steel and JINDAL. In this context, RSP is engaged in a process of developing workforce that continuously strives for excellence in all spheres of knowledge, skill, and attitudes that leads towards achievement of objectives.

II. Literature Review

Different studies conducted on training and organization development within and outside India has been reviewed. The review is discussed in a nutshell below:

Lynnette M. Godat Sprint and Brigham A. Thomas (1999) in their research study 'The Effect of a Self-Management Training Program on Employees of a Mid-Sized Organization' have predicted that employees would be able to improve self-selected work related problems through self-management training.

Walter Wehrmeyer and Jonathan Chenoweth (2006) in their research study ' The Role and Effectiveness of Continuing Education Training Courses Offered by Higher education Institutions in furthering the implementation of sustainable development' have found that if the training of short continuing education courses in sustainable development is to be effective, then such courses need to exploit existing knowledge bases so that limited time resources are used for maximum benefit through teaching methodologies which promote a constructive learning environment.

R.A Noe (1986) in a research titled 'Trainees Attributes and Attitudes: Neglected Influence On Training Effectiveness' has developed a model of training effectiveness in which he proposed that rewards resulting from successful completion of training influences individual's motivation to attend training and to learn from it. According to him, success of training programmes depends on their perceived effects on career goals. So employees can also be motivated if they can be involved in the training activities. Training need analysis is one of the ways to involve people so that they can put more efforts to learn and then transfer the learning into action.

Garrett J. Endres and Brian H. Kleiner (1990) in their research study 'How to Measure Management Training and Development Effectiveness' have observed that successfully measuring effectiveness in management training and development can be a difficult task. So they designed a valid measurement programme that includes evaluation in key areas such as emotional reaction and knowledge gained after training interventions.

Judith B. Strother (2002) in the work 'An Assessment of the Effectiveness of e-learning in Corporate Training Programs' has pointed out that the corporate managers are constantly looking for more cost-effective ways to deliver training to their employees. E-learning is less expensive than traditional classroom instruction. In addition, many expenses such as booking the training facilities, meeting the travel costs for employees or trainers, plus employees' time away from the job can be greatly reduced.

Ridha Al Khayyat (1998) in his study 'Training and Development Needs Assessment: A Practical Model for Partner Institutes' introduced a practical model of training and development needs assessment for partner institutes. The model is competency-based that allows for the incorporation of various data gathering techniques. Finally, he concluded that partner institutes systematically and effectively assess the actual training and development needs of the industry to which they belong.

III. Methodology

Data source and method of collection

The study has been conducted mainly on primary data collected through our own developed 'attitude scale'. Secondary data is only used for the development of the research framework. A structured questionnaire is used as the main tool for data collection.

Sample size and sampling

A total of 200 respondents from the sample unit, i.e., Rourkela Steel Plant (RSP) of the Steel Authority of India Limited (SAIL) have been included in the study. The respondents are from eleven different categories of employees as already indicated in Table-1.The specific Departments/Units/Sections/Divisions included in the study along with the number of respondents from each such unit are given in Table-1.

Table -1: Sample size and its distribution

Name of Departments/Units/Sections/ Divisions	Number of respondents	Name of Departments/Units/ Sections/Divisions	Number of respondents
Plate Mill	20	Training +HRD(Human Resource Department)	10
SMS-II(Steel Melting Shop)	20	SWPP(Spiral Welded Pipe Plant)	10
CPP-I(Captive Power Plant)	10	LDBP(Lime and Dolamite	20

		Bricks Plant)	
Instrumentation	20	SP-II(Sintering Plant)	20
RSM(Repair Shop Mechanical)	20	Communication	20
BF(Blast Furnace)	20	ERP(Enterprise Resource Planning)	10
Total sample size	**200**		

Tools and techniques used

The important statistical tools and techniques used in the study are 'Item Analysis' with calculation of t-value, Correlation, Reliability.

Construction of attitude scale

The study has been conducted through own developed and validated attitude scale. The scale was initially developed with 100 statements and administered, as a pilot study, on 50 respondents spread across employees of the categories S_3, S_4, S_5, S_6 and S_7 representing the Technician category; S_8, S_9, S_{10} and S_{11} representing the Senior Technician; and E_0, E_1 through E_8 representing the junior officers to the general managers as given in Table-2.

Table-2: Description of categories of employees included in the study

Code	Categories(Grade)of employees	Code	Categories(Grade)of employees
S_3-S_7	Technician	E_4	Manager
S_8-S_{11}	Senior Technician	E_5	Senior Manager
E_0	Junior Officer	E_6	Assistant General Manager
E_1	Junior Manager	E_7	Deputy General Manager
E_2	Assistant Manager	E_8	General Manager
E_3	Deputy Manager		

While designing the statements, due care was taken to ensure that every statement is moderately positive or negative. Five options for each statement were given with weights assigned to the option as follows:

Response	Score for Item	
	Positive effect statements	**Negative effect statements**
Strongly Agree	5	1
Agree	4	2
Undecided	3	3
Disagree	2	4
Strongly Disagree	1	5

The assignment of weights was based on the suggestions of Edwards, and the 'scale' developed was of the nature of the Likert scale.Based on the responses and suggestions received from the pilot study that the total number of statements was reduced to 78(from 100) by dropping and/ or modifying some of the statements.These 78 statements form the final list of attitude scale that was administered again among respondents.

IV. Results and Discussion

Now after receiving the response from respondent, test the validity and reliability of the statements used in the attitude scale in the following ways: Each of the 78 statements included in the attitude scale as above has been put to test through 'Item Analysis' together with t-test to know if the statement concerned is statistically significant with regard to its quality and validity in explaining the

attitude of the respondents towards training and development. Based on the 'Item Analysis', the procedure of which is explained below, that 28 items (i.e., statements) further got dropped from the list of 78, for not being so strong in explaining the attitude of the respondents. The 50 items left thereby were put through reliability test by using the Spearman Brown Prophecy formula, the details of which has also been discussed below.

Item analysis

The 'Item Analysis' mainly goes through three important stages:

a) Scoring of the scale
b) Calculation of 't' values
c) Final selection of statements

The following paragraphs explain details of the stages:

Scoring of the scale

The responses received from the respondents were assigned weights from 5 to 1 for all the positive statements and 1 to 5 for the negative statements. Having assigned the weights to the statements corresponding to each respondent, the total weight, i.e., the summated score per respondent was calculated. The respondents were then arranged in an ascending order of total score. Thereafter, 27% of the respondents in the upper group (with higher score) and 27% of the respondents in the lower group (with lower score) were separated and picked up to find the t-value in respect of each of the 78 statements. Inclusion of 27% of the extremes is after Kelly(1939) who has demonstrated that when extreme groups, each consisting of approximately 27 percent of the total group are used, one can say with the greatest confidence that those in the upper group are superior in the ability measured by the test to those in the lower group.

Calculation of t-value

t- values were calculated for all the 78 statements using the under mentioned formula as given by Edwards:

$$t = \frac{XH - XL}{\sqrt{\frac{(XH-XH)^2 + (XL-XL)^2}{n(n-1)}}}$$

where,

t= the extent to which a given statement differentiates between the high and low groups
XH= the mean score on a given statement for the high group
XL= the mean score on the same statement for the low group
XH-XH= the variance of the distribution of responses of the high group to the statement
XL-XL= the variance of the distribution of responses of the low group to the statement
n (n-1) = number of subjects in low or high group

Table-3 shows the list of 78 statements with their corresponding t-values.

Table-3: Statements of Item analysis by employee towards training programme

Sl. No	Attitude Statement	t-value
01.	Training programme enables employees to play a more active role.	1.301
02.	The subject covered in the training programme is relevant to the job	2.585
03.	Training programme helps in meeting the problems of work area.	1.710

04.	Training programme helps to solve organizational problems.	3.144
05.	Training policies in the organization facilitates development.	2.916
06.	Training programme helps employees to gain faith in themselves.	2.125
07.	Training programme is a powerful instrument for organizational development.	4.930
08.	Training programme prepares employees to play their role effectively.	3.853
09.	Training programme enables employees to understand job assignment responsibilities better.	5.24
10.	Training programme does not help in improving the working skills of employees.	2.859
11.	Training programme helps acquire new knowledge at workplace.	2.941
12.	Training programme acts as a motivational tool for employee development.	3.741
13.	Training programme improves the worker's thinking and action in a positive direction.	5.747
14.	General awareness about workplace can be enhanced by training programme.	5.077
15.	Training programme develops a sense of belongingness and reduces absenteeism	4.83
16.	Training programme does not promote leadership qualities and sense of responsibility.	7.727
17.	Training programme educates employees for adopting the changing environment.	1.665
18.	Training programme promotes cordial relation among employees at workplace.	1.524
19.	Training programme does not contribute to the overall development of employees.	3.921
20.	A man can learn more by work experience than by going to training.	0.867
21.	On-the-job training helps an employee to use his leisure time for development.	4.989
22.	Training programmes are sometimes too impractical.	2.313
23.	Training programme is worth all the time and it requires effort.	0.314
24.	Training tends to make an individual less satisfied.	2.554
25.	Company seldom encourages training programme to address individual needs.	1.324
26.	Most people think that training programme is wasteful.	1.707
27.	Appropriate teaching aids such as LCD, OHP etc. are useful in training programmes.	2.766
28.	The presentation and communication skills of the instructor have been very effective.	1.458
29.	The duration of training programme has been too short.	2.2691
30.	Training programmes help in improving group cohesiveness.	5.949
31.	Knowledge gained in training programme is relevant and useful to job.	5.343
32.	Useful topics are covered in the training programme	1.328
33.	Training programme improves the skills of time management.	5.723
34.	Training programme improves team participation at work.	7.046
35.	Training programme improves individual as well as organizational productivity.	3.932
36.	Training programme improves decision making skills.	4.844
37.	Training programme helps in improving interpersonal communication.	3.283
38.	Training programme satisfies overall efficacy of organization development.	1.155
39.	Training programme enables employees to generate creative solutions.	4.815
40.	Training programme enables employees to evaluate alternative action plans critically.	0.754
41.	Training materials are generally useful to job situation.	1.657
42.	Training methodology used is appropriate to the content of the lessons.	1.287
43.	Experience is more beneficial in skill development than training.	-2.18
44.	On- the- job training is most effective way for skill development.	1.633
45.	On-the-job training is more effective than off-the-job training.	1.067
46.	Training programme creates learning experience.	4.853
47.	Training programme improves interpersonal relation to deal with colleagues, superiors and subordinates.	5.403

48.	Training programme enables employees to give and receive feedback.	7.244
49.	Training programme makes employees to present their ideas clearly and concisely.	5.546
50.	Training programme enables employees to be challenging.	5.707
51.	Training programme enables employees to be supportive and to build on the ideas of others.	3.698
52.	Training programme brings job rotation which is one of the best practices for skill development.	4.963
53.	Training programme prepares employees to implement decisions timely.	1.459
54.	Training programme helps minimize production cost.	3.404
55.	Training programme improves work safety.	0.882
56.	Training programme makes employees more discipline and improve their morale.	5.206
57.	Training programme improves work method of employees.	4.595
58.	Training programme improves quality in job assignment.	3.726
59.	Training programme reduces burden in supervisory activities.	1.615
60.	Training programme offers opportunities for growth and advancement of employees' career.	4.626
61.	Training programme helps identify and use the potential of employees.	4.483
62.	Training programme prepares employees to invest a considerable amount of their time for development.	5.156
63.	Employees sponsored for training take the training seriously.	4.141
64.	Training programme improves ability to understand superiors' viewpoint and problems.	1.021
65.	Training programme improves ability to work systematically.	1.335
66.	Training programme improves skill in collecting data and analysis the causes of problems.	-14.536
67.	The newly learned and developed skills are assessed by the superior after the training programme.	4.134
68.	Physical facilities used during the training programme are generally conducive for learning.	5.172
69.	Employees are not afraid of expressing their feelings with their superiors as well as subordinates after the training programme.	1.492
70.	Training programme enables employees to bring out problems to solving them rather than hiding them.	5.523
71.	Training programme deals with all types of conflicts with others that arise in work situations.	1.45
72.	Training programme creates trust and understanding among employees.	4.448
73.	Training programme enables seniors to trust their juniors and prepare them for future responsibilities.	6.659
74.	Training programme helps employees to recognise their hidden potential.	1.377
75.	Training programme builds confidence in employees to do what they say.	1.336
76.	Employees are encouraged to take initiative and do things on their own without having to wait for instructions from supervisors after attending the training programme.	6.808
77.	The top management goes out of its way to make sure that employees enjoy their work.	-4.636
78.	Training programme encourages teamwork.	5.274

Final selection of statements

Having calculated the t- values of each of the items (statements), the items then were arranged in the rank order according to their t- values. Items with t-value less than 1.75 were rejected

as they are considered inconsistent in defining the attitude of the respondents towards training and development. Consequently, after such rejection of items with t-value less than 1.75 *that 50 statements with t -values equal to or greater than 1.75 were left which ultimately became the list of items to form the final scale.* The list of the statements finally selected and included in the scale along with their degree as positive or negative has been reflected in Table-4.

Table-4: List of 50 statements selected for inclusion in the final scale

Sl. No	Attitude Statement	Degree of Statement
01.	The subject covered in the training programme is relevant to the job	+
02.	Training programme helps to solve organizational problems.	+
03.	Training policies in the organization facilitates development.	+
04.	Training programme helps employees to gain faith in themselves.	+
05.	Training programme is a powerful instrument for organizational development.	+
06.	Training programme prepares employees to play their role effectively.	+
07.	Training programme enables employees to understand job assignment and responsibilities better.	+
08.	Training programme does not help in improving the working skills of employees.	-
09.	Training programme helps acquire new knowledge at workplace.	+
10.	Training programme acts as a motivational tool for employee development.	+
11.	Training programme improves the worker's thinking and action in a positive direction.	+
12.	General awareness about workplace can be enhanced by training programme.	+
13.	Training programme develops a sense of belongingness and reduces absenteeism	+
14.	Training programme does not promote leadership qualities and sense of responsibility.	-
15.	Training programme does not contribute to the overall development of employees.	-
16.	On-the-job training helps an employee to use his leisure time for development.	+
17.	Training programmes are sometimes too impractical.	+
18.	Training tends to make an individual less satisfied.	+
19.	Appropriate teaching aids such as LCD, OHP etc. are useful in training programmes.	+
20.	The duration of training programme has been too short.	+
21.	Training programmes help in improving group cohesiveness.	+
22.	Knowledge gained in training programme is relevant and useful to job.	+
23.	Training programme improves the skills of time management.	+
24.	Training programme improves team participation at work.	+
25.	Training programme improves individual as well as organizational productivity.	+
26.	Training programme improves decision making skills.	+
27.	Training programme helps in improving interpersonal communication.	+
28.	Training programme enables employees to generate creative solutions.	+
29.	Training programme creates learning experience.	+
30.	Training programme improves interpersonal relation to deal with colleagues, superiors and subordinates.	+

31.	Training programme enables employees to give and receive feedback.	+
32.	Training programme makes employees to present their ideas clearly and concisely.	+
33.	Training programme enables employees to be challenging.	+
34.	Training programme enables employees to be supportive and to build on the ideas of others.	+
35.	Training programme brings job rotation which is one of the best practices for skill development.	+
36.	Training programme helps to minimize production cost.	+
37.	Training programme makes employees more discipline and improve their morale.	+
38.	Training programme improves work method of employees.	+
39.	Training programme improves quality in job assignment.	+
40.	Training programme offers opportunities for growth and advancement of employees' career.	+
41.	Training programme helps identify and use the potential of employees.	+
42.	Training programme prepares employees to invest a considerable amount of their time for development.	+
43.	Employees sponsored for training take the training seriously.	+
44.	The newly learned and developed skills are assessed by the superior after the training programme.	+
45.	Physical facilities used during the training programme are generally conducive for learning.	+
46.	Training programme enables employees to bring out problems to solving them rather than hiding them.	+
47.	Training programme creates trust and understanding among employees.	+
48.	Training programme enables seniors to trust their juniors and prepare them for future responsibilities.	+
49.	Employees are encouraged to take initiative and do things on their own without having to wait for instructions from supervisors after attending the training programme	+
50.	Training programme encourages teamwork.	+

Test of reliability

The 50 items selected after calculating their t-values as discussed in the aforesaid paragraphs were further put to reliability test to judge the soundness of the constructed scale. The most widely used procedure for estimating reliability is to divide a particular scale into two equal halves, called the split half method. The scale is divided into two halves only for the purpose of scoring and not for administration. However, two separate scores were derived, one by scoring 'one half' and the other by scoring the 'other half'. The correlation between these two sets of scores provides a measure of the accuracy. Further, any constructed scale with correlation coefficient ≥0.85 is considered as most sound. *In the present study*, the 'split-half' method has been used for testing the reliability. The scale was split into two halves on the basis of odd number(1,3,5,...) and even number(such as 2,4,6,...) of statement. The scores of even and odd items were recorded separately in order to calculate the correlation coefficient(***r***).Finally, the Spearman Brown Prophecy formula was used to estimate the reliability *(r)* of the scale, where $r = 2r/1+r$. The reliability *(r)* of the present attitude scale has been found to be 0.84029 or **0.84** which is very close to 0.85 and hence the constructed scale may be considered as highly reliable. Table-5 contains details of the calculation of reliability(r).

Table-5: Statement showing calculation of reliability *(r)*

Odd(x)	X	Square X	Even(y)	Y	Square Y	XY
121	11.85	140.42	121	16.15	260.82	191.37
121	11.85	140.42	116	11.15	124.32	132.12
121	11.85	140.42	117	12.15	147.62	143.97
121	11.85	140.42	114	9.15	83.72	108.42
111	1.85	3.42	121	16.15	260.82	29.87
108	-1.15	1.32	110	5.15	26.52	-5.92
110	0.85	0.72	104	-0.85	0.722	-0.72
102	-7.15	51.12	106	1.15	1.322	-8.22
109	-0.15	0.022	103	-1.85	3.42	0.27
110	0.85	0.72	101	-3.85	14.82	-3.27
108	-1.15	1.32	99	-5.85	34.22	6.72
107	-2.15	4.62	98	-6.85	46.92	14.72
104	-5.15	26.52	100	-4.85	23.52	24.97
106	-3.15	9.92	107	2.15	4.62	-6.77
103	-6.15	37.82	104	-0.85	0.722	5.22
108	-1.15	1.32	99	-5.85	34.22	6.72
102	-7.15	51.12	99	-5.85	34.22	41.82
108	-1.15	1.32	93	-11.85	140.42	13.62
105	-4.15	17.22	89	-15.85	251.22	65.77
98	-11.15	124.32	96	-8.85	78.32	98.67
2183/20=109.15		894.502	2097/20= 104.85		1572.506	859.35
Result : **Correlation(r)** = 859.35/sqrt 894.502*1572.506 =0.72 & **reliability*(r)***=2r/1+r= +0.84						

The scale consisting of 50 items (statements) were distributed among the respondents at random and collected back upon being filled up by the respondents. An attitude scale with 50 items described the attitude of employees towards training and development.

V. Conclusion

Training in general is an innovative stage in India and moreover, development of employees depends on the proper adoption of practices which in turn depends upon the attitude of employees. The scale developed will be of use to assess the attitude of employees towards training and development programmes in order to plan the organizational development programmes. The scale can be used by future researchers in measuring the attitude of employees in similar steel manufacturing business in the private and public sectors.

Training is an ongoing exercise not a "one shot" function which is concerned with developing potential of employees in order to get maximum satisfaction. With increased competition, organization is being faced with challenges so organization constantly focuses on improving their employees which results in the overall development of the organization performance. In this connection, training program generally build up "learning organization" to transfer the learning to all human resources for greater organizational effectiveness. It is the organizations that improves the skill of people by providing well design training programs and touches every heart by ignite a billion dreams. Thus, every organization should respect human rights, value its employees, invest in new innovative technologies and provide appropriate training program which will lead to success.

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A case study of user generated content on the collaboration of McDonals and Olympic games on Twitter

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Abstract

With constant advances in technology the influence of social media on various activities of organizations – from marketing strategy to customer service, is growing at an increasing rate. Social media is "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allows the creation and exchange of user generated content" (Kaplan & Haenlein, 2010). Social media not only grants the possibilities (for advertising, branding, public relations, communication, etc.) but also creates challenges (negative response, more time needed to monitor social media, etc.). One of challenges faced by organizations is facilitation of positive user generated content (any type digital content that is created and shared by end users of a website, this can be presented in a form of comments, images, video, audio, blogs or other type of content), reception of which ensures positive public opinion. Hence, this article aims to investigate user generated content available on Twitter web site. For the investigation, a collaboration of McDonalds and Olympic games was chosen due to various different public opinions regarding such collaboration as well as growing interest in the topic of sporting event sponsorship. The aim of this article is to investigate the user generated content on Twitter on the collaboration of McDonals an Olympic games.

Keywords: social media, user generated content, Twitter, McDonald's, Olympics.

I. Introduction

Social media is "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allows the creation and exchange of user-generated content" (Kaplan & Haenlein, 2010). Therefore, social media is a fairly vast field, encompassing social networking sites, content production sites, video and photo sharing sites, virtual worlds, diary-type webs and virtual game worlds (Aula, 2010) (Kapoor et al, 2013). Social media is an inseparable part of contemporary world, there are a lot of various case studies, emphasizing the potential and challenges of social media, e.g. The Melbourne Metro system campaign "Dumb ways to die" (Allagui & Breslow, 2015), Miss Universe pageant (Dennis, 2013), Applebee's franchise in the USA (Ott & Theunissen, 2014), United Airlines (Aula, 2010), T-Mobile (Norel et al., 2014), Parody social media accounts (Wan et at, 2015) and others.

Many researchers agree, that extended use of social media lead to higher levels of customer engagement and positive behaviour towards the organization (Allagui & Breslow, 2015). However, more than 1 million people read product or service reviews every week on a social media platforms such as Twitter, and more than 80% of these reviews are negative or critical (Balaji, et al, 2016). According to Ismail & Khalid (2015) an average of 41% of consumers are more likely to share a negative experience via Twitter or by writing a review. From such statistics we can observe, that Twitter, as social media plafrom has not only positive influence on the organizations, but also throws some signifficant challenges to the image of the organization, value of the brand, sales etc.

User generated content available on Twitter web site was chosen for analysis in this article. User generated content is defined as any type digital content that is created and shared by end users of a website, this can be presented in a form of comments, images, video, audio, blogs or other type of content. For the investigation, rather than choosing a specific organization, a collaboration of two organizations was chosen. Collaboration of McDonalds and Olympic games was chosen due to various different public opinions regarding such collaboration as well as growing interest in the topic of sporting event sponsorship. The aim of this article is to investigate the user generated content on Twitter on the collaboration of McDonals an Olympic games.

II. Description of McDonalds and Olympic games collaboration

In order to perform the investigation, it is firstly, mandatory to get the big picture of McDonalds and Olympic games collaboration. McFonalds first became the official sponsor for the Olympic games, back in 1976 after signing a long term collaboration contract. However, already back in 1968, during the winter Olympics in France, McDonalds was sending hamburgers in a special plane to the Grenoble city. These hamburgers were intended for U.S. athletes, who stated to be longing for the taste of home - McDonald‘s fast food (Aaker, 2010). Since then McDonald‘s began designating specific menus, intended for athletes, their families and fans (Pradhan, 2009:534). In 1983 McDonald‘s Olympic swim stadium, this is the first stadium, during the history of Olympics, fully funded from private funds. For the building of the stadium McDonald‘s devoted 3 million USD. Later McDonald‘s publicized an agreement, that after the Olympics, the pool will be open to athletes as well as the general public. McDonald‘s Chief Marketing Officer Paul Schrag stated, that the construction of the stadium is not just a public relations campaign for improving image, McDonald‘s wants to become a serious and important Olympic partner, as well as contribute to the general good in society and therefore, the pool will be open for all. The Olympics committee was pleased with such decision, the committee chairman Tom Bradley stated: „The equipment fully satisfies the requirements of the Olympics and will be used by guests, athletes and the community for many years to come “. However in 1988, a fitness centre was built nearby (Lyon Centre), which simply blocked the access to the pool to the community members (Pulido, 2012).

Before the 1984 Olympics, which took place in the United States of America, McDonald‘s started a campaign: “U.S. wins, You win”. Clients were given game cards with hidden sporting events. Everyone was informed that is an American wins in the denoted sporting event the holder of the card will win a glass of “Coca Cola” in the case of bronze medal, French fries in the case of silver and a „Big Mac“ burger for a gold medal. McDonald‘s calculations were based on the numbers from 1976 Olympics, in which U.S. won 94 medals, 34 of which were gold. Most medals in 1976 were won by the Soviet block countries. However, after communist block countries boycotted 1984 year Olympics, Americans won 174 medals, 83 of which were gold. The fast food chain sustained a 300 million USD loss (Carlson, 2011). McDonald‘s, when referring to the failed campaign and the Olympics stated: “Those were the most successful and most expensive Olympics ever” (Payne, 2006).

After more than 20 years McDonald‘s repeated their mistake. During the 2000 Olympics in Australia, Sydney, McDonald‘s failed to take into account the “home field advantage” of Australian athletes and fan support. McDonald‘s, as previously, prepared cards with sporting events hidden inside. In the case of Australia winning gold in the sporting event denoted on the card, the card holders would receive a free burger. When Simon Fairweather won a gold medal for Australia, McDonald‘s had to give away extra 140 thousand burgers, which amounted to more than 200 thousand USD (Payne, 2006). During Sydney Olympics, McDonald‘s had 1 200 employees in total, that worked only in spaces related to the games: athlete village, stadiums etc. Majority of these employees were very young people. McDonald‘s noted themselves as a fast food chain very frugal with their wages. McDonald‘s employees, would make from 3 to 5 USD an hour, while any 15 year old could earn 10,30 USD an hour in any other Olympic venue. McDonald‘s public relation specialists explained: “The employees will return to their regular jobs after the Olympics and will get normal wages, however, here they will obtain invaluable experience of the Olympics” (Leskyj, 2002).

McDonald‘s leveraged the 2008 Beijing Olympics in China in their competition with KFC (*Kentucky Fried Chicken*). The fact that, KFC took up a larger market share in China and was wining the competition was an unusual place for McDonald‘s to find itself in. McDonald‘s had to be more creative when creating the marketing program for the Beijing Olympics, since they not only were faced with the challenge of creating a positive image in China, with consumers that are culturally, traditionally and behaviourally different from U.S. or European customers, where McDonald‘s is the market leader (Davis, 2012). McDonald‘s prepared three programmes for Beijing Olympics: McDonald‘s Olympic champions, McDonald‘s children Olympic champions and Ronald McDonald Beijing house (Aaker

2010). During the Vancouver winter Olympics in Canada McDonald‘s presented their largest ad campaign during the Olympics. All efforts were devoted towards improvement of the image; all employees were integrated into image development process. McDonald‘s restaurants were built in athlete villages all over the town, McDonald’s restaurants were open 24/7 throughout the duration of the event. Advertisement stands, flyers and other marketing tools were employed in restaurants. Advertisements employed images of Canada’s athletes and McDonald‘s employees who were all rejoicing over the winter Olympics but for different reasons. Also it was emphasized in the advertisements, that McDonald‘s support for Olympics is not just about growing fast food sales, it is also about promotion of positive way of life. Therefore, adds featured healthier McDonald‘s offers, special Olympic menus were designated (Toohey & Veal, 2007).

After the success of the year 2012 London Olympics and Para-Olympics McDonald's reported, that it will continue supporting the Olympics till 2020. What influenced such success? What marketing tools were employed during London Olympics? Why will McDonald’s continue its sponsorship throughout the Olympics? Firstly, such success was decided by marketing decisions – high level ad-campaign “We All Make the Game”. Integrated ad-campaign provided the behind- the scenes footage of 70 thousand Olympics volunteers, fans and participants. Intensive television and outdoor advertising encouraged viewers of Olympics to actively support the athletes or their favourites. Participants of London Olympics (athletes, serving personnel, volunteers, spectators, fans etc.) were asked to send video footage and photos that capture the atmosphere of the games, best works were used in advertisements. Footage was being collected throughout the entire duration of London Olympics. This footage was intended to demonstrate, that it is people who create the atmosphere of Olympic Games and that it is a useful experience for volunteers, employees, athletes, fans and other participants (Duncan, 2012). The advertisement campaign was created at Leo Burnett company in London, the authors of the idea: Adam Tucker, Mark Franklin, Rob Tenconi, Tom Poach ir Kit Patrick (Leo Burnett London, 2012).

London Olympics distinguished themselves by the special attention to communication and its quality. Most recent information was immediately accessible on the internet. Special apps for smart phones were developed, that featured all information regarding the Olympics and scheduling, it was also possible to subscribe to short message notification service that would provide specific information regarding scheduling of events, achievements of specific athletes etc. McDonald’s did not lag behind by installing a system allowing purchases in the restaurant to be payed via mobile phones. McDonald’s proposed a small game for smart phone owners. After spotting a special advertisement stand, participants would have to transfer the image to their phone and share it with their peers. The more times the images was shared – the higher the chance of winning the final prize. However, even smaller amounts of shares were awarded. McDonald‘s presented another novelty in London – QR nutritional data code. After scanning the QR code, the customers are able to see nutritional data of their chosen McDonald‘s product. Even after major losses, McDonald‘s sustained during 1984 Los Angeles and 2000 Sydney Olympics, kept the campaign „U.S. wins, You win“, however, during the London Olympics, campaign was titled „Win, when U.S. wins gold “. This campaign was also attempted to be transferred into virtual space (Ferrand, 2012).

In 2012 London Olympics devoted extra attention towards ecology, therefore McDonald’s not being too far behind decided to open four new ecologic restaurants. One of them operated in the Olympic village, this is the biggest McDonald’s fast food restaurant, in which 500 employees can simultaneously serve 1500 visitors. Company that is the official sponsor of the games is the only one that possesses the exempt right to sell its production in the games, therefore, visitors craving French fries would have no other choice but to head to the nearest McDonald‘s fast food restaurant. This position was very favourable in London; however it got opposed and ignored by restaurants in other countries. McDonald’s filed a complaint to International Olympics Committee, regarding the positioning of Burger King as Olympic restaurant in Brazil. Burger King had a local importance offer: double portion of French fries when Brazil wins a gold medal (Wentz, 2012).

As in previous games, McDonald‘s devoted special menus, that feature a slogan: “You don't have to be an Olympic athlete to eat like one”. McDonald‘s along with athletes and famous nutrition experts attempted to promote active and healthy children lifestyle. The menus included more vegetables, dairy products than usual and best McDonald‘s restaurant chefs from around the world were flown in to promote various cooking events. For instance a program presented by McDonald‘s, titled “Champions of Food” children along with their parents could recommend their recipes for a McDonald‘s menu. One of the winners was given an opportunity to help a McDonald’s chef in creating "Happy Meal" complexes. In an attempt to promote healthy living to children, McDonald‘s presented the “McDonald‘s Champions of Play” program. A part of this program is the Championsofplay.com web site, translated 41 languages. Most of the program was created by a well-known nutritional problem professor from Leeds Metropolitan University London – Paul Gately. For promotion of the website, organizers enlisted help of famous athletes: swimmers Dara Torres and Fernando Scherer, gymnast Shawn Johnson and football player Julie Foudy. The aim of the page – inspire kids to take up sports through the help of fun games. Two participants of the program were awarded with prizes – a chance to spectator at the Olympics, to cross the finish line together with an athlete and to go receive a medal at the podium.

In order to promote “green” marketing ideas McDonald‘s outfitted their new restaurants with advanced electricity and water saving technologies. Constructions employed environment friendly materials, which after the London Olympics were recycled. Also, all of the equipment used during the Olympics was repurposed for use in other restaurants. During the entire duration of London Olympics, McDonald‘s had 2 000 employees, that were employed only during the games period in London, 1 200 McDonald‘s restaurants in total, were operating in UK. Additionally introduced were new, fully recyclable employee uniforms.

Despite the benefitial partnership both, the Olympics and McDonald‘s received a lot of critique from the society. McDonald's are associated with obesity problems in UK and around the world, while Olympics are associated with being motivated by profit. Usually sporting games are associated with such topics as: healthy living, honesty, righteousness, trustworthyness, prestige. Sponsorship is like a factor for brand value generation, therefore McDonald‘s wants to adopt associations towards Olympics occuring in customer minds towards its production (Lensky, 2008). Thomson (2011) compared values created by McDonalds media, and Olympics, relying on this comparison we can conclude that values of organizations differ greatly. McDonald‘s is mostly associated with negative effect on the consumer, while Olympics are associated with positive feelings in customers. A value that aligns in both cases is - equality. This value can be interpreted in the following way – all customers have are eaqual and have eaqual rigths to quality food or to participation in games. Dean Barrett, McDonald’s vice president for global marketing, stated that, the “spirit of McDonald’s and Olympics is related, since both organizations directly ”touch” people of all age groups and cultures” (Davis, 2012).

McDonald‘s slogan: ”You don't have to be an Olympic athlete to eat like one” is highly criticized by health organizations and psychologists. In their opinion, kids especially, are made to believe, thet they will become Olympic champions by eating McDonald‘s food. Gary Bennett (professor at Duke University) describes McDonald‘s actions when supporting Olympics as: ”marketing activities, intended to use the healthiest and most athletic part of the population in order convince the consumers that fast food industry is healthier than it is commonly believed to be”. Professor G. Bennett notes, that athletes are more efficient at burning through the calories present in McDonald’s burgers, fries or sodas (Berkes, 2010). Terence Stephenson, representative of Royal Medicine academy states: ”It's very sad that an event that celebrates the very best of athletic achievements should be sponsored by companies contributing to the obesity problem and unhealthy habits”. A group of practitioners from Royal Medicine academy filed requests and petitions in an attempt to limit ad campaigns by McDonald‘s, Coca-Cola and Heineken durin London Olympics. Attempts were fruitless, however, as the Olympics committee stated: ”Without partnership with McDonald‘s, Olympics could not take place” (Cheng, 2012).

McDonald‘s, over many years has become one of the most important sponsors of the Olympics. McDonald‘s renewed its role as a sponsor for the Olympics till 2020. Such decission was influenced by many factors: success in London Olympics, image improvement, competitor actions, 35 years of experience, positioning and achievements attained in the position of official Olympic restaurant, image building potential, employee morale enhancement, etc. McDonald‘s position as Olympic sponsor helps in creating a socialy responsible image (Toohey & Veal, 2007). Drawbacks of partnership for both, McDonald‘s and Olympics are immaterial – negative responses in media, critical evaluation in society, negative image building etc.

III. Methodology

The occurrence investigated in the case analysis – user generated content in microblogging site Twitter during 2015, evaluating McDonalds and Olympics collaboration. Sentiment analysis was applied, therefore hypertext will be investigated (text displayed on a computer display or other electronic devices) (Hart, 2014). While analysing, firstly a Twitter search for two keywords - “McDonalds” and “Olympics” was performed. Further, all microblogging messages for 2015 were collected and classified. Sentiment analysis was performed, by denoting main attitudes, emotions and opinions, related to McDonald’s and Olympics collaboration, and data interpretation by integrating the context of the analyzed occurrence.

Research data was gathered in January 20 – 26, 2016. 278 messages, were gathered in total, however, only a part of these were analysed, because 23 messages were related either only to Olympics or only to McDonald’s, hence these messages did not fit the scope of the research (Table 1).

Table 1. Messages gathered on Twitter during 2015, evaluating collaboration between McDonald’s and Olympics

Period	Messages about collaboration between McDonald’s and Olympics	Messages encompassing McDonald‘s activities, however not related to Olympics	Messages encompassing Olympics activities, but not related to McDonald‘s	Total
January	36	1	1	38
February	21	2	0	23
March	20	0	0	20
April	16	3	0	19
May	15	1	2	18
June	20	4	0	24
July	21	0	1	21
August	21	2	1	24
September	27	0	0	27
October	21	1	0	22
November	20	3	1	24
December	17	0	0	17
Total	255	17	6	278

Usage of a tool described in Benthous et al (2016) method - ‘‘SentiStrength 2” (an automated unsupervised sentiment analysis, meant to handle the large amount of data that allowed for determining positive and negative opinions, emotions, and evaluations) was attempted, it is especially designed to analyze the sentiment of short informal texts like those that can be found on Twitter. The algorithm returns a sentiment assessment ranging from –5 to +5 for every message expressing their tonality. However after repeatedly reviewing Twitter messages it was noticed that the tool assumes sarcasm and irony as positive (e.g. messages “McDonald’s being the supporting restaurant for the Olympics is like Kim Jong Un enjoying The Interview, it’s not supposed to happen” was evaluated by +3). Therefore according to the tool recommendations 255 usable messages were classified into 4 groups – rational, positive, negative and irrelevant (Gasper et al, 2016) (Table 2.)

Table 2. Messages gathered on Twitter during 2015, evaluating collaboration between McDonald’s and Olympics, classification into groups

Period	Rational messages	Positive messages	Negative messages	Irrelevant messages
January	17	4	14	1
February	4	4	13	0
March	5	0	13	2
April	4	3	9	0
May	7	2	6	0
June	7	2	11	0
July	5	1	14	1
August	7	3	11	0
September	11	4	12	0
October	6	1	14	0
November	7	0	13	0
December	11	0	6	0
Total	91	24	136	4

IV. Results

All collected messages were classified into groups – rational, positive, negative or irrelevant messages. A particular group of comments was titled as **irrelevant messages**. Comments in this group are generally considered to be out of the bounds of this study. Majority of comments in this group could be denoted as either malicious, attention seeking, non-contributing or any combination of the three. Internet slang for this type of response is usually – “trolling”. On internet, comments are considered to be of such nature regardless of whether the projected opinion is positive, neutral or critical of the subject in question. What is of real crucial essence here, however, is the intention of the responder – if the poster was not intending to contribute to content development, but rather to attract attention or pick a fight, it is deemed unsuitable for the investigation at hand. This includes: ad hominem attacks, purposefully misleading information, unrelated tall tales etc. As such responses are an inevitable part of social media it is a very likely case that they have influence over the subject’s reputation building process on social media. However, as there has been no clear methodology developed for evaluating the impact of such input, these comments are excluded and reserved for future research, if and when an appropriate methodology is available.

Rational messages encompass content that does not provide subjective statements and therefore is neither negative nor positive, or in other words, their sentiment was equal to 0 (as computed by "SentiStrength 2" evaluation tool). Rational messages, most commonly are impersonnal and do not feature graphics for reflecting emotions. Majority of rational messages was comprised of sales ads for souveniers from previous olympics, an example of such ads can be seen further: "*VINTAGE USA 1984 OLYMPICS MCDONALDS MESH SNAPBACK TRUCKER HAT CAP FROM http://ift.tt/1CahKbe* " or a special offer ad: "*Wednesday, February, 18 come to McDonalds on Broadway between 5-7 there giving 20% of purchase for LG Special Olympics*". Rational messages made up 35.7% of all content.

Positive messages made up the minority of the gathered content totaling only at 9.4% of all the messages for the year 2015. Positive messages in this case were discerned by their positive score of at least +1 or more and those that (in accordance to the context) did not feature irony or sarcasm. Often, the messages were posted in relation to other organizations, also involved in supporting the Olympics, a few examples include: "*Tomorrows IF Seminar at MSI welcomes speakers from Dow Chemicals, McDonalds & IOC @olympics @McDonalds @DowChemical*" (due to the verb "*welcomes*" this message is classified as positive), "*Thousands celebrate Olympic Day in #Singapore http://ow.ly/QoLQU #olympics #mcdonalds*" (verb – "celebrate"), "*Come out to McDonalds in Hamden Plaza to support our Special Olympics Team*" (verb - support). Messages feature verbs with positive polarity, some examples of such verbs: "*please*", "*thanks*", "*like*" etc. On a few occassions consumers used adjectives with positive polarity, a few examples of such use: "*fair*", "*best*", "*great*" etc. A lot of results from "SentiStrength 2" tool were mistakenly classified as positive messages due to use of irony and sarcasm to express negative emotions, yet the tool mistook these messages as having a positive polarity due to inherent humour, these messages were transferred to the negative group after a review.

Majority of messages were comprised of negative messages – 53.3%. **Negative messages** feature irony, sarcasm and are evaluated at -1 or lower ranking by the "SentiStrength 2" evaluation tool. Most messages related to collaboration between McDonalds and Olympicswere messages of ironic or sarcastic content. One of the most common sentences shared by the users was: "*Who else finds it kinda funny that McDonalds sponsors the Olympics?*". Since the sentence uses the adjective "*funny*" when performing sentiment analysis, the "SentiStrength 2" tool determined the sentence to possess +2 positive strength and -1 negative strength, however after reviewing the context, the sentence actually expresses a negative attitude towards collaboration between Olympics and McDonalds. A few examples of messages falsely identified as positive due to present sarcasm or irony are provided further: *"Even though McDonalds is a proud sponsor of the Olympics, the athletes are proud non eaters of their product. @ObecanoACPM #eatright*", "*@AlanMurchison Coke and McDonalds sponsor the Olympics,the diet of champions eh!*", "*#shawmarketing #shawacademy got to love the McDonalds fail at the '84 Olympics 'when the US wins you win' campaign*".

However, not all ironic or sarcastic content was evaluated as positive. A few ironic or sarcastic messages were evaluated as negative as well, for example: "*McDonalds: We may cause obesity but we sponser every sport from football to the Olympics*", "*McDonalds being the official sponsor of Olympics is like smoking being official medicine of cancer*". Messages that did not feature irony or sarcasm, clearly expressed negative emotions, attitudes or opinions. Messages also used a lot of adjectives with a negative polarity, for instance - "*dumbest*", "*ironic*", "*unhealthy*", "*embarrassed*", "*fat*", "*ludicrous*", "*shamefully*", "*irresponsible*", "*awful*" etc. Negative verbs are used as well, e.g.: *"fail*", "*avoid*", "*boycott*", "*hate*", "*baffles*" etc.

When analyzing the messages, instances of online activism (Veil et al, 2015), suggesting to boycott the 2020 Olympics in Japan. Most commonly used messages were addressed towards McDonalds organization with statements such as: "*@McDonalds Japan slaughter dolphins each year. Your brand is toxic conected to japan olympics #OpKillingBay*". The message occasionally also featured a related image. The messages were different, by not being negative towards a particular organization

or collaboration of McDonalds and Olympics, but are against actions carried out at a specific country. Summing up all of the above, it can be stated that user opinion on microblogging website Twitter in 2015 on McDonalds and Olympics collaboration is more negative rather than positive.

V. Conclusions and discussion

The content was investigated using sentiment analysis, which employed a "SentiStrength 2" tool. The tool ranked messages based on the type of emotion projected by the words used in the messages. Ranked messages were then classified into groups: neutral, positive, negative and irrelevant which made up 35.7%, 9.4%, 53.3% and 1.6% of the content respectively. It should be noted however, that results obtained from the tool "SentiStrength 2" analysis had to be altered, as some messages featuring sarcasm and irony were mislabeled, a discrepancy which should be addressed in future releases of the tool.

After conducting an investigation of activity during 2015 on microblogging website Twitter, it was concluded that public opinion regarding the collaboration between two organizations – McDonald's and the Olympics is mostly negative. Since the Olympics attract very large and varied demographic, it is of McDonald's interest to keep sponsoring the Olympics in order to leverage the resultant exposure. With McDonald's being the strongest sponsor of the Olympics, the Olympics are also inclined to continue the partnership further. Keeping this situation in mind it is apparent, that the issues indicated by these results require attention from both sides as both are parties of interest.

Majority of the negative views and generated content arise from the inherent discrepancy between healthy living (fitness) and fast food. Statements, whether intended or not, suggesting that irresponsible consumption of fast food will leave customers as healthy as the Olympic athletes is viewed as false and hypocritical at the least. To dispel such the negative backlash from such statements, both organizations should get involved in actively promoting healthy lifestyle choices, even including their own menu items. McDonald's made such attempts in the past as mentioned in the article, however this should be done with more emphasis on education on sensible nutrition. Athletes already act as promoting agents of fast food, however they could also educate the public on which, how and why McDonald's menu items make it into their daily routine. This way, helping to make a case for sensible nutrition with presence of fast food items, yet cautioning against irresponsible consumption at the same time. Another way to alter the image of McDonald's towards a health conscious establishment would be to not limit their green marketing and healthy lifestyle promotion practices to just Olympics or other sporting events, but to extend it to day-to-day customers as well.

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Eventual shortcomings of the electricity market model development in the Baltic States

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Abstract

Latvia was the last from three Baltic States taking a part in the NPS. NPS is one of the world's largest power exchanges trading in physical energy and financial products and other mitigating measures provided by Transmission System Operators as well. Therefore, transition from one market model to another was not so smooth and encountered significant volatility of electricity prices at least in Lithuanian and Latvian price zones. The investigation of electricity market model development in the Baltic States shows the main possible reasons why the transition period turned into financial problems.

Keywords: Electricity market, Market price, NPS, TSO, congestion management

I. Introduction

Over several years, the Baltic States electricity markets have been using a rather modern Nord Pool platform for electricity trading, including physical and financial products and other mitigating measures provided by Transmission System Operators (TSOs). Nevertheless, it was not so easy at a very beginning. Worldwide energy reforms moving from a sector dominating vertically integrated monopolies and therefore regulated electricity markets towards deregulated, liberalized ones were carried out at the end of the last century (Hämäläinen et al, 2000, Jacobsen et al, 2006). Different models with different regulative culture and different degree of competitive market penetration into electricity sector were implemented across countries (Bohne, 2011).

Reforms or better to say evolutionary changes taken place in the Nordic countries were the most advanced among others. Procedures were based on the market principles as much as possible not only on the generation side but in regard the infrastructure as well. It was a challenge for the Baltic electricity market to access the advanced arena of the Nord Pool Spot. Therefore, the Baltic States have to overcome a transition period from highly regulated price environment because of market dominating actors to the merit order procedure resting on the marginal price applied in the NPS. Estonia and Latvia were relaying on the bilateral contracts. Lithuania was also relaying mostly on the bilateral contracts but at the same time it was using a self-prepared exchange based on the merit order procedure but resting on the average price. Despite the fact, that Lithuania could be treated as the most advanced among other Baltic States, the transition was not so smooth and encountered significant volatility of electricity prices in day-ahead market. The year 2012 can be divided in two parts – the first half of the year with the old fashioned market model and the second half facing the NPS. The price fluctuation was no more than 17 % during the first part of the year, while during the second part it jumped more than twice and reached 38 %.

It was a big chock for market participant to trade electricity in such a volatile environment and they experienced significant financial losses. Moreover, significant price jumps still occur especially in Lithuanian and Latvian price zones. Having a participation experience already for several years, it is very important to analyze it and make fruitful conclusions.

II. Research Methodology

The core aim of this research is to investigate the main reasons why the transition period turned into financial problems for the electricity suppliers. In order to perform the research answering the question what are the main reasons why the transition period turned into financial problems for the electricity suppliers, theoretical analysis, based on results and conclusion of various scientific papers and practical reports, a systematic analysis, an analysis of statistics, a case analysis,

generalization, comparison, abstraction was utilized. The data was mainly collected from the NPS, Lithuanian National Commission for Energy Control and Prices, Republic of Estonia Competition Authority, the Public Utilities Commission of the Republic of Latvia whose are independent national regulatory authorities and regulate the activities of entities in the field of energy and carrying out the supervision of state energy sector, and Baltic States TSOs.

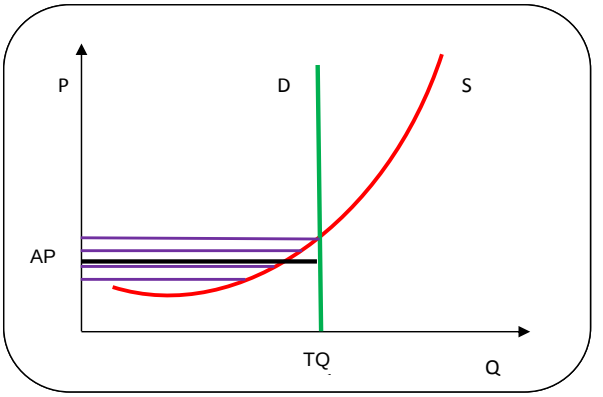
III. Electricity market development in the Baltic States

Reforms concerning electricity market model accelerated after the passing of qualitatively new Law on Lithuanian Electricity sector in the year 2002. The Law on Electricity was prepared in accordance with the EU energy package requirements. The law has set the market liberalization procedures and timing, solidified the regulated third party access to the grid and the approach of the vertically integrated monopoly unbundling. Lithuania was the leading country among other Baltic States regarding the market reforms with 45 K eligible customers and 24 electricity suppliers in the year 2004 (Lithuanian National Commission for Energy Control and Prices (the NCC), 2005).

Nevertheless, Lithuania has implemented an auction procedure aside prevailing bilateral contracts. As can be seen from

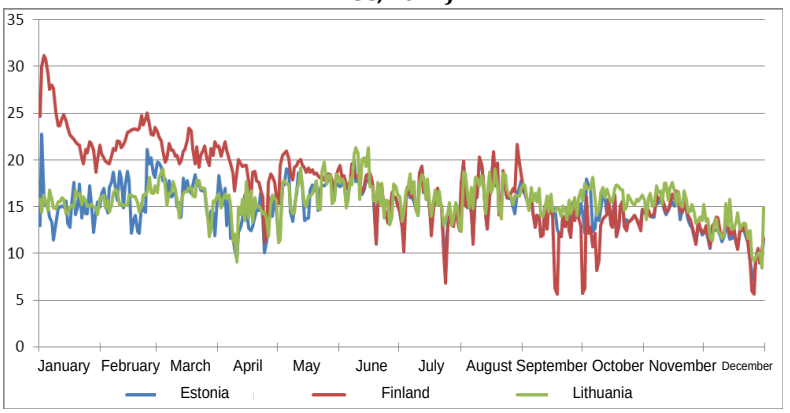
Figure 6, so called single buyer defines the total quantity of electricity required and generators submit the proposals containing price and quantity. Generators are arranged according the merit order and get the price on the bases „pay as bid", and demand side pays a weighted average price calculated in accordance to qualified generators' proposals. It is clear, that applied action principles do not correspond to regular exchange principles based on marginal price.

Figure 6. Lithuanian electricity market model price clearing principle



At that time price fluctuations were relatively small in Lithuania comparing with other countries already participating in the NPS. A more detailed picture of an average daily price fluctuation in different electricity markets can be seen in Figure 7.

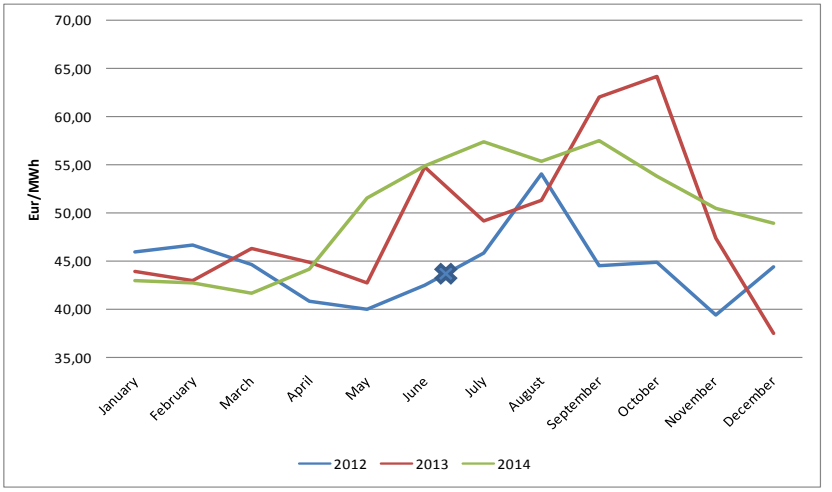
Figure 7. Average daily electricity price in Estonia, Finland and Lithuania in 2011, ct/kWh (the NCC, 2012)



Regular electricity exchange was launched in Lithuania on 18 June 2012 and from this moment the clearing of Lithuanian electricity market price is being made by Nord Pool Spot relaying on the regular exchange principles based on marginal price. It could be assumed that it was a smooth shift because of already acquired know how of acting in the market. Figure 8 indicates the contrary.

After the quite smooth change in price trend comparing to other markets (see Figure 7), the price shocks became a part of market trend development. A blue cross indicates the moment of the NPS lunch in Lithuania. At the time it divides the year 2012 in to two equal parts. The lowest price of the first part of the year was 39.88 Eur/MWh when the highest was 46.63 Eur/MWh and it corresponds to the 17 % of the price deviation. The second part of the same year showed the price deviation of 34 % with the lowest price 39.33 and the highest 54,10 Eur/MWh. Having long-term contracts with already predefined prices, suppliers wet into financial difficulties providing the contractual prices for the customers and at the same time buying electricity from the NPS. Two ensuing years showed even higher price deviation.

Figure 8. Price fluctuations in Lithuania, 2012-2014



Independent suppliers were confused and felt suspicious. That's why, on 1 August 2013, the NCC together with the regulatory authorities of other Baltic States started the investigation of the

price jump at the NPS, which had occurred on 25 June 2013, and the potential breach of Regulation No 1227/2011 of the European Parliament and of the Council of 25 October 2011 on wholesale energy market integrity and transparency. At that time the hourly price, which had been forming in the electricity trading zones of Lithuania, Latvia and Estonia, equaled 103.85 Eur/MWh. It should be mentioned that in 2013 the average market price of electricity in Lithuania was 47.93 Eur/MWh (the NCC, 2015).

Formation of the Estonian electricity market dates back to 1998, when the Energy Act was introduced. The Energy Act the status of an eligible electricity customer was defined as the customer with an annual consumption of over 40 GWh but later on the annual consumption was reduced till 2 GWh (Republic of Estonia Competition Authority, 2009). Joining the EU Estonia gained the exemption and according to this exemption, 35% of the market had to be opened by 2009, while by 2013 the market was opened for all customers. It is important to mention, that the eligible consumers did not exercise the possibility to buy from an open market in Estonia. The reason was that by law the eligible customers were allowed to continuously buy electricity also at regulated tariffs. As the regulated tariffs were lower than the market price, thus, not a single eligible customer changed its supplier (Republic of Estonia Competition Authority, 2010). The main reason was that the state-owned vertically integrated monopoly owned almost all the market capacity – more than 95% of power production and 90% of the distribution market.

In January 2010 comprehensive amendments were adopted in the legislation expecting the significant contribution to a real market opening. Among others the eligible customers were deprived from the right to buy electricity at regulated prices. Herewith, they were directed to an open market and a regulation was created for the functioning of a power exchange in Estonia (Republic of Estonia Competition Authority, 2010). Soon after these changes NPS was launched in Estonia. In other words, Estonia has changed its market model from mostly based on bilateral relationships adding to them the regular exchange.

Latvian case is quite similar one. The state-owned company JSC "Latvenergo" dominated the field of electricity supply in Latvia. This company controlled more than 90% of installed capacity for the generation of electricity. JSC "Latvenergo" soled electricity to both - captive customers and market participants and owned the biggest part of the market (The Public Utilities Commission of the Republic of Latvia (the PUC), 2014). Latvia was the last among three Baltic States taking a part in the NPS. Regular exchange principles came from the middle of the year 2013. On the bases of the analysis given above it is possible to conclude that lack of know-how of acting in the regular exchange could be one of reasons leading to the financial problems of the suppliers. The fact supporting this statement is given further.

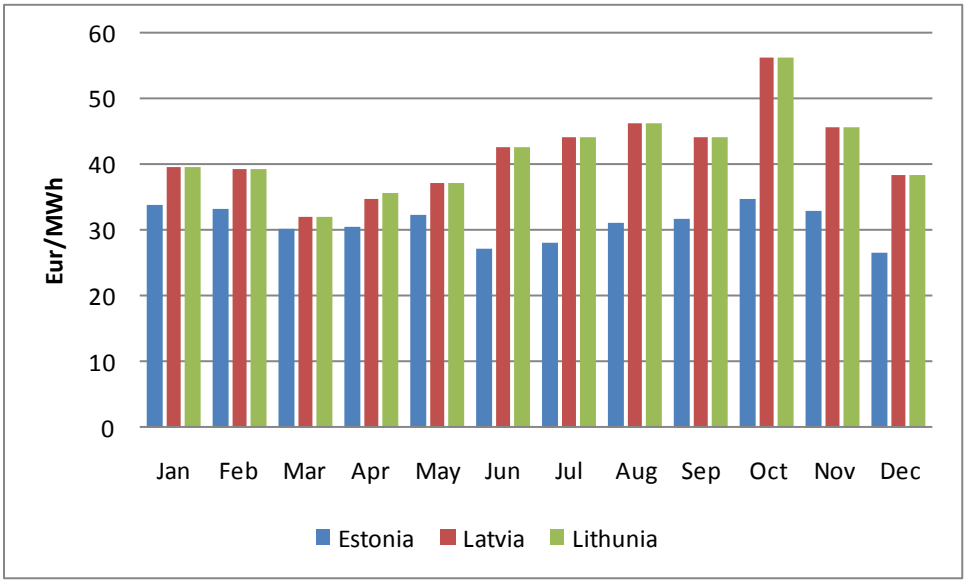
In October 2014, after receiving the notification from the operator of the NPS, the NCC started the investigation on the potential breach of trade by using publicly undisclosed inside information. The main objective of the investigation was to clarify whether Lithuanian JSC Lietuvos energijos gamyba was allegedly trading by using the publicly undisclosed inside information. After completing the investigation, it was found out that on 30 June 2014 and 1 July 2014 JSC Lietuvos energijos gamyba was trading at the NPS by using the publicly undisclosed inside information at the same time having no right to do so until this information was disclosed to other market participants. Consequently, the NPS and other participants could have incurred losses. Besides, the NCC made a decision to initiate the procedure of imposing sanctions against JSC Lietuvos energijos gamyba (the NCC, 2015).

On the other hand, price deviations are accompanying part of the market functioning and problems can be only temporary. This claim is valid when market participants are wizards of prediction the future or market provides some financial products for hedging against the market trade risks. Therefore, the issues of the integration of the European markets for the day-ahead and intraday trade were being solved only several years after the NPS was launched. In November 2014, Nasdaq

OMX proposed financial products for Latvia and, at the same time, for the trading zone of Lithuania for hedging against the market trade risks (the NCC, 2015).

As with the previous fact, it can be assumed that problems were solved and problems caused by price deviations were managed. Moreover, the Estonian Competition Authority stated that a positive side of the power system in all three Baltic countries is the very strong power transmission infrastructure. In fact, Baltic countries are the only EU region in which transmission power deficit and the so-called bottlenecks do not exist (Republic of Estonia Competition Authority, 2009). Figure 9 clearly shows that the Estonian Competition Authority was rather mistaken in this case.

Figure 9. Price differences in the Baltic States, 2015 (prepared by authors' using the NPS data)



Having a strong impact on the proper market model functioning, a congestion management is one more aspect coming into light.

There were more or less separated operations between of infrastructure and trading before the NPS started to operate in the Baltic market. The explicit capacity auctions were used to share available transmission capacities among market participants and after that contracts for electricity were concluded. It was a rather simple and stable trading environment for the market participants. Unfortunately, such a method did not give appropriate incentives for TSOs to reduce congestions.

The NPS platform creates intensives through electricity pricing and provides price signals not only for producers and suppliers but for TSOs as well. The Baltic TSOs had done significant preparation works in order to harmonize their activity with the requirements of the NPS and among three Baltic TSOs in regards the congestion management issues as well. Unfortunately, such rather new aspects were introduced without consistent explanation and consideration with other market participants in particular regarding hedging methods.

The biggest opposition aroused from Lithuanian traders to the TSO congestion management policy. Traders accused TSO of the lack of incentives to reduce restrictions of interconnections while cheaper electricity from neighboring price arias cannot be utilized.

Just after lunching the NPS, Estonian and Latvian TSOs have started to receive a rent for a congested interconnection between Latvia and Estonia which accounted for more than 2.5 million Euros in the year 2014 and around twice more in the year 2015 (Pažėraitė and Krakauskas, 2014). Source for paying the rent usually is a positive payment balance of the NPS which always takes place in the market consisting from price areas interconnected between each other with congestions.

Unfortunately, this kind of payment mechanism does not provide any incentive to reduce congestions because TSOs get rent particularly for that. In this case, only controlling institutions can imply the force to use the rent for improving interconnections but there are still no significant steps made. Moreover, this kind of payment mechanism does not provide any possibility for market participants to hedge mitigating the price peaks.

Other available mechanisms to handle the congestion are physical transmission right (PTR) and financial transmission right (FTR). PTR means a right entitling its holder to physically transfer a certain volume of electricity in a certain period of time between two bidding zones in a specific direction. This method is implemented through the auction procedure.

FTR option does not give any physical right and as such means a right entitling its holder to receive a financial remuneration based on the day ahead allocation results between two bidding zones during a specified period of time in a specific direction (ENTSOe, 2015). FTR is the most advanced method, since it concerns only financial obligation without any physical execution. Also, this method gives a proper incentive for TSOs to reduce congestions as much as possible. This method utilizes the lottery principle. In this case, not only TSOs but traders are taking their part in the congestion management as well.

Therefore, all the difficulties and not properly and timely managed uncertainties resulted that in 2014, as compared with 2013, the number of the Lithuanian market participants holding the independent electricity supply permits went up from 67 to 73, but the number of active suppliers went down from 25 to 18. At the NPS the number of active participants in the day-ahead trade Elspot also dropped from 18 to 15, while in the intraday trade Elbas 6 participants invariably remained (the NCC, 2015).

IV. Findings and Conclusions

The Baltic States had to overcome a transition period from highly regulated price environment because of market dominating actors to the merit order procedure resting on the marginal price applied in the Nord Pool Spot. All three Baltic States were largely using bilateral contracts. Therefore, Lithuania has introduced a self-prepared exchange based on the merit order procedure but resting on the pay as bid in regards supply side and an average price for the demand side. Analysis shows three eventual shortcomings of the electricity market model development in the Baltic States: lack of preparedness of the newcomers of the Nord Pool Spot and insufficient information from the TSOs and regulating institutions; launching the Nord Pool Spot without full scope of market risk hedging instruments; lack of the TSOs facilitation to the effective market functioning.

All the difficulties and not properly and timely managed uncertainties resulted that the number of active market participants holding the independent electricity supply permits went down while experiencing uncontrollable circumstances resulting financial loses. At that time the hourly price, which had been forming in the electricity trading zones of Lithuania, Latvia and Estonia equaled 103.85 Eur/MWh while the average market price of electricity in Lithuania was 47.93 Eur/MWh.

The research is timely and has to be extended as Lithuania is launching new interconnections with Sweden and Poland. Lots have to be done preparing the rules on calculation and allocation of interconnection capacities. In order to facilitate the effective trading, all the

stakeholders have to be involved in transparent process of the public consultation, timely informed and empowered to act.

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An Analysis of the Relationship between the Real Gross Domestic Production (RGDP) and Tourism Sector: An Econometric Study on Sri Lankan Perspective

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Abstract

This study targeted to find the relationship between the Real Gross Domestic Production and the tourism industry which was one of the key industries in promoting economic growth and development in Sri Lankan context. The variables used in this study were Real Gross Domestic Production, Tourism Receipts/Income, Tourists Arrivals, Tourism Employment and Dummy (1/0). The dependant variable was Real Gross Domestic Production and the rest of the variables were independent variables. The Dummy stood for the war period or not by defining '1' for the war period and '0' for non-war period in Sri Lankan context. The data used in this study were collected from the annual reports of Central Bank of Sri Lanka for the time period of 1970 to 2014. The quantitative methodology used in this study was based on the econometric analysis using the Statistical Software of E-Views, Minitab and MS Excel in collaboration with the parametric and non parametric analyses. The time series econometric techniques such as Augmented Dickey Fuller for unit root test, Engle Granger for co-integration and Granger causality test for causal relationships between the variables were used in this study. This study found that a positive relationship existed between tourism receipts and economic growth in the long run and the unit root test resulted in the stationarity of the variable. The Granger causality test showed the two way causal relationships from Tourism Receipts to Real Gross Domestic Production and from Real Gross Domestic Production to Tourism Receipts. This study prominently suggested for the government and policy makers to keep on focusing on the economic policies to be designed for the promotion of tourism industry as one of the prospective sources for economic growth and development in Sri Lanka.

Key Words: Tourism Industry, Parametric, Spuriousness, Granger Causality, Augmented Dickey Fuller

I. Introduction

Modern tourism in Sri Lanka expanded rapidly after 1966 when the government established the Ceylon Tourist Board, now called the Sri Lanka Tourism Board (SLTB). The government of Sri Lanka recognized the tourism industry as a prominent and potential sector of growth in the post-war development with a target of attracting 2.5 million tourists by 2016. There are 39 tourist attractions all over Sri Lanka (Ismail, et.al. 2012). The number of tourist arrivals reached a peak of 407,230 but then declined to 337,342 arrivals in 1983 due to the ethnic tension between Sinhalese and Tamils.

Tourism industry has experienced persistent expansion and has achieved a significant source of global economic output over the past six decades. Tourism has been identified as one of the fastest growing industry in the world. According to the United Nation World Tourism Organization (UNWTO), tourist visits have grown from about 900 to 940 million last year and the figure is projected to rise to 1.6 billion by the year 2020 and UNWTO states that tourism is the largest industry in the world with an estimated 11.5 percent of the world GDP and employing about 12.5 percent of the world's work force (Halter & Randle, 2012). International tourist arrivals calculated as 25 million in 1950, 278 million in 1980,528 million in 1995, and 1,035 million in 2012 and 1.8 billion tourist arrivals are forecasting the year 2030 (UNWTO,2013). Travel & Tourism is an important economic activity in most countries around the world. As well as its direct economic impact, the industry has significant indirect and induced impacts. The UN Statistics Division-approved Tourism Satellite Accounting methodology (TSA: RMF 2008) quantifies only the direct contribution of Travel & Tourism. But WTTC recognizes that Travel & Tourism's total contribution is much greater, and aims to capture its indirect and induced impacts through its annual research (WTTC, 2014).

The direct contribution of Travel & Tourism to GDP in 2013 was LKR336.6bn (3.9% of GDP) in Sri Lanka. This increased to 3.5% to LKR348.3bn in 2014.This primarily reflects the economic activity generated by industries such as hotels, travel agents, airlines and other passenger transportation services (excluding commuter services). But it also includes, for example, the activities of the restaurant and leisure industries directly supported by tourists. The direct contribution of Travel & Tourism to GDP is expected to grow by 6.1% per annum to LKR628.2bn (3.7% of GDP) by 2024 in Sri Lanka. The total contribution of Travel & Tourism to GDP (including wider effects from investment, the supply chain and induced income impacts, see page 2) was LKR 800.7bn in 2013 (9.4% of GDP) and is expected to grow by 4.3% to LKR 835.3bn (9.1% of GDP) in 2014. It is forecast to rise by 6.2% pa to LKR 1,527.2bn by 2024 (9.0% of GDP).

Travel & Tourism generated 286,000 jobs directly in 2013 (3.5% of total employment) and this is forecast to fall by 2.0% in 2014 to 280,500 (3.4% of total employment). This includes employment by hotels, travel agents, airlines and other passenger transportation services (excluding commuter services). It also includes, for example, the activities of the restaurant and leisure industries directly supported by tourists. By 2024, Travel & Tourism will account for 360,000 jobs directly, an increase of 2.5% pa over the next ten years in Sri Lanka (WTTC, 2014). The total contribution of Travel & Tourism to employment (including wider effects from investment, the supply chain and induced income impacts, see page 2) was 688,500 jobs in 2013 (8.4% of total employment). This is forecast to fall by 1.6% in 2014 to 677,500 jobs (8.3% of total employment). By 2024, Travel & Tourism is forecast to support 804,000 jobs (9.5% of total employment), an increase of 1.7% pa over the period.

Visitor exports are a key component of the direct contribution of Travel & Tourism. In 2013, Sri Lanka generated LKR254.1bn in visitor exports. In 2014, this is expected to grow by 2.2%, and the country is expected to attract 1,351,000 international tourist arrivals. By 2024, international tourist arrivals are forecast to total 2,571,000, generating expenditure of LKR469.0bn, an increase of 6.1% per annum. Travel & Tourism is expected to have attracted capital investment of LKR92.4bn in 2013. This is expected to rise by 6.4% in 2014, and rise by 5.7% pa over the next ten years to LKR171.0bn in 2024. Travel & Tourism's share of total national investment will fall from 4.0% in 2014 to 3.8% in 2024 (WTTC, 2014).

The empirical data disclose that Sri Lanka like other countries such as Malaysia, Singapore and Spain has much potential to invite foreign direct investment through the tourism means. That's why; this study is devised to light up this significance of factors of the tourism sector in Sri Lankan context. As such, this study herewith guides to focus on tourism sector as main source as to influence on Gross Domestic Product of the country and also it presents implications of tourism to develop the country nationally. Since this study paves the way to make the tourism sector to be comprehensible with economic growth, it is aimed to develop the tourism sector in terms of economic boom of the country. Thus, the contribution of this study leads to the generation of knowledge for future studies and it contributes to reacquaint researchers with the existing knowledge in the field of tourism and economic growth.

1.2 Objective Of The Study

1. To explore the impact of tourism on the economic growth and development in Sri Lanka context.
2. To come across the relationship between Real Gross Domestic Production and tourism industry in Sri Lankan context.

II. Literature Review

Related literature review as done by the researcher in order to justify the purpose of the chosen study and it is discussed in detail below:

Nihal A. Farooquee, et. at. (2008) assessed the socio cultural impacts of camping on the river beach and white –water rafting development on the River Ganga in Uttarakhand in India using primary and secondary data. He found some of the positive and negative socio cultural impacts of tourism development in the area. Income generation, employment opportunities from both camping and rafting to the local people, infrastructure development such as hotels, lodges and camps, improvement of the social services such as access to electricity, communication and telecommunications were positive impacts of the tourism adventure from his study. And also he found some of the negative socio cultural impacts such the increased out migration, frustration among the youth and the cultural degradation. Manika Singla (2014) focused in her study on the socio-cultural impacts perceived by residents as the impacts of tourism development and identified the effects of demographic variation on the residents' attitudes towards tourism in Jaipur, India using quantitative research. He used Microsoft Excel to capture the data and analyzed the data by using the Statistical Programme for Social Sciences (SPSS 16.0) with the factor analysis to determine the underlying impacts of tourism on the residents, t-tests and ANOVA used to determine differences between various demographic variables and the impact statements and finally Chi-square test to identify the determining factors of respondents' overall opinion towards tourism impacts. She concluded with the perceptions of respondents on the positive social impacts of tourism such as the increase in quality of life, the increase in their morality, honesty, and hospitality towards strangers, the increase in language skills and learning about other nations. Pressures on civic amenities, overcrowding and congestion in the city were identified as the negative social impacts of tourism development in this research area.

Lateef Ahmad Mir (2014) exposed the economic viability of the Indian tourism industry by employing secondary data taken from various national and international reports, journals, books, magazines and other relevant literature of this discipline and statistical tools (OLS). He found that the Indian tourism industry played an important role in economic development of many sectors of the economy by generating employment both for skilled and unskilled labour force, by improving living standard, particularly of remote rural areas , foreign exchange earnings, infrastructure development, and boosted the world famous Indian traditional Art and craft; tourism was an important catalyst in the socio-economic development of both rural and urban areas since the last two decades, contributing in several ways and strengthened the inter-connected processes; tourism industry had potential to strengthen the inclusive economic development; and It was a limitless industry with immense growth potential having clear remarkable positive impact on economic and social aspects of Indian economy. Prasanna-Perera Lalith Welgamage (2015) attempted to quantify the relationship between tourism related foreign earnings and four other important variables (foreign exchange earnings, tourist arrivals, tourist prices, tourist spending and direct employment) for Sri Lanka. He aimed to develop an econometric model based on the Cobb-Douglas function to analyze the relationship between foreign exchange earnings, tourist arrivals, tourist prices, tourist spending and direct employment in tourism with the importance to forecast future tourism related foreign earnings and to establish relationship among tourism related variables in Sri Lanka. Mansour Esmaeil Zaei and Mahin Esmaeil Zaei (2013) focused on the tourism sector and its impacts on the economy, environment, politics and the socio-cultural being of the host community in India based on the descriptive method using the secondary sources. They concluded and found some of the economic impacts of tourism such as multiplier effects: Sales multiplier, output multiplier, income multiplier, employment multiplier on income created by the tourism, increase in Foreign Exchange Earning, Employment Generation, Impact on Balance of Payment, increase in Infrastructure Development, Contribution to National Income, Increase in Investment Opportunities, Helpful to Balanced Regional Development, Helpful in Reduction of Poverty, increase in Tax Earnings, Increase in The Standard of Living, Improvement in Health and Family Welfare along with the positive environmental impacts such as improvement of facilities, access and enabling of development, encouragement in conservation of features (buildings, wildlife, countryside) and increased income for upkeep and preservation of facilities and with negative environmental impact such as over-development. Surabhi Srivastava (2011) focused on the economic benefits accruing to the state byway of tourist's arrivals to Agra in India depending on the tested methods of surveys and interviews of the various constituents of the tourism industry including the tourists. To analyze the study and test the

hypothesis, Chi-square technique was used and applied by him. And also he attempted to identify and assess the importance and level of significance using the independent variables like tourist arrivals, season or weather, scenery, feeling of secure, behaviour of local guides, transportation, hotels, lodges and apartments, food and drinks available, tourist information offices and communication centers, shopping facilities and money exchange service at Agra. The hypothesis about the significant relation between the dependent variables like revenue generation, foreign exchange earnings with each of the independent variables was tested by using suitable test. He found that all the independent variables had the significance on the dependant variables.

Kailash Gokhale et. al. (2014) aimed to assess the perceptions of cultural change at selected tourist destinations of South Goa district, Goa- India using the questionnaire survey at six coastal tourist destinations from 337 respondents. Their analysis revealed that majority of the respondents agreed that there were positive as well as negative impacts due to tourism. They used quantitative methodological using random sampling. Their survey instrument consisted of indicators with positive indicators such as image of Goa, employment, investment, economic benefits to the locals, understanding the other cultures, infrastructural improvement, and level of awareness and encouragement of various cultural activities of Goa and with the negative indicators such as immoral behaviors, increased crime and drugs among the locals, for living unsuitable, construction of hotels destroying the natural environment, high spending tourist affecting the way of life, living in the tourism destination the locals suffering due to traffic congestion, noise pollution, unpleasantly overcrowded beaches, change of traditional culture, and working in tourism industry bringing insecurity and restriction on traditional culture. Jesim Pais (2006) attempted to estimate total direct employment generated in India by foreign tourism using a simple and innovative method of employment coefficients to arrive at estimates of employment generated in the country. He could found that foreign tourists visiting India in 2004–05 contributed to about USD 5029 million in foreign exchange. Moreover, he concluded that employment coefficients for the tourism sector in India were estimated to be 584 in 1993– 94 and 393 in 2004–05. It means that the number of jobs created for one corer rupees of foreign tourist expenditure (at constant 1993–94 prices) in India in 2004–05 was 393. The visit of every foreign tourist generated about one job (one man-year of employment) in India was estimated by his study. Bandula Jayathilake (2013) investigated the role of international tourism in economic growth of Sri Lankan. He used a tri-variate model of real gross domestic product, international tourist arrivals and real effective exchange rate to investigate the long - run and short-run dynamics of the relationship between tourism and economic growth. The annual time series data were obtained for the period spanning from 1967 to 2011. The results of Johansen's Cointegration procedure showed the evidence of long run relationship between the variables. In particular, result confirms the tourism-led economic growth hypothesis; tourism has a positive impact of economic growth in the developing countries. However, Granger causality test reveals evidence of unidirectional causality running from tourist arrivals to economic growth but not vice versa. He finally emphasized on the need of government involvement at promoting and increasing international tourism demand to attain sustainable growth and development in the industry.

Dinesh Das (2012) made an attempt in his study to access the contribution of tourism industry to the Net State Domestic Product (NSDP) in the eight states of North-Eastern Region (NER) in India. He used the secondary sources of data to access the role of tourism in economic growth of North-Eastern Region of India. The major variables considered in this study are Net State Domestic Product at constant (2004-05) prices at factor costs (NSDP), Domestic tourist inflow (D) and foreign tourist inflow. He examined the percentage growth rate over previous year of major variable like NSDP at constant (2004-05) prices at factor costs. He used multiple regression models to estimate the NSDP function. He concluded that tourism sector contributed to some part of NSDP of North-Eastern Region and both domestic tourist inflow and foreign tourist inflow significantly contributed to the NSDP growth. Sangeetha (2012) attempted to probe the scope of tourism in India, which can help in shaping Indian society based on the descriptive method using the secondary sources. He concluded that tourism was a perfect vehicle for inclusive growth of society because it showcased the heritage of the nation and positively contributed to the development of local communities and poverty alleviation.

Wijesundara (2015) examined and evaluated the attitudes and perception of graduates from Sri Lankan government universities on their employment in tourism industry in Sri Lanka and other countries using a sample of 120 graduate employees selected using the cluster sampling and convenience sampling techniques considering their working sections. Questionnaire, telephone interviews and Skype communication technology were employed to gather primary data from the respondents in this study. Secondary data were collected from documents of government universities, tourism employment related books, journals and research papers. He used both quantitative and qualitative approaches to analyze data using the Statistical package (SPSS). This study resulted in 66 percent of respondents currently working in the tourism industry with positive perception due to main four factors; position received, compensation package, relevant knowledge and skills and available opportunities for carrier development and 34 percent of respondents with negative perceptions due to working schedules, job environment and personal attitudes. Vijayaragavan (2014) invented how tourism sector was significant for Indian economy with the support of secondary sources like magazines, newspapers, reports, dissertations, thesis and the like. He concluded in his study that developing country like India tourism became one of the major sectors of the economy, contributing to a large proportion to GDP and employment opportunities, and attracting more foreign exchanges. Ruwan Ranasinghe (2014) investigated the socio-economic impact of tourism on small scale entrepreneurs and their enterprises in UNESCO World Heritage City of Dambulla by using descriptive method of inquiry in the study. He used a self administered questionnaire survey and several interviews to collect the needed primary data. Descriptive analytical approach with the help of frequency count and percentage were used by him to analyze the collected data. He found the impacts of tourism such as development of the entrepreneurship in the existing businesses, increased income, personal improvement of the entrepreneurs with the opportunities in attending training programmes, workshops and conferences to develop their business; and enhancement in their socio-economic condition.

Potukuchi Thryambakam (2013) studied to understand the impact assessment of community based sustainable tourism on the society and to evaluate and analyze its positive and negative implications on the society in Maredumilli, East Godavari District of Andhra Pradesh and adjoining areas in India. This study was conducted using the convenient sampling method. He used 200 respondents to collect primary data by administering them a detailed questionnaire and different sources to collect secondary data. The collected data were analyzed by simple statistical tools in this study. He found that tourism was one of the growing industries in Andhra Pradesh. And also its high growth and development rates, considerable amount of employment generation, infrastructure development positively contributed to the social and economic development of the state. In addition population structure, transformation of forms and types of occupations, transformation of values, influence on traditional lifestyle, and modification of consumption patterns were some of the impact of tourism and benefits to tourists. Finally he concluded with some of the issues of the tourism development such as benefits going to a small group committees, environmental damage, sex tourism and indigenous people becoming vulnerable. Nilanjan Ray et. al. (2012) studied the exploration of rural tourism and its socio-economic impacts in West Bengal, India based on the primary and the secondary data with the analysis using different statistical methods like percentage and ARMA model. They found that rural tourism created tremendous impact on the local economy, life style and socio-cultural changes among the rural people in and around this tourist destination. And also their survey showed that rural tourism at this location improved civic amenities like communication, sanitations, transport facilities and standard of living for the people in general. They estimated that additional revenue to the extent of Rs. 4, 300 corer could be generated through Rural tourism, leading to play a vital role in bridging the gap between Rural and Urban India by balancing urbanization and counter urbanization syndromes. Finally they argued that rural tourism in this part of West Bengal would pave the way for sustainable development with women empowerment and rural tourism was expected to emerge as an important factor for sustainable human development including poverty alleviation, employment generation, environmental re-generation and development of remote areas and empowerment of women. Anura Shantha (2009) studied the relationship between Kalpitiya

tourism development project in Sri Lanka and impacts of the project from the overall perception of local community in Sri Lanka. He conducted this study by using mixed methods(quantitative and qualitative) such as questionnaires survey with 401 questionnaires distributed in Kalpitiya local community, (13) in-depth interviews with government stakeholders and fourteen(14) in-depth interviews with tourism investors. This study resulted in a significant relationship between tourism investment and the possible economic, social, cultural and environmental impacts of tourism to the local community and the industry itself. This study concluded that economic impacts of tourism investment created more employments, more investment opportunities SME sector business development, tax income for the local government and community development, increase in price level of the local product, reduction in the local currency value, foreign bank development and the bad increase in the inflation rate of the local economy.

Madanlal V Suryawanshi (2013) study the potentiality of tourism in Aurangabad declared as tourism capital of Maharashtra, India based on descriptive method using the data collected from the primary and secondary sources. He found some of the beneficial socio-economic impacts of tourism such as stimulation in enterprises, creation of new jobs, and increase in government revenue along with some of the negative factors such as leakages of expenditure out of the economy, pressures for increased imports and new utility and infrastructural costs. Finally he concluded that in balance, the socio-economic impacts of tourism are usually considered to be beneficial for sustained growth.

This study is conducted on the impact of tourism industry on economic growth in Sri Lankan. The analysis of Sri Lankan situation is on the basis of the models derived from above review of literatures.

III. METHODOLOGY

The annual data for the period from 1970 to 2014 of tourism sector in Sri Lanka are used in this study. The appropriate data used in this study are collected from Sri Lanka Tourism Development Authority (SLTDA) – Annual Statistical Report and Annual Report of Central Bank of Sri Lanka (CBSL) 1970 – 2014. Real Gross Domestic Product (Real GDP) is used to measure the value of economic growth. Tourism receipts (TRE), tourism employment (TEM), tourist arrivals (TAR), Gross Domestic Product (RGDP) and Dummy (D) are used as the variables found in this study. The dummy variable is defined as 1 for war period and 0 for no war period. The variables of TRE, TEM, TAR, and RGDP are transformed into the Natural Logarithms to measure the percentage changes in the model. Since the tourism led-growth hypothesis is about contribution of tourism to the economic growth, real GDP is included to represent the economic growth. Therefore, the following equation is estimated:

$$Y = f(TRE, TEM, TAR, D) \quad \text{.....(1)}$$

$$\ln RGDP = \alpha_0 + \alpha_1 \ln TRE_t + \alpha_2 \ln TEM_t + \alpha_3 \ln TAR_t + \alpha_4 D + \varepsilon_t \quad \text{.....(2)}$$

Where,

lnRGDP = Natural logarithm of Real Gross Domestic Product
lnTRE = Natural logarithm of tourism receipts
lnTEM = Natural logarithm of tourism employment
lnTAR = Natural logarithm of tourism arrivals
D = Dummy variable
ε = The error term
$\alpha_0, \alpha_1, \alpha_2, \alpha_3, \alpha_4$ = Coefficients of the model

The modeling strategy used in this study is on the basis of Engle-Granger methodology. There are three steps to analyze the data: the stationary property of each time series data of the variables is first tested using Augmented Dickey-Fuller in our methodology. Secondly cointegration test is performed to identify the existence of the long run relationship between the variables. Error correction mechanism and Granger Causality test are performed in the third stage to find the short run

relationship and causal relationship between tourism and economic growth. The data analyses are executed with the use of E-Views, Minitab and Excel statistical software.

IV. Analysis And Discussion

Kernel Fit

It is one of the methods to test the relationship between the dependent and dependant variables. Thus, the Kernel Fit is used in this study. The Kernel Fit is the graphical representation of the relationship between the variable individually with the dependant variable. Thus, the Kernel Fit is a non parametric graphical representation of the two relevant variables. The dependant variable (RGDP) can be related with other three independent variables used in this study.

Figure – 1: Relationship between Real Gross Domestic Product and Tourist Arrival

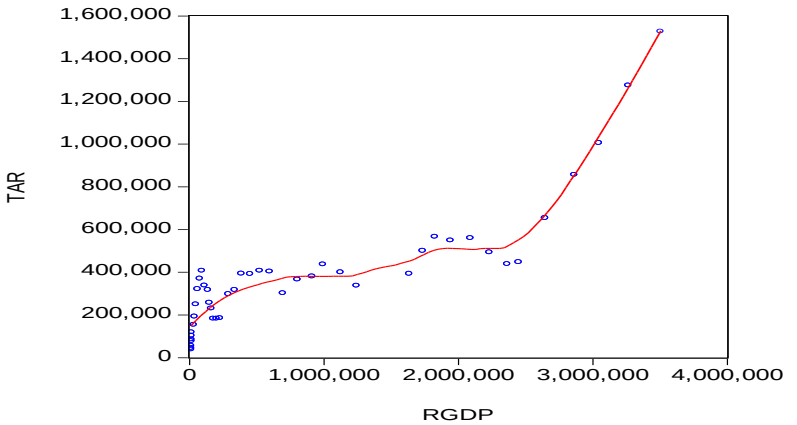


Figure – 1 depicts the positive relationship between RGDP (income) and TAR (tourist arrivals) in the long run equilibrium of the open economy during the period from 1970 – 2014.

Figure – 2: Relationship between Real Gross Domestic Product (RGDP) and Tourism Employment (TEM)

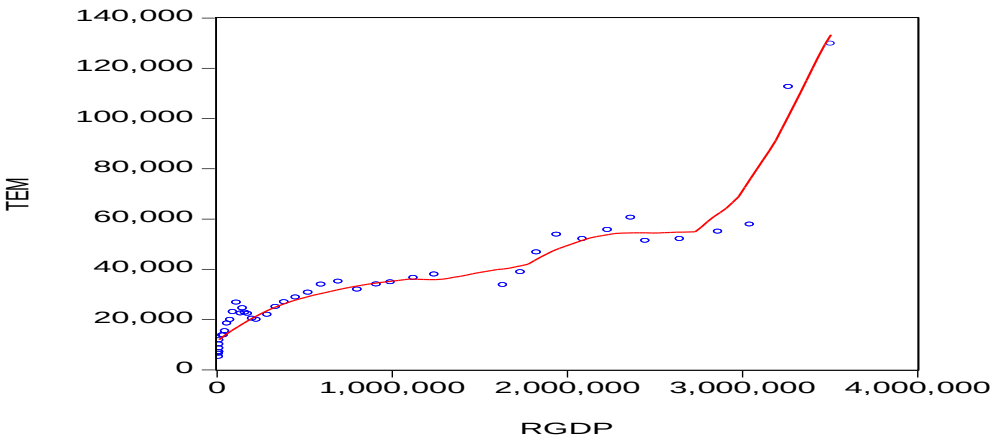
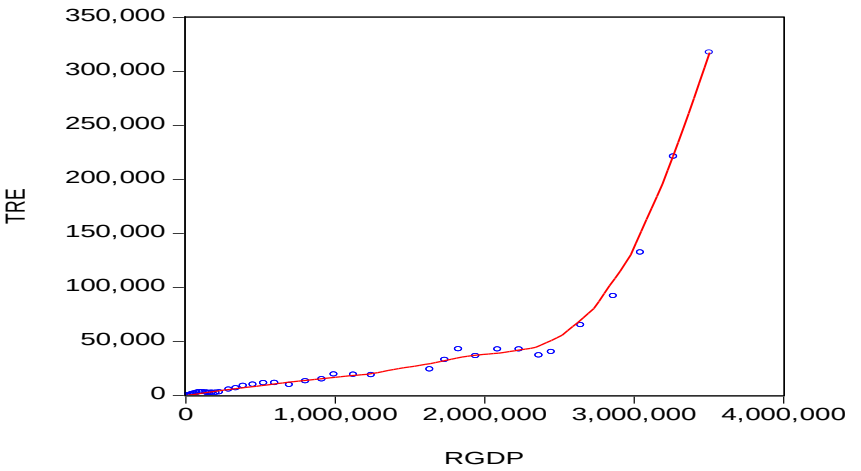


Figure – 2 depicts the positive relationship between RGDP (income) and TEM (tourism employment) in the long run equilibrium of the open economy during the period from 1959 – 2013. The relationship is not steady within the time period covered in this study. Compared to RGDP, TEM slows down up to a point during a certain period of time. Then, there is a sharp positive relationship between the variables.

Figure 3: Relationship between Real Gross Domestic Product (RGDP) and Tourism Receipts (TRE)



From Figure – 3, the positive relationship between RGDP (income) and TRE (tourism receipts) is not steady in the long run equilibrium of the open economy during the period from 1970 – 2014. Up to a certain point of time, TRE stagnates compared to RGDP, and then it is becoming shapely increased.

Unit Root test (Augment Dickey Fuller):

Under a univariate analysis, the first step in our methodology is to determine whether the variables are stationary or non-stationary. If a series is found as non-stationary, all the regression results are suffering from the problem of spurious regression. Therefore, the regression results may be leading to wrong conclusion and findings. It leads to meaningless and biased results. In case of Augmented Dickey Fuller Test, a problem of autocorrelation may be created. To tackle/deal with the problem of autocorrelation, Dickey Fuller developed a test called Augmented Dickey Fuller (ADF) Unit Root Test that are performed on both the level and the first differences of the variables (i.e., intercept only, trend and intercept, no trend and no intercept). It means three models such as the model with intercept only, the model with the trend and intercept and the model with no trend and intercept, are used and must be satisfied to come to a decision about Unit Root testing/Stationary or Non stationary. It is defined as follows (Wooldridge Jeffrey, 2006):

$$\Delta \ln RGDP(\text{Variable 1}) = \pi_1 + \gamma RGDP_{t-1} + a_i + e_t \text{ (Intercept)} \ldots\ldots \quad (3)$$

$$\Delta \ln RGDP = \pi_1 + \pi_{2t} + \gamma RGDP_{t-1} + a_i + e_t \text{ (Intercept \&Trend)} \ldots\ldots \quad (4)$$

$$\Delta \ln RGDP = \gamma RGDP_{t-1} + a_i + e_t \text{ (None/Neither Intercept nor Trend)} \ldots\ldots \quad (5)$$

Therefore, the hypotheses are tested as follows:
Null hypothesis H_0: Particular Variable is not stationary/ is unit root.
Alternative hypothesis H_1: Particular Variable is stationary/ is not unity root.

The results of ADF test are summarized as stated below in Table - 01.

Table – 1: The results of Augmented Dickey Fuller test (ADF)

Variable	ADF test	Intercept/ constant		Trend and Intercept		None/Neither intercept nor trend		Overall Decision
		Test statistic value	Test Critical Value (5%)	Test statistic value	Test Critical Value (5%)	Test statistic value	Test Critical Value (5%)	
RGDP	Data Level First Difference 2nd Difference	8.38 1.29 6.54	2.92 2.92 2.93	1.25 5.94 6.55	3.51 3.51 3.52	12.51 0.24 10.51	1.94 1.94 1.94	Cannot be decided Cannot be decided Stationary
TRE	Data Level First Difference 2nd Difference	4.63 2.90 1.65	2.94 2.94 2.94	4.93 2.29 1.94	3.54 3.54 3.54	4.58 3.06 1.46	1.95 1.95 1.95	Stationary Cannot be decided Non- stationary
TEM	Data Level First Difference 2nd Difference	2.38 3.25 1.03	2.93 2.93 2.95	1.12 3.65 1.53	3.52 3.52 3.55	3.83 1.46 0.91	1.94 1.95 1.95	Cannot be decided Cannot be decided Non-stationary
TAR	Data Level First Difference 2nd Difference	1.28 2.30 8.39	2.93 2.93 2.93	0.10 2.74 8.47	3.51 3.51 3.52	1.89 1.91 8.41	1.94 1.94 1.94	Non-stationary No-stationary Stationary

Source: E Views Results

If the *Test Statistical Value (absolute) is more than *Test Critical Value (absolute) at 5% level, the Null Hypothesis (H_0) can be rejected and Alternative Hypothesis (H_1) can accepted.

According to the Table – 1, at data level, intercept, trend & intercept and none, it cannot be decided whether the variable (lnRGDP) is stationary or not because all the conditions are not satisfactory. At the first difference also, it can't be deduced as it is same as before. But, when the particular variable is converted to the second difference only, the variable is stationary. Therefore, in this model this variable can be used only at the second difference to avoid the problem of spurious. The variable of lnTRE at level data is stationary. As a result, it can be used at level in the model and there is no problem of spurious. The next variable is lnTEM is not stationary at all the conditions. Therefore, there is a problem of spurious in using this variable in this model. Finally, the variable of lnTAR is stationary at the second difference. Thus, this variable can be used at the conversion of the second difference to avoid the problem of spurious. It means that we can use D(lnTAR, 2) variable in the time series model because this variable does not have unit root that this variable is stationary.

Granger Causality test (Vector Auto Regression Estimate)

The results of E views shown in the above table describe the causality relationship between the variables used in this study according to the hypothesis testing (Null: TAR (lag1 and lag2) cannot cause RGDP, ALT: TAR (lag1 and lag2) can cause RGDP). Tourism receipts (TRE) can cause tourism arrivals (TAR). Tourism arrivals (TAR) and tourism receipts together can cause tourism employments (TEM). Real Gross Domestic Product (RGDP) and tourism employment (TEM) can cause tourism receipts (TRE). Thus, there is a close interrelationship between the variables.

Table – 02 : Results of Granger Causality Tests

Null Hypothesis:	Obs.	F-Statistic	Prob.
LOG(TAR) does not Granger Cause LOG(RGDP)	43	1.54719	0.2260
LOG(RGDP) does not Granger Cause LOG(TAR)		1.76842	0.1844
LOG(TEM) does not Granger Cause LOG(RGDP)	43	2.12127	0.1339
LOG(RGDP) does not Granger Cause LOG(TEM)		0.67974	0.5128
LOG(TRE) does not Granger Cause LOG(RGDP)	43	3.69081	0.0343
LOG(RGDP) does not Granger Cause LOG(TRE)		4.05100	0.0254
LOG(TEM) does not Granger Cause LOG(TAR)	43	2.16649	0.1285
LOG(TAR) does not Granger Cause LOG(TEM)		8.79432	0.0007
LOG(TRE) does not Granger Cause LOG(TAR)	43	3.25551	0.0495
LOG(TAR) does not Granger Cause LOG(TRE)		2.34285	0.1098
LOG(TRE) does not Granger Cause LOG(TEM)	43	10.1077	0.0003
LOG(TEM) does not Granger Cause LOG(TRE)		0.38636	0.6822

Source: E -Views Results

Table – 02 shows that at optimal lag 2, the Null hypothesis of 'TRE does not cause RGDP' can be rejected because the value of probability is smaller than 5% (3.43%) and it is not accepted. Tourism receipts can cause Gross Domestic Product and the Null hypothesis of 'RGDP does not cause TRE' can be rejected because the value of probability is smaller than 5% (2.54%) and it is not accepted. Therefore, Gross Domestic Product causes Tourism Receipts. From these results, two way causal relationships can be explained from TRE to RGDP and from RGDP to TRE in Sri Lanka. Another causal relationship can be statically detected from the above test that the Null hypothesis of 'TAR does not cause TEM' can be rejected because of the probability value of smaller than 5% (0.07%). There is a statistical causal relationship between the Tourist Arrivals and Tourism Employment as well. TAR can cause TEM in this model to explain the relationship between the independent variables too as same as TRE and TAR. Null: there is no serial correlation. Null can be rejected because the value of probability is less than 5%. It is not desirable. Existence of Heteroscedasticity is not desirable as a whole. But the R Squared is higher in this model and this model is normally distributed (P = 0.20: Null hypothesis is). Therefore it is desirable. In this model R^2 (0.81/81.96%) is very high. It means the model is nicely fitted or the data used in this model is nicely fitted. F-statistic and corresponding probability value is 62.09% and less than 5% respectively. Therefore, they are prominent to explain the model. It means all the independent variables such as TRE, TEM, and TAR can jointly influence the dependant variable of RGDP.

Table – 03: Johansen Cointegration test

Hypothesis	statistic	Critical value 0.05	P-Value	Decision/results
Variables not cointegrated	134.4299 (Trace)	69.81889	0.0000	Variables are cointegrated. Therefore all the variables are having long run relationship/associationship/eventually move together in the long run.
Variables not cointegrated	58.90304 (Max-Eigen)	33.90304	0.0000	Variables are cointegrated. Therefore all the variables are having long run relationship/associationship/eventually move together in the long run.

The Long Run relationship model is as follows:

Table – 04: Long run Relationship Model from Johansen Cointegration Test

RGDP	TAR	TEM	TRE
1.000000	-0.705198	18.01170	-61.08933
Standard Error	(0.26622)	(4.28419)	(2.40479)

Coefficients (standard error in parentheses)

From the Johansen Cointegration test according to Table – 03 and Table -04, all the variables are having long run relationship and eventually moving together ensuring the close relationship between the variables.

Table – 05: Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	24.58917	3.022025	8.136654	0.0000
LOG(TAR)	-1.929954	0.195154	-9.889392	0.0000
LOG(TEM)	0.105463	0.294270	0.358388	0.7220
LOG(TRE)	1.334655	0.104875	12.72615	0.0000
DU	-0.087100	0.148888	-0.585003	0.5619
R-squared	0.982518	Mean dependent var		12.56366
Adjusted R-squared	0.980725	S.D. dependent var		1.844582
S.E. of regression	0.256091	Akaike info criterion		0.220074
Sum squared resid	2.557713	Schwarz criterion		0.422822
Log likelihood	0.158382	Hannan-Quinn criter.		0.295263
F-statistic	547.9712	Durbin-Watson stat		0.827067
Prob(F-statistic)	0.000000			

The estimated model from the above results is as follows:

LOG(RGDP) = 24.58917 + 1.334655LOG(TRE) - 1.929954LOG(TAR) + 0.105463LOG(TEM) - 0.087100DU

As per the regression output shown in Table - 05, this model is mostly significant because most of the variables (02 variables out of 03 variables such as TAR -Tourism Arrivals, TRE – Tourism Receipts) are significant. The estimated coefficient of TRE indicates that 1% change of increase in TRE will increase RGDP only by 1.33%. The long run positive relationship between Tourism receipts and Real Domestic Product exists in this model and is significant at 5% level. There is a negative relationship between RGDP and TAR (negative coefficient of TAR) but it is statistically significant at 5%.significant to run the model and to explain the dependant variable of RGDP – Real Gross Domestic Product.

Table – 06: Error Correction Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.045068	0.067620	0.666487	0.5093
D(LOG(TAR))	0.359927	0.257665	1.396883	0.1710
D(LOG(TEM))	-0.007509	0.162958	-0.046079	0.9635
D(LOG(TRE))	-0.126369	0.177855	-0.710518	0.4820
DU	0.098392	0.064774	1.519004	0.1375
U(-1)	-3.92E-07	4.62E-07	-0.846864	0.4027
R-squared	0.116569	Mean dependent var		0.131057
Adjusted R-squared	-0.006129	S.D. dependent var		0.130283
S.E. of regression	0.130681	Akaike info criterion		-1.100546
Sum squared resid	0.614794	Schwarz criterion		-0.852308
Log likelihood	29.11147	Hannan-Quinn criter.		-1.009557
F-statistic	0.950046	Durbin-Watson stat		1.871943
Prob(F-statistic)	0.460977			

As per the above results of Error Correction Model (ECM) in Table - 06, the coefficient of error correction term U (-1) has negative sign. The negative sign shows that the dependant variable of lnRGDP moves towards long run equilibrium relationship because it gives validity to ensure the long run relationship between the independent variables and the dependant variable, but the Error Correction term is statistically not significant at 5%. The value of R-squared is less than Durbin-Watson Statistics. Therefore, there is no spurious problem in this error correction model or it is not a non-sense model. As such, this model can be accepted. The residual of this model is stationary at the first difference. The coefficients of all the variables represent short run relationship to explain the dependant variable, but these variables are not statistically significant at 5% to explain the short run relationship because of the civil war and politically considered violence that affected the tourist arrivals in Sri Lanka.

Table – 07: Unity Root test for Residual Cointegration

			t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic			-6.332630	0.0000
Test critical values:	1% level		-3.592462	
	5% level		-2.931404	
	10% level		-2.603944	

*MacKinnon (1996) one-sided p-values.

Table – 08: Augmented Dickey-Fuller Test Equation

Variable	Coefficient	Std. Error	t-Statistic	Prob.
U(-1)	-0.991065	0.156501	-6.332630	0.0000
C	-442.6963	7334.624	-0.060357	0.9522
R-squared	0.494465	Mean dependent var		195.5014
Adjusted R-squared	0.482135	S.D. dependent var		66828.66
S.E. of regression	48091.81	Akaike info criterion		24.44501
Sum squared resid	9.48E+10	Schwarz criterion		24.52692
Log likelihood	-523.5676	Hannan-Quinn criter.		24.47521
F-statistic	40.10221	Durbin-Watson stat		1.994851
Prob(F-statistic)	0.000000			

Based on the above results in Table - 07 and Table - 08, the absolute value of ADF test statistics is 6.33 and the value of probability is smaller than 5%. Therefore, the residual is stationary and there is no problem of spuriousness in this model. When the residual of this model becomes stationary, the variables are cointegrated and the relationship between the variables is long run. Then the whole model becomes as the long run model. All the coefficients of this model are long run coefficient not short run coefficient.

Table 09: the results of Diagnosis Test of residual based on the Error Correction Model

Tests	Statistics	Probability	Decision
Brush-Godfrey serial Correlation LM test	F-Statistics 0.203774 Obs R-Squared 0.497478	0.8166 0.7798	Not serially correlated
Heteroscedastictiy Test: (Breusch-Pagan-Godfrey)	F-Statistics 0.442082 Obs R-Squared 2.429630	0.8161 0.7871	No Heteroscedasticity
Jarque-Bera (Normality test)	JB: 3.126894	0.209413	Normally distributed

Source: Results of E Views

Figure -4: Stability test (CUSUM test)

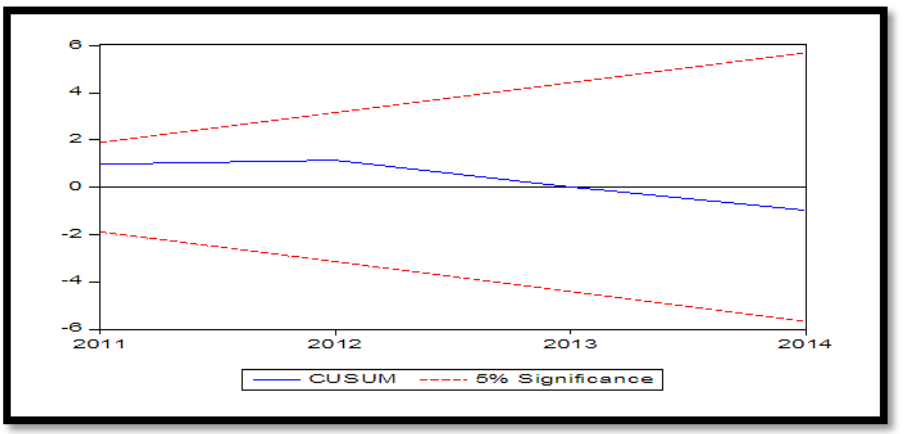


Figure -5: Stability test (CUSUM test of Squares)

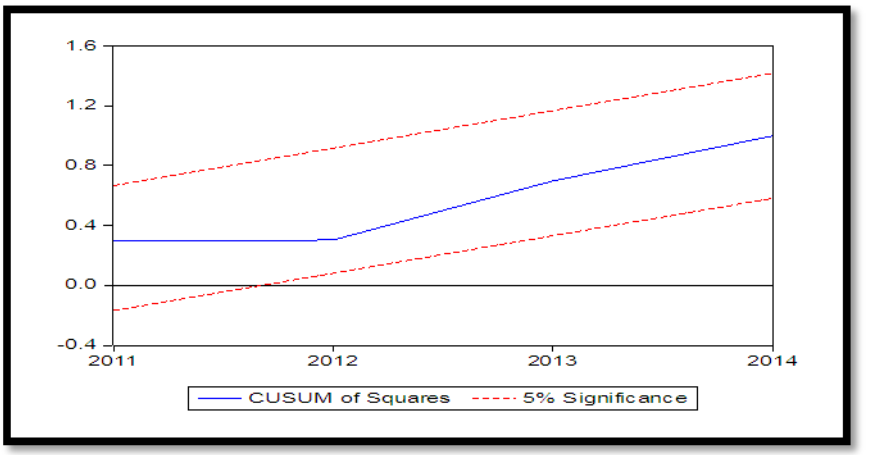


Figure – 6: Distribution of Residuals

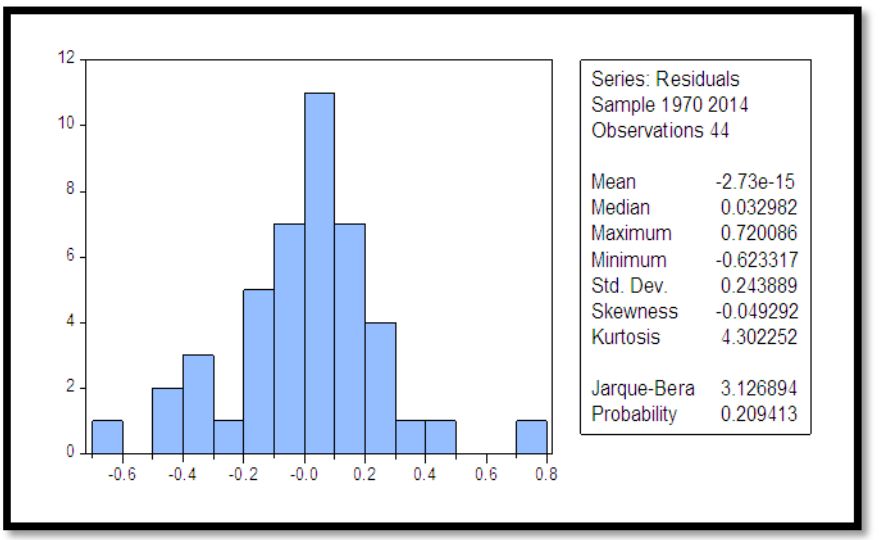


Figure – 6 explains the residuals based on the ECM mechanism are normally distributed because the value of Jarque-Bera statistic (3.126894) is higher than the value of probability (0.209413). Thus, another good sign of this model is the normal distribution of the residuals of this model. According to the results shown in Table – 09, there is no heteroscedasticity, no autocorrelation and non normality of errors. Figure – 4 and figure - 5 shows that this model has correctly specified functional form and stable regression (i.e., CUSUM of Square at 5% level) with the residual normally distributed and also within 5% level of significance, figure – 4 ensures that the model also is located and figure 5 ensures that the residuals of the model also are located. So that, the model used in this study is strong and stable and the model is specified with the adequacy of data representation.

V. Conclusion

The main objective of this study was to explore the impact of tourism industry on the economic growth and development and to come across the relationship between Real Gross Domestic Production and tourism industry in Sri Lankan context. It is found from the results that the tourist receipts are directly and positively related with Real Gross Domestic Product (RGDP) and statistically significant to determine RGDP in the long run. The investigation of the direction of causality between tourism sector and economic growth is carried out in this study based on the Granger Causality test. Thus, the multiplier effects of the tourism receipts is immensely caused by the expenses of the tourists in Sri Lanka on various supply chain such as transportation accommodation, shopping, food and drinks, recreational activities, culture, and sports activities. And also there is a positive relationship between the RGDP and the tourism employment which is also one of the multiplier effects in Sri Lanka. Further, it is evident from the Causality test that the tourism receipt causes tourism employment. As the money from tourism receipts is re-spent within the country, income and employment are mechanically generated and distributed among the various sectors in the economy. Thus, it is concluded that the best interest of the country is to keep its direct attention on this important industry to achieve persistent economic growth and development. Further implementation of policy design instrumental to promote the contemporary tourism in Sri Lanka leads to promote and increase demand for the tourism sector of Sri Lanka from international arena.

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An Analysis on Pension Fund Reforms in India

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Abstract

Countries with demographic shifts in population across the world are revisiting their pension systems. India, a county with large informal workforce understood a decade back that the generous tax financed Defined Pension System which serves only a miniscule of the population that too, majorly of the Organised Sector may not work and sustain. Paradigm shift in the Pension landscape of the country, post launch of the 'National Pension System (NPS)' on 1st Jan 2004 and the passage of the Pension Fund Regulatory and Development Authority (PFRDA) Act, 2013-14 to regulate the Pension sector are hailed as major reform initiatives in Pension sector. This paper examines and explains the National Pension System (NPS) thread-bare since inception and the reform initiatives in general. Comparison of the NPS with other Pension savings schemes of the traditional variety and evaluation of the growth and current status of NPS is achieved by researching into NPS / PFRDA records spanning more than 10 years and practices that evolved in the Pension sector. The evaluation of the Pension Sector Reform in the context of the overall Financial Sector Reform initiatives of the government is of topical relevance and has connotations to Public Finance and Policy initiatives in the coming Years.

Key Words : Pension Reforms, New Pension System, NPS, Defined Pension, Defined Contribution, PFRDA Act, PRAN, Tier I Account, Tier II Account, POP- SP, CRA, Comparison with NPS

1.1. Introduction:

Pension plans provide financial security and stability during old age when people don't have a regular source of income. Retirement plan ensures that people live with pride and without compromising on their standard of living during advancing years. Pension scheme gives an opportunity to invest and accumulate savings during the active years and get lump sum amount as regular income through annuity plan on retirement. According to United Nations Population Division World's life expectancy is expected to reach 75 years by 2050 from present level of 65 years. The better health and sanitation conditions in India have increased the life span. As a result number of post-retirement years has increased. Thus, rising cost of living, inflation and life expectancy make retirement planning essential part of today's life. Many Governments are finding it difficult to operate defined pension schemes world across and are moving to Contribution-based market-linked plans, when it comes to providing Pensions and such other social security needs of people in their twilight years. To provide social security to more citizens the Government of India has started the National Pension System (NPS) in the year 2004. It was started with a view to reform the Pension sector and move away from the Defined Pension system to Defined Contribution System. It is worth examining the current status of reform, in this crucial sector.

2.1 PFRDA and NPS

Subsequent to the reforms in Banking sector, Capital Market and Insurance Sector, the Government of India, through an act of Parliament established the 'Pension Fund Regulatory and Development Authority (PFRDA)', which is to serve as the Regulator for 'Pension Funds' in India. The Pension Fund Regulatory & Development Authority Act was passed on 19th September, 2013 and the same was notified on 1st February, 2014. Ever since, the PFRDA came into being, all the Pension Schemes of the Government were brought under PFRDA. Now, PFRDA is regulating NPS, subscribed by employees of Govt. of India, State Governments and by employees of private institutions/organizations & unorganized sector in the country.

The National Pension System (NPS) was launched on 1st Jan 2004 with the larger objective of providing retirement income to all the citizens and also due to the untenable nature of the defined pension regime which was in operation since then. The aim of NPS is to institute pension reforms and to inculcate the habit of saving for retirement amongst the citizens. Initially, NPS was introduced for the new government recruits (except armed forces). With effect from 1st May 2009, NPS is open to all citizens of the country including the unorganised sector workers on a voluntary basis. To create awareness and add more of contributors from the un-organised sector and to encourage them voluntarily to save for their retirement, the Central Government launched a co-contributory pension scheme 'Swavalamban Scheme' in the Union Budget 2010-11. Under the 'Swavalamban Scheme', the government will contribute a sum of Rs. 1000 to each eligible NPS subscriber who contributes a minimum of Rs.1000 and a maximum of Rs.12000 per annum. This scheme is applicable upto the FY 2016-17.

2.2 PRAN and Tier I and Tier 2 Account

The NPS offers following important features for the subscribers to help save for retirement.

(i) **PRAN** : Each subscriber will be allotted a unique **Permanent Retirement Account Number (PRAN).** This Unique account number will remain the same for the rest of subscribers life and is portable and can be used for subscription to pension accounts with any pension funds any where in India and is much like the PAN no.

(ii) The PRAN will provide access to open two personal accounts viz.,

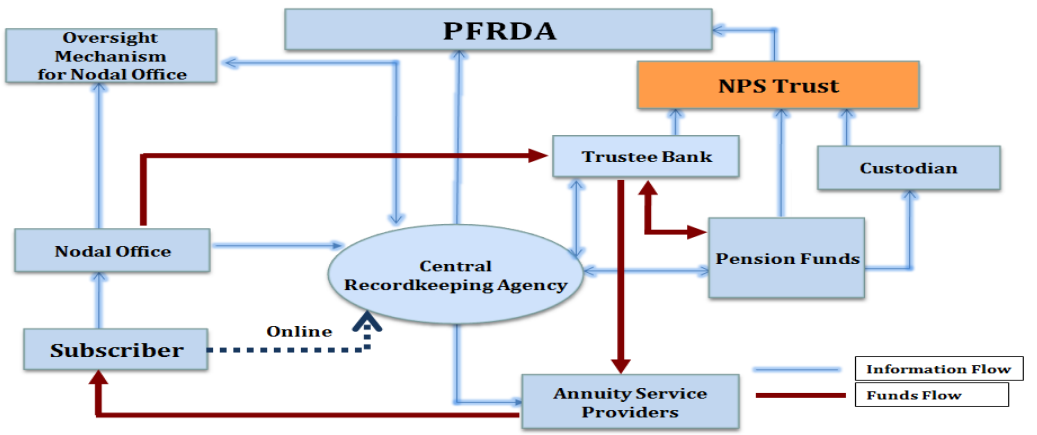
(a) **Tier I Account** : This is a non-withdrawable account meant for savings for retirement.

(b) **Tier II Account** : This is simply a voluntary savings facility whereby the subscriber is free to withdraw savings from this account whenever subscriber wishes. No Tax benefit is available on this account.

3.0 NPS Architecture

Fig. 3.1 depicts the Information flow and the Fund Flow Architecture of the National Pension System (NPS) which has different entities in the overall envelop of the system. While the PFRDA is the overall regulator for Pension funds, for operationalising the NPS on a nation-wide basis many Points of Presence (POP) Service Providers, Record keeping agency, Annuity Service Providers, Pension Fund Managers etc., are drafted in. Their role can be enlisted as follows:

Fig 3.1: NPS Architecture and Entities in NPS



Source : PFRDA Annual Report 2013-14

3.1 Point of Presence (POP)

Points of Presence (POPs) are the first points of interaction of the NPS subscriber with the NPS architecture. The authorized branches of a POP, called Point of Presence Service Providers (POP-SPs), will act as collection points and extend a number of customer services to NPS subscribers. The PFRDA has so far authorized 58 institutions including public sector banks, private banks , private financial institutions and the Department of Posts (DoP) as Points–Of-Presence (POPs) entities for opening the National Pension System (NPS) accounts of the citizens.

3.2 Central Recordkeeping Agency (CRA)

Just like how a depository becomes important in a capital market transaction, in the case of pension funds also, as there is buying and safe keeping of securities over long years being involved, the role of record keeping of all the purchases of securities is vital. Thus, the recordkeeping, administration and customer service functions for all subscribers of the NPS are being handled by the National Securities Depository Limited (NSDL) which is acting as the Central Recordkeeping Agency (CRA), Aggregattors etc. for the NPS.

3.3 Fund Managers

The returns from the Pension funds aren't guaranteed and are only as good as the Fund Managers who are going to manage the funds within the overall guidelines of the PFRDA. Hence, the quality of the Fund managing firm is equally indispensable in the NPS to become successful. Accordingly, with this major objective of managing the Pension Funds, as of now the PFRDA has approved Eight Fund Managers which are as follows :

(1) SBI Pension Fund
(2) ICICI Pru Pension Fund
(3) Reliance Capital Pension Fund
(4) Kotak Pension Fund
(5) UTI Retirement Solutions
(6) LIC Pension Fund
(7) HDFC Pension Management Co. Ltd.
(8) Pension Fund to be incorporated by Birla Sunlife Insurance co. Ltd.

The subscribers have the option of selecting which ever Fund Managers after their own due-diligence at the time of enrolment and also at any time after that with a minor fee / charge for changing Fund Manager, mid course. Axis Bank functions as Trustee Bank and Stock Holding Corporation of India functions as the Custodian for NPS.

3.4 Annuity Service Providers (ASPs)

As there is a Component of Compulsory Purchase of the Annuity at the end of subscription to NPS or at the time of Vesting, the approved Annuity Service Provider (ASPs) would be responsible for delivering a regular monthly pension to the subscriber after exit from the NPS. As of now five Annuity Service Providers have been approved by PFRDA and they are

(i) Life Insurance Corporation of India (LIC)
(ii) HDFC Life Insurance Company
(iii) ICICI Prudential Life Insurance Company Ltd.
(iv) SBI Life Insurance Ltd.
(v) Star Union Dai-ichi Life Insurance Company Ltd.

4.0 Various Models of NPS for different Target Groups

As of now the PFRDA is executing the following different models for NPS Groups, targeted at different class of subscribers. The eligibility conditions differ for each class and are as follows:

(i) **All Citizen Model** : Applicant should be between 18 – 60 years of age as on the date of submission of his/her application to the POP/ POP-SP. Applicant should comply with the Know Your Customer (KYC) norms. It was introduced from 1st May 2009.

(ii) **Government Sector Model :** This is again sub-divided into 4 class of subscribers viz., a) Central Government Employees (CG); b) Central Autonomous Bodies (CABs); c) State Government Employees (SG) ; d) State Autonomous Bodies (SABs).

The Central Government had introduced the National Pension System (NPS) with effect from January 1, 2004 (except for armed forces i.e. Army, Navy & Air Force). Any one who has joined the Central Service post 1.1.2004 is mandatorily enrolled into the scheme under CG. The Autonomous bodies under Central Government was also brought under this scheme from 30th June 2009. Similarly, as regards the State Governments, and State Autonomous Bodies, various State governments / Autonomous Bodies have adopted NPS architecture and have implemented the NPS with effect from different dates.

(iii) **Corporate Model :** The Corporate Model NPS is available to Entities registered under Companies Act, Entities under various Co-operative Acts, Central PSUs, State PSUs, Registered Partnership firms, LLPs, Body Corporates, Trusts, Societies etc. Employees in the above entities need to be in the age group of 18-60 years Indian citizens to satisfy the eligibility of subscription.

(iv) **NPS Swavalamban :** It is conceived as a Co-contributory Pension scheme for the marginalised. The government will contribute a sum of Rs. 1000 to each eligible NPS subscriber who contributes a minimum of Rs.1000 and a maximum of Rs.12000 per annum. This scheme is presently applicable upto the FY 2016-17. The scheme also entails an annuity whereby a minimum of Rs.1000 pension will be paid to the subscriber.

(v) **Atal Pension Yojaya (APY):** Atal Pension Yojana (APY) is open to all bank account holders. The Central Government would also co-contribute 50% of the total contribution or Rs. 1000 per annum, whichever is lower, to each eligible subscriber, for a period of 5 years, i.e., from Financial Year 2015- 16 to 2019-20, who join the APY before 31st December, 2015, and who are not members of any statutory social security scheme and who are not income tax payers. Therefore, APY will be focussed on all citizens in the unorganised sector. There was also a scheme called 'NPS Lite' prior to the launch of APY in 2015, and subscriptions to NPS Lite has since been discontinued after the launch of APY.

5.0 Investment Choices:

How the subscription money in NPS is to be invested depends upon subscriber's own choice or Risk appetite. NPS offers a number of funds and multiple investment options to choose from. In case subscriber does not want to exercise a choice, his/her money will be invested as per the "Auto Choice" option, where money will get invested in various type of schemes as per the subscriber's age. The NPS offers two approaches to invest the subscriber's money:

(i) Active choice - Individual Funds (Asset Class E, Asset Class C, and Asset Class G). Subscriber will have the option to actively decide as to, how his/her NPS pension wealth is to be invested in the following three options:

Asset Class E - Investments in predominantly equity market instruments. (In short it is an 'Equity Fund')

Asset Class C - Investments in fixed income instruments other than Government securities. (In short a 'Corporate Bond Fund')

Asset Class G - Investments in Government securities. (In short a G- Sec or Govt. Bond Fund)

Subscriber can choose to invest his/her entire pension wealth in C or G asset classes and up to a maximum of 50% in equity (Asset class E). Subscriber can also distribute his/her pension wealth across E, C and G asset classes, subject to such conditions as may be prescribed by PFRDA.

(ii) Auto Choice - Life Cycle based investment in consonance to Age

NPS offers an easy option for those participants who do not have the required knowledge to manage their NPS investments. In case subscribers are unable /unwilling to exercise any choice as regards asset allocation, their funds will be invested in accordance with the Auto Choice option. In this option, the investments will be made in a life-cycle manner ie., Here, the fraction of funds invested across three asset classes will be determined by a pre-defined portfolio as per the age of the subscriber.

6.0 NPS Charges

The charges for NPS is supposed to be the least (especially when compared to charges Fund Managers and / Administrar's of Mutual Funds and ULIPS take) and are prescribed / revised by the PFRDA. Currently the following rates apply for the various services in NPS.

The NPS account has 4 costs: central record-keeping charges, point of presence (PoP) charges, custodian charges, and pension fund management charges. Pension fund management, or fund management charge, is an annual fee paid to the fund managers for managing your money. Presently this charge is 0.01% of the fund value, but is under review. The central record-keeping agency (CRA) functions like a repository as it safe-keeps data and securities and issues a permanent retirement account number (PRAN). For issuing PRAN, the CRA deducts a one-time charge of Rs.50 from the fund value. Subsequently, it deducts Rs.190 annually for maintenance of each NPS account and Rs.4 per transaction. These charges are deducted from the fund value by cancelling equivalent units based on NAV. There is also a custodian charge of 0.0075% a year of the asset value held with the custodian. Currently, Stock Holding Corp. of India Ltd is the
custodian responsible for holding assets of the NPS.

Apart from this there are some charges an NPS account holder pays to the POP. When we open a retirement account, the distributor or the PoP, gets initial subscriber registrations charge. Earlier this charge was Rs.100, but in order to ensure better penetration of the NPS through enhanced participation of PoPs, PFRDA, in a circular dated 20 April 2015 , increased the initial subscriber registration charge for corporate and all citizens model from Rs.100 to Rs.125. The charge for any subsequent transaction is 0.25% of the amount received from the NPS subscriber, subject to a minimum of Rs.20 and maximum of Rs.25,000. Non-financial transactions or those that do not involve a contribution from the subscriber will cost Rs.20 per transaction. All these charges are collected upfront and in the case of government subscribers, all the charges associated to Tier I account including Annual PRA Maintenance charge are paid by the employer. Tier II activation charge and transaction charges for Tier II is to be paid by the subscriber.

7.0 Retirement Savings Options - A Comparison with NPS

Table 7.1 : Retirement Savings Options – A Comparison

Features	Mutual Funds	EPF	ULIPs (Pension)	NPS
Equity Exposure	No Cap on Exposure	Max of 15% allowed only from Jul'15)	No Cap on Exposure	Only upto 50%.(increasing it is being considered)
Tax Benefit	Under Sec 80 C for ELSS	Under Sec 80 C and 10 (10D)	Under Sec 80 C and 10 (10D)	Under Sec 80 C and 80 CCD (1B).
Minimum Guarantee	Not Applicable	Not Applicable	Minimum return on Prem. paid	Has been proposed in APY scheme
Lock-in Period	Not Applicable.	Not Applicable	Till 60 Years.	Till 60 Years.
Withdrawal	No restriction	Allowed for specific purposes	Not Allowed	Not Allowed as of now in Tier I.
Charges	1.25 % as Fund Management Fee	7 paise for every □100 managed.	1.35 % as Fund Management Fee	0.25 % Fund management fee
Annuity	Not Applicable	Not Applicable	1/3rd of the Proceeds	40% of the Proceeds
Tax on Maturity Proceeds	LTCG on Equity Funds tax-free (is in EEE)	Proceeds enjoy EEE Status from investment to maturity.	Proceeds enjoy EEE Status from investment to maturity	Will be taxed at withdrawal as per present law (in EET)

The other retirement savings options available in the Country apart from NPS are the Employees Provident Fund (EPF), Unit-Linked Insurance / Pension Plans (ULIPs), Mutual Funds with long term pension focus etc. All the schemes referred above have been there before the NPS and can be called as traditional savings options in the Pre-pension reform era. Analysis in Table 7.1 above compares and contrasts the NPS of the Post Reform with such other savings options on various features / parameters.

From the above analysis, it is clear that the **NPS has a distinct advantage** in terms of the following :

- Least Fund Management Fee of 0.25 % (It was 0.1% earlier and was increased to 0.25 % recently on the recommendations of the Bajpai Commitee)
- High Tax Benefits (80 C benefit and 80 CCD (1B) additional benefit for Rs.50,000/- separately at the time of investment (introduced in Finance Bill 2015).
- High Equity exposure compared to peers

NPS's dis-advantages emanate from the following:

- Maturity Proceeds are not tax exempt and are in EET regime.
- No Guaranteed return or capital protection
- Minimal partial- withdrawal avenues.
- Compulsory Annuitisation
- Poor awareness
- Marketing and distribution issues
- Competition from Traditional schemes like EPF, ULIPs etc.

8.0 Analysis of NPS – AUM, Subscriber base, Returns etc

The analysis of the data taken from PFRDA Annual Reports, PFRDA Bulletins and NSDL Reports and other committee reports reveals the growth of the National Pension System in terms of various parameters like :

(i) Assets Under Management (Across the Years)
(ii) Subscriber Base (Across the Years)
(iii) Scheme-wise AUM (Beneficiary Target-group wise)
(iv) Share of subscribers (Beneficiary Target-group wise)
(v) Matrix showing Pension Fund Manager (PFM)-wise portfolio.
(vi) Age-wise and Gender-wise classification of Subscribers
(vii) Returns on the Investments made by Pension Funds.

Table 8.1 : Assets Under Management and No. Of Subscribers (Category-wise)

Sector	Number of Subscriber as on 31 Oct'15	Number of Subscriber as on 28 Nov'15	% Growth Over the month	Assets Under Management as on 31 Oct'15 (Rs. cr)	Assets Under Management as on 28 Nov'15 (Rs. cr)	% Growth Over the month
Central Government	1,580,705	15,89,110	0.53	43,244	43,879	1.47
State Government	2,795,304	28,18,749	0.84	49,454	50,453	2.02
Corporate	426,223	4,31,929	1.34	7,558	7,760	2.67
UoS	110,382	1,13,411	2.74	739	757	2.43
NPS Lite*	4,467,560	44,67,001	- 0.01	1,883	1,889	0.32
Total	**9,380,174**	**94,20,200**	**0.43**	**102,878**	**104738**	**1.81**

* Fresh/new registration under NPS Lite has been stopped w.e.f. 01st April 2015

Sector	Number of Subscriber as on 31 Oct'15	Number of Subscriber as on 28 Nov'15	% Growth Over the month	Assets Under Management as on 31 Oct'15 (Rs. Cr)	Assets Under Management as on 28 Nov'15 (Rs. Cr)	% Growth Over the month
Atal Pension Yojana	836,674	1,131,633	35.25	149.69	192.72	28.75

The subscriber base has crossed 1 Crore in numbers with more than 50 % of them constituting the Central or State Government / autonomous bodies employees. As regards the AUM, it has crossed the Rs. 1,00,000 crore mark on the back of major contributions (> 90 %) by Central and State / Autonomous Bodies employees.

Fig 8.1 AUM in NPS across the Years (Rs. In Crores)

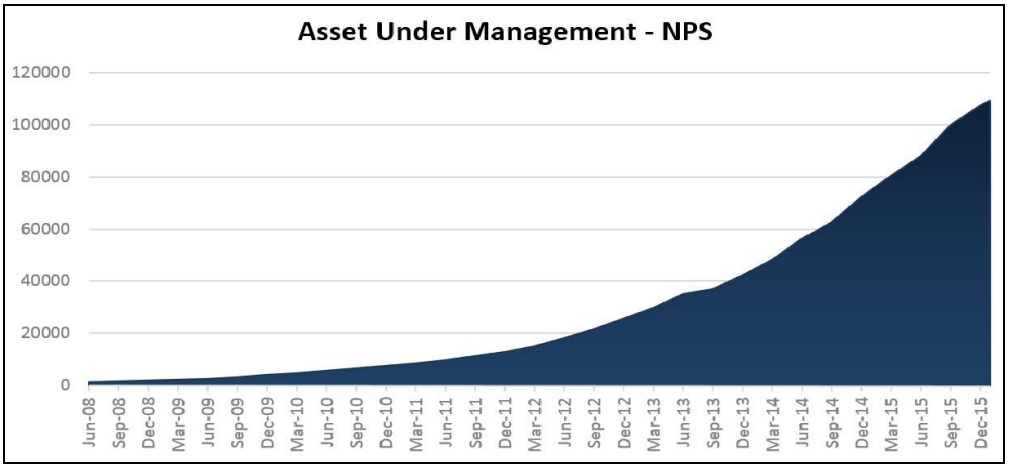
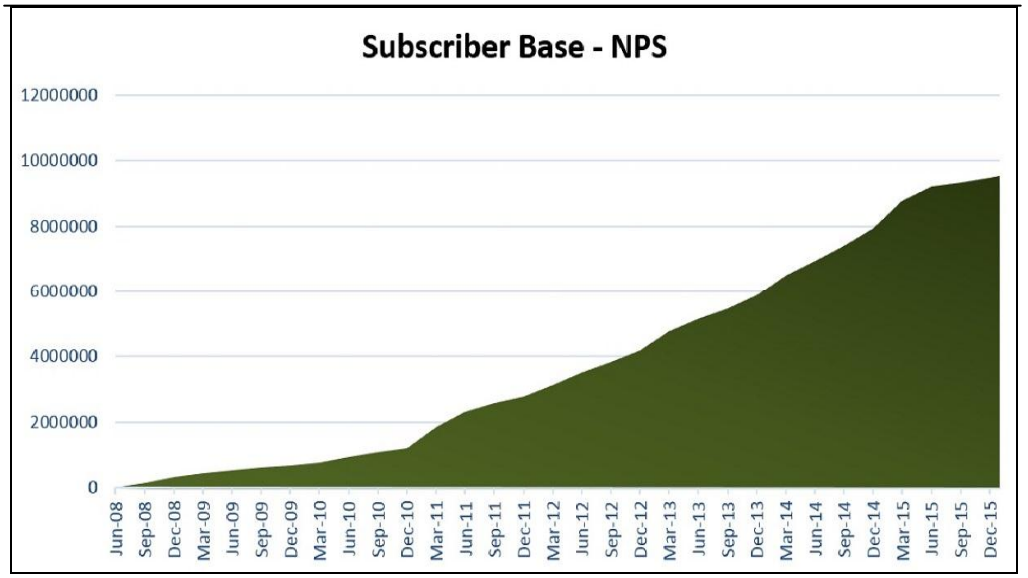


Fig 8.2 Actual Number of Subscribers in NPS across the Years



If we are to analyse the Pension Fund Manager-wise portfolio handled it turns out that of the 8 Pension Fund Managers, the SBI Pension Fund handles maximum corpus (ie.,) to the tune of nearly 40 % of AUM followed by UTI retirement solutions as could be seen from **Table 8.2.** The share of subscribers, Category-wise and on real terms, is depicted in Table 8.3 which gives an idea that nearly 50 % of the subscribers and 90 % the Quantum mobilised is constituted by Government employees.

Table 8.2 - PFM-wise and Category-wise Portfolio Matrix

Scheme wise AUM of the Pension Funds as on March 31, 2014 (Rs in crore)

Pension Fund	NPS Schemes										
	Central Govt (CG)	State Govt (SG)	Corp CG	NPS Lite	E-I	C-I	G-I	E-II	C-II	G-II	TOTAL
SBI PF	9025	6892	1664	335	221	154	306	12	11	10	18629
UTI RSL	8082	6659	0	242	21	14	20	3	2	2	15045
LIC PF	7081	6661	146	252	20	12	8	0	0	0	14180
ICICI PF					64	45	47	7	9	6	177
Kotak PF				15	14	10	13	1	1	1	55
Reliance PF					15	10	13	2	1	2	44
HDFC PF					2	2	2	0	0	0	6
DSP PF					0	0	0	0	0	0	1
TOTAL	**24188**	**20211**	**1810**	**844**	**356**	**247**	**409**	**26**	**24**	**20**	**48136**

*The Corporate CG Scheme has been discontinued w.e.f. February 12, 2013

Table 8.3 - Category-wise share of subscribers

Sector	Share of Subscribers (%)	Share of Corpus (%)	Share of Assets Under Management (%)
Central Government	15.1	39.1	41.8
State Government	26.7	50.1	48.1
Total	**41.8**	**89.2**	**89.9**
Corporate	4.1	7.9	7.4
UoS	1.1	0.8	0.7
Total	**5.2**	**8.7**	**8.1**
NPS Lite*	42.3	1.9	1.8
APY	10.7	0.2	0.2
Total	**53.1**	**2.1**	**2.0**
Grand Total	**100**	**100**	**100**

Fig 8.3, depicts the Age-wise classification of the NPS subscribers as on 30th Nov 2015. We could note that majority of them fall in the 25-35 Years age bracket.

Fig 8.3 : Age-wise Classification of NPS Subscribers

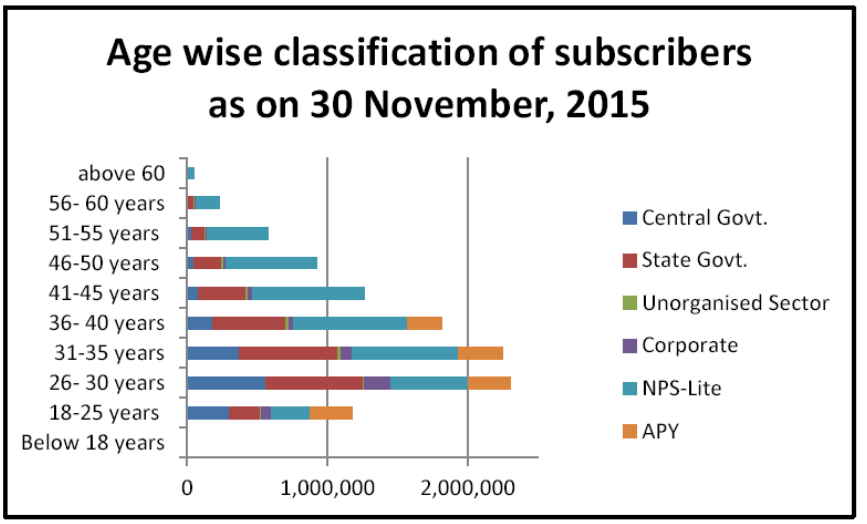
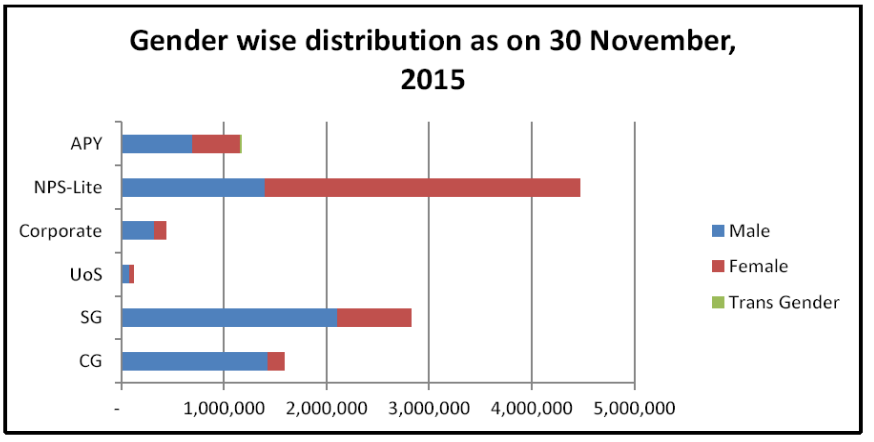


Fig 8.4 below captures the Gender-wise classification of NPS subscribers and we can note that except in NPS-Lite scheme (which was later discontinued and merged with Atal Pension Yojana -APY), the male members out-number females.

Fig 8.4 : Gender-wise Classification of NPS Suscribers



As regards, the crucial element of **Returns (since inception)** by each of the Fund Managers in different Asset classes Table 8.4 below codifies the same. We can notice that the returns (which are presented in Annualised basis for all schemes and Funds) provided by SBI Pension Fund is marginally higher and the other Fund Managers are closely following it.

Table 8.4 - Returns since inception (in %)

(as on 30th November 2015)

Pension Funds→		SBI	UTI	LIC	KOTAK	RELIANCE	ICICI	HDFC
Schemes↓								
CG		10.14	9.64	9.78				
SG		9.62	9.67	9.86				
Corporate-CG		10.02		10.32				
TIER I	E	8.54	10.97	13.83	9.78	10.26	11.36	17.40
	C	11.19	9.68	12.28	10.95	9.34	11.12	12.11
	G	9.74	8.32	12.34	8.32	8.01	8.59	10.98
TIER II	E	7.97	8.40	6.45	8.62	8.39	8.29	10.11
	C	10.77	9.79	9.30	9.42	8.99	11.13	9.23
	G	9.92	9.52	12.97	8.09	8.30	8.93	11.99
NPS Swavalamban		10.74	10.66	10.50	10.96			

9.0 Conclusion

While it is still early days to surmise anything as regards Pension Funds and its performances, it is true that India has moved away from the Defined-Pension Regime to a Defined – Contribution regime. The fiscal stress of the Defined pension regime in a country which has a Public Debt of more than 70 % of GDP is understandable and naturally a generous tax financed Pension System was simply unsustainable. But, has the reform helped the ordinary people, especially of the unorganised sector who were beyond the Pension ambit even earlier is a moot question. Averting old age crisis in a country of more than a billion people seem to require far higher effort. The analysis in the paper would have revealed that the current NPS initiatives impact, is so far anything but minimal and is no match for the task on hand.

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Factors Influencing Customers Buying Behavior in Mobile Marketing

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Abstract

Mobile marketing has gained immense popularity in the contemporary business world because of its convenience in sending promotional messages to individual customers. Marketing activities conducted via mobile devices enable advertisers to directly communicate with potential customers in a fast speed and regardless the geographical location. Mobile advertising has been recently referred as one of the best means to cut through the clutter and interact directly with the consumer. Hence, with the trend toward direct, one- to- one marketing, more attention is being paid to the use of the mobile channel as a means of effectively advertising to consumers. Indian mobile market is one of the fastest growing markets due to the increase in the number of middle-income consumers, and is forecasted to reach millions of users in the next decade. Thus, research on mobile advertising would impact greatly on the way business is done. This study seeks to explore the factors influencing customers buying behavior in mobile marketing. This study aims to explore the relationship between the attributes of customers who use mobile phone and their behavioral intentions. A total of 72 valid responses were received from a survey in Chennai city. The results revealed that there exists a positive relationship between the attributes of customers using mobile phones and their behavioral intentions.

Keywords: Mobile advertising, contemporary business, behavioral intention, attributes of customer

I. Introduction

The mobile phones are no longer used for communication alone, according to Michael and Salter (2006), who stated that the world has entered a new era called, "the all mobile era". According to them, the mobile phones or rather said, smartphones, do it all, from browsing the internet for information to ordering of online products, mobile banking and paying of bills. "The mobile phone is set to become the Third Screens after TV and computer," according to Asif (2011). As with other traditional marketing programmes, consumer attitude play an important role in determining the success of using the mobile device by marketers as a platform for communicating, creating sales and building relationships with their consumers. The acceptance of mobile device by consumers is influenced by, amongst others, the perceived utility of the content and the perceived risk associated with data security and consumer privacy (Bauer, Barnes, Reichardt and Neumann, 2005).

Many people, a mobile phone is seen as one of the few remaining inviolate personal spaces which they can use to communicate and socialize and, at the same, they can still maintain the control over the use of their mobile phones. In this regard, marketers should take into account consumers' needs for security and privacy when designing a marketing plan. The marketers should maintain a balance between engaging consumers in their marketing mix and achieving the objectives of their marketing plan.

The mobile phone is seen as a personal device (Barwise and Strong, 2002; Tsang, Ho and Liang, 2004) and as such, marketing messages are expected to meet the individual need and possibly take the form of permission marketing (a message either in form of SMS and MMS that has been requested by the consumer as part of an opt-in scheme requiring the consumer to indicate their consent to receive commercial messages and information of interest to them) in order to stimulate a positive response from the consumer. A mobile device is a possession many people carry with them and text messaging is generally used for one-to-one contact, which is why a more personal approach seems to be required in mobile marketing in order to generate a favourable attitude from the consumer (Barwise and Strong, 2002). Intrusion of marketing messages into this personal device often lead to irritation, especially when the mobile phone is seen as an "extended self" , of the consumer as identified by Kolsaker and Drakatos (2009).

Marketing communication strategy depends largely on consumer attitude and behaviour towards the company and its product (Jun and Lee, 2007). The study of consumer attitude has become

imperative in a bid to ensure consistent purchase of marketing products/services. Consumers attitude about marketing information are a direct indication of how they feel about the product itself, which reflects in their decision on whether or not to purchase the advertised product (Solomon, 2004). Given the mobile device as a new and emerging platform of marketing communication, it has become imperative for this study to examine how marketing messages through this new medium (the mobile phone) affects consumer attitude.

Consumer attitude towards marketing messages varies according to the communication media used, message content and consumer factors. Advertising research has shown that the effects of advertising activities on consumers are determined by the influence of advert message on consumers' attitude, the advertising company and the media (MacKenzie and Lutz, 1989; Ducoffe's, 1995). Thus, there is a need to identify and assess factors which contribute negatively or positively to attitude formation of consumers towards mobile marketing messages.

Rationale of the study

The popularity of mobile advertisements is growing in India, and it is therefore relevant for marketers to consider this new form of marketing. This is a current concern of market research of many companies. Although many research studies have been conducted world-wide to examine consumer attitudes towards a product or service, there has been insufficient research on customer attitudes towards mobile advertising, especially in India. This research study aims at exploring the behavioral intentions of consumers towards mobile advertisements in the city of Chennai, India. This is significant as there has not many similar studies on this field of marketing. The findings provide better insights to companies on how to use mobile phones as one of the powerful tools to market their products.

Since mobile marketing is able to reach individual consumers in a more personal and interactive manner than other traditional marketing forms, many companies have been invested in developing mobile marketing applications. Such applications, namely mobile marketing platforms and international wireless systems, allow companies to interact with consumers faster with more personalized and customized advertisements (Altuna and Konuk, 2009)

II. Research Methodology

The research work is empirical in nature. A survey questionnaire designed and distributed under Random sampling method. 72 valid samples are considered for the study. Books and websites constitute the secondary data.

Statement of the Research Problem

Attitude toward marketing activities and especially advertising in the traditional channel (print and broadcast media), have been studied widely in the literature because they have a considerable impact on measuring the effectiveness of these channels on consumer purchase decisions. The findings have been controversial across various channels of traditional marketing communication media (Moore, 1983; Zanot, 1984; Shavitt, 1998; Schlosser, 1999) as mobile communicators cannot exactly predict or determine the influence of mobile marketing messages on consumer attitude and purchase behavior (Haghirian and Madiberger, 2005). Thus, this has necessiatated the need to assess the influence of mobile marketing messages on consumer purchase behavior.

Objectives of the Study

1) To identify the factors that influencing buying behavior of customers in mobile marketing
2) To identify the consumer purchasing behavior and loyalty on product
3) To suggest some valuable suggestions to business people about mobile marketing and buying behavior of customers

III. Review of Literature

Relevant literature review was done to justify the undertaken study by the researcher.

Mobile Marketing Association (2005) has suggested that "mobile marketing is any form of marketing, advertising or sales promotion activity aimed at consumers and conducted over a mobile channel". Scharl, Dickinger and Murphy (2005) defined mobile marketing as using a wireless medium to provide consumers with time- and location-sensitive, personalized information that promotes products, services and ideas, thereby benefiting all stakeholders. Also, Wireless Advertising Association (WAA) defines mobile marketing as releasing advertising messages to mobile phones or PDAs through the wireless network (Xu, 2007). According to Advertising age (2006), mobile marketing is defined as "the use of wireless media as an integrated content delivery and direct-response vehicle within a cross-media marketing communications program".

In an article about the implications of mobile technology on mobile commerce (m-commerce), Balasubramanian, Peterson and Jarvenpaa (2002) described that m-commerce is a form of communication which involves "either one-way or interactive, between two or more humans, between a human (or humans) and one or more inanimate objects or between two or more inanimate objects (e.g., between devices)" (p. 350). These authors used the concepts relating time and space to discuss a conceptualized framework of mobile technology and m-commerce. They explained that buying products and services from a brick and mortar retail shop may discourage a customer who does not know the location of the shop and/or who cannot move around easily due to the geographical distance, time constraints, and other barriers. However, it is more flexible and convenient for a customer to get information about a product or a service, and to make a purchase of such product or service via his/her mobile, provided that the seller does provide such mobile applications phone (Balasubramanian et al., 2002; Altuna and Konuk, 2009). Although some marketing activities are not available via mobile technologies, space and time are considered constraints to consumers living in a world without mobile technologies.

The next development was the 3G wireless services which enabled a higher data transfer rate and a variety of multimedia communications (MMA Global, 2008). According to Zeng et al. (2009) and Bao (2010), the 3G offered advanced voice capacity, video streaming, high quality image transfer services, internet access and it provides various services such as web browsing, video conferencing, e-commerce applications and personalized information services. These features made mobile marketing attractive to marketers as its provides a wide array of opportunities to communicate with their target market via the mobile phone (Yang, 2010).

Developments in mobile screen technology increased the resolution and provided an opportunity for advertisers to implement higher quality images and banners on mobile devices (Mobile Marketing Association, 2007). Consequently mobile advertisers can produce more efficient advertisements with higher quality, richer and bigger screen (Varshney, 2008).

The 3G technology led to the emergence of Global Positioning System (GPS) which facilitated the development of Location based marketing and proximity marketing (Liu et al., 2010) on the mobile media. Location based marketing refers to targeting consumers with mobile marketing messages in a particular location (Tsang, Shu and Ting, 2004; Leek and Christodoulides, 2009). Proximity marketing refers to the delivery of marketing messages content to mobile devices through the use of bluetooth (Becker and Arnold, 2010). The Latest development in mobile technology that has influenced mobile marketing is the mobile application according to Ho, Hui and Syu (2010). According to studies in the literature (Becker and Arnold, 2010; Ho et al., 2010), mobile applications are used for branding and advertising purposes. And these have been used both globally and locally.

Consumer marketing strategies are based on determinants of consumer behavior and this involves those factors that explain how and why consumers behave in a certain way when purchasing a product (Cant, Brink, and Brijball., 2006). The consumer decision-making process and the continual changes in the behavioral patterns of consumers are strongly influenced by various factors (Leon and Kanuk, 2000). The model below depicts the consumer behavior model. This model shows two main groups of factors these are internal and external influences. These factors in turn may lead to the purchase and repurchase of a product or service (Cronje, Toit, Maraais and Motlatla, 2004). The model has two-directional arrows indicating that each set of factors interacts with each other.

According to Cant et al. (2006), Consumer attitude can be better explained by understanding the nature and characteristics of attitude. Generally, attitudes are composed of three components, via, a knowledge or cognitive component, a feeling and affect component and a behavioural and conative component (Cronje et al., 2004). It was further emphasized that in terms of consumer learning, the attitude would express consumers' feeling of like or dislike about a product or service offering and the marketing mix. In addition, Leon and Kanuk (2000) stated that the knowledge component is reflected in the learned knowledge that a consumer obtains from his interaction with others as well as his own experiences. The feeling component is reflected in his evaluation, and the resultant feeling of favourableness and unfavourableness attitude. While the behavioral component is reflected in the predisposition to act (purchase) based on the evaluation. Consumer decision making pertains to making decisions regarding product and service offerings. As Marketers are interested in consumers' purchase behaviours, i.e., the decision making process. Thus, decision making is defined as a process of gathering and processing information, evaluating it and selecting the best possible option so as to solve a problem or make a buying choice (Hawkins et al., 2005).

Attitudes toward advertising have been studied more than any other concept in the marketing area (Mittal, 1994; Pollay and Mittal, 1993; Shavitt et al., 1998; Wang et al., 2002). In particular, consumer attitude toward advertising has been largely examined because of its relation to consumer responses towards advertisements (Schlosser et al., 1999) and its influence on behavioural intentions (Bruner and Kumar, 2000; Goldsmith and Lafferty, 2002; Lutz, 1985; McMillan et al., 2003; Mehta, 1994; Poh and Adam, 2002). Moving into the Internet advertising context, existing perspectives of Internet advertising research suggest that consumer attitude towards advertising is an important determinant of their responses and behaviours (Abd Aziz et al., 2008; Chen and Wells, 1999; Stevenson, Bruner, and Kumar, 2000; Wolin, Korgaonkar, and Lund 2002). Theory of planned behavior was propounded by Ajzen (1980). Ajzen's Theory of Planned Behaviour (TPB) is an extension of Ajzen and Fishbein's TRA Model (1980;1985). TPB includes the construct of perceived behavioral control, defined as 'the perceived ease or difficulty of performing the behavior (Ajzen, 1991) to overcome the original model's limitation in dealing with behaviours over which people have incomplete volitional control (Ajzen, 1985). Ajzen (1991) revises TRA and proposes the inclusion of a third determinant of behavioural intention; perceived behavioural control. According to Theory of Planned Behaviour (TPB), behaviour is determined by the intention to perform the behaviour. The behaviour itself is determined by three factors: attitude toward the behaviour, subjective norm, and perceived behavioural control (Mathieson, 1991).

IV. Analysis and Interpretation:

Indicating KMO and Bartlett's Test for factors of Consumer Mobile usage behavior on mobile marketing:

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.641
Bartlett's Test of Sphericity	Approx. Chi-Square	314.678
	df	36
	Sig.	.000

From Table 1, it can be noted that Kaiser-Meyer-Olkin measure of sampling adequacy is 0.641 and Bartlett's Test of Sphericity approximate Chi-Square value is 314.678 which are statistically significant at 5% level.

Table 2 Indicating consumer purchasing behavior on Mobile Marketing

Communalities		
Purchasing Behavior	Initial	Extraction
Reaction of customers when they receive Marketing messages	1.000	.829
Aware of new product/services through marketing on my mobile phone	1.000	.605
Informed about the latest news in sport/entertainment through SMS	1.000	.741
interested in buying SMS Product/services that meet my need	1.000	.380
Subscribe to receiving latest news on my phone after Receiving an SMS advert	1.000	.762
respond to a text message Promotion sent to my phone	1.000	.611
use of mobile application to know the product	1.000	.537
Downloaded Ringing tunes on my phone after receiving an SMS advert	1.000	.814
Vote through SMS for my favorite contestant in a TV show	1.000	.800
currently using my phone to receive information that I need	1.000	.647
Extraction Method: Principal Component Analysis.		

From table 2 it is found that the 10 variables exhibit the variance limitation from 0.683 to 0.872 which is 38% to 83%. Thus these variables can be reduced to predominant factors.

Table 3 Indicating Mean and Standard deviation for respondent's Purchasing Behavior on Mobile Marketing

Purchasing Behavior	Mean	Std. Deviation
reaction of customers when they receive Marketing messages	2.53	.872
aware of new product/services through marketing on my mobile phone	2.90	1.165
informed about the latest news in sport/entertainment through SMS	2.97	1.233
interested in buying SMS product/services that meet my need	3.24	1.055
subscribe to receiving latest news on my phone after receiving an SMS advert	3.68	.901
respond to a text message promotion sent to my phone	3.68	.853
use of mobile application to know the product	3.10	1.023
downloaded Ringing tunes on my phone after receiving an SMS advert	2.99	1.068
vote through SMS for my favorite contestant in a TV show	4.03	.872

currently using my phone to receive information that I need	3.32	.577
Valid N (listwise)		

The above table 3 shows that there is a difference in level of agreement among respondents hence using the rate scale (1) Strongly Agree (2), Agree (3), Neutral, (4) Disagree, (5) Strongly disagree. Below 1 to less than 1.5 considered to be - Strongly agree, more than 1.5 to less than 2.5 - agree, more than 2.5 to less than 3.5 - Neural, more than 3.5 to less than 4.5 - Disagree, more than 4.5 – Highly Disagree. Reaction of customers when they receive Marketing messages (2.53), Aware of new product/services through marketing on my mobile phone (2.90), Informed about the latest news in sport/entertainment through SMS (2.97), Interested in buying SMS product/services that meet my need (3.24), use of mobile application to know the product (3.10), Downloaded Ringing tunes on my phone after receiving an SMS advert (2.99) are Neutral. Subscribe to receiving latest news on my phone after receiving an SMS advert (3.68) Respond to a text message promotion sent to my phone (3.68) are Disagree therefore dominate on Neutral. Hence it's dominantly proved Consumer Purchasing behavior is neutral on above factors

Table 4 Showing the one-way Analysis of variance between the Educational Qualification and Loyalty on mobile marketing

Ho – There is no significant difference between Educational qualification and Loyalty on mobile marketing.

Loyalty	F	Sig.
Text-to-win SMS builds relationship between the brand and the customer	6.900	.000
continue to use SMS to vote for my favorite contestants in a TV show	8.411	.000
Continue to buy product/service that sends me information on their promotional offers.	.629	.599
Regularly buy product/service that gives me timely information that I need.	4.566	.006
Recommend to my friends' product/service SMS that provide sales information.	2.720	.051

From table 4 It is inferred from the above table that the p-value of the variables, we found Text-to-win SMS builds relationship between the brand and the customer, continue to use SMS to vote for my favorite contestants in a TV show, Regularly buy product/service that gives me timely information that I need, Recommend to my friends' product/service SMS that provide sales information are less than the table value at 95 % level of significance. Hence Null hypothesis is rejected and it is concluded that there is significant difference between Educational Qualification and Loyalty on mobile marketing.

V. Suggestion and Conclusion:

Mobile marketing has Neutral responses in the findings, Consumer level of usage of Mobile marketing lies on 0.683 to 0.872 which is 38% to 83%. Thus these variables can be reduced to predominant factors, Reaction of customers when they receive Marketing messages, my phone after receiving an SMS advert, Vote through SMS for my favorite contestant in a TV show are the few dominant factors in purchasing behavior. In the mean Ranking test most of the consumer purchasing

behavior factors are neutral. ANOVA test also proved there is no significance between Educational Qualification and Loyalty of consumer towards mobile marketing. Factors influencing consumer purchase behavior is neutral, marketing managers and advertisers should identify their target customers and understand their demographics characteristics in developing successful mobile marketing messages, programs and strategies.

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Impact of Emotional Intelligence of Trainers on their Training Outcomes – A Study with special reference to Trainers in Chennai

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Abstract

In this age of intense worldwide competition and fast change, organizations of all size are more concerned to make the best use of Human Resource capital. Training has increased its importance in today's environment where jobs are intricate. To have the optimum use of Human resource, training must be delivered to the employees. As a result of mounting economic pressures, organizations are becoming more vibrant and they are more sensitive about the return on training investment. Human resource managers and training professionals need to validate training expenses by producing some evidence about the positive impact of training on trainees' development and on organizational productivity. Thus the success of a training program largely depends upon the trainers' and trainees' active participation and interaction in which the emotional intelligence of the trainer could play a greater role in determining such success. Emotional intelligence can provide mental health requirements by creating a dynamic environment, facilitating learning together with joy and happiness as well as a desirable social relation along with controlling emotions and feelings. .Emotional intelligence refers to the capability, skill, or self-perceived ability to identify, evaluate, the emotions of one's self, of others, and of groups. People possessing high degrees of emotional intelligence know themselves very well and are also able to sense the emotions of others.

Keywords: Emotional intelligence, training, trainers, training outcomes

I. Introduction

Emotional Intelligence

Emotions are closely related to people's purpose, goals, plans, and requires (Brown, George-Curran and Smith, 2003), so emotional intelligence can be defined as the ability to be aware of own and others emotions and feelings and to manage the emotions in self and others (Goleman, 1995). Emotions are of paramount importance in any person's life which has vigorous effects on all aspects of life. Each emotion has a motivating characteristic, a personal implication in life, and a rendition echoed in behaviors (Çeçen, 2006). The term emotion encompasses an item, which is Emotional Intelligence (EI). Emotional Intelligence (EI) is often measured as an Emotional Intelligence Quotient (EQ), the term (EQ) was coined by (Bar-On, 1988).

Emotional intelligence is also defined as a subset of "social intelligence" which involves the ability to consider one's own and others' feelings and emotions to guide one's thinking and actions (Salovey and Mayer, 1989). Then they defined it again as "the ability to perceive emotions, to access and generate them so as to assist thoughts, to understand emotions and emotional knowledge, and to regulate them so as to promote emotional and intellectual growth (Mayer and Salovey, 1997). The most important construct in their definition which we require to explain is "emotions". Van Maanen and Kunda (1989) explain that emotions are "ineffable feelings of the self-referential sort", and are comprehensively defined as "self-referential feelings an actor (employee) experiences or, at least, claims to experience in regard to the performances he or she brings off in the social world" (Van Maanen and Kunda, 1989). Feeling explanation refers to basic (e.g. joy, love, anger) and social emotions (e.g. shame, guilt, jealousy, envy), as well as to related constructs as affect, sentiments and moods (Ashforth and Humphrey, 1995). Emotional intelligence include some abilities to perceive, appraise and express emotion accurately and adaptively, understand emotion and emotional knowledge and make apply of the knowledge by accessing or generating feelings to facilitate thought, whilst reflectively regulating emotions (Salovey, Mayer, & Caruso, 2002; Tarasuik, Ciorciari and Stough, 2009). Emotional intelligence skills have close relationship to motivation and can be explained the gateway to learn all the life and gain to success. A lot of researches show that emotional intelligence skills are essential to each learner (Low & Nelson, 1999).

Training and Emotional Intelligence

Training is a planned operation effectuated by an organization in order to accelerate its workers by augmenting the level of their competencies through skill development (Gritz, 1993). EI has recently obtained inevitable popularity as a personality characteristic in connection with learning and performance. To put in short, emotional intelligence has profound link with performance and training outcomes due to the psychological states of trainees and trainers including motivation, self-efficacy and perceived control (Saks &Haccoun,2007). Although considerable research has been conducted on the significance emotional intelligence has on employee performance, a search of the existing literature shows that little research has been conducted in the area of emotional intelligence and performance of trainers. The relationship of emotional intelligence to trainer performance is pertinent for discussion because, if a correlation exits between them, it can have implications for how organizations hire or choose the trainers. Keeping this in perspective, the objective of this study is to assess the direct impact of level of trainers' EI on work performance. The researcher sets out to find answers for the two questions through this research. They are to study the impact of emotional intelligence on trainers' performance and the perception of the trainers on EI dimensions.

II. Research methodology

Research Measures

Questionnaire consisting of questions relating to the chosen dimensions of the study using Likert's five point scale. The instrument was distributed to 150 trainers in Chennai city out of which 130 questionnaires were received back. SPSS package was used to analyze the data and interpret the results. Tools such as percentage analysis, mean Standard deviation and correlation were used. The researcher proposes to test the hypothesis that there is significant relationship between emotional intelligence and training outcomes.

Emotional Intelligence

The Wong and Law Emotional Intelligence Scale (Law, Wong, and Song 2004; Wong and Law 2002). This 16-item self-report scale consisting of four dimensions: Self—Emotions Appraisal (SEA), Others—Emotions Appraisal (OEA), Regulation of Emotion (ROE), and Use of Emotion (UOE).

Training outcomes

Self developed scale was exploited to measure the training outcomes to measure the outcomes namely derived satisfaction, Understands the needs of trainees, able to value the emotions of trainees and able to bring out the best of trainees.

Table 1.1. Demographic representation of the respondents

Demographic factors		No.	%	Total
Gender	Male	70	53.84	
	Female	60	46.16	130
Age	25-35 years	10	7.69	
	36-45 years	34	26.15	130
	45 - 55 years	50	38.46	
	>55 years	36	27.69	
Experience	0-5 years	40	30.76	
	5-10 years	65	50	130
	>15 years	25	19.23	

The above table 1.1 reveals that both men and women equally take up the training profession and most of them are aged between 35 years to 45 years. 50% of them are experienced in the training field for a period of 5 years to 10 years. This clearly indicates that there is a greater scope in the field of training.

Table 1.2 Responses of respondents to dimensions of emotional intelligence and Training outcomes

EI dimensions	Mean	SD
Self-Awareness	4.06	0.935
Self-Management	3.86	1.010
Social Awareness	4.16	0.955
Relationship Management	3.76	1.238
Training outcomes	4.03	0.928

The opinions of the respondents regarding the emotional intelligence are given scores based on Likerts scale and mean and standard deviation are calculated. Such analysis reveals that the trainers are highly aware of them and often interrogate themselves as the mean value tends to be 4.06.Similarly they are also highly aware of the society and its needs and the mean value is found to be 4.16. These two variables again exhibit a consistent opinion pattern as the standard deviation values are comparatively lower. They also opine that their training creates better results among the trainees and this variable goes with a mean value of 4.03.

Relationship between Emotional Intelligence and Training outcomes

Emotional intelligence was studied the four dimensions namely self awareness, self management, social awareness and relationship management. Similarly the training outcomes on trainers were studied by measuring derived satisfaction, Understands the needs of trainees, able to value the emotions of trainees and able to bring out the best of trainees.

Table.1.3. Correlation between Emotional Intelligence and Career Success

Variables	N	r	P
Self Awareness and training outcomes	130	0.515**	0.001
Self-Management and training outcomes	130	0.558**	0.001
Social Awareness and training outcomes	130	0.584	0.508
Relationship Management and training outcomes	130	0.633**	0.001

*P ≤ 0.05, **P ≤ 0.01 Source : Primary Data

The researcher exploited Karl Pearson's correlation and found a positive correlation Politics is significant at $p<0.05$ level and at at $P \leq 0.01$ level of significance between dimensions of emotional intelligence with satisfaction(r=0.515), understanding(r=0.558), value emotions of trainees(r=0.584) and ability to bring out the best in trainees(r=0.633). Although the correlation level was not high there does exist a positive relationship between all factors. Hence the researcher concludes that , being aware of self, helps the trainers to understand the needs of the trainees and helps to bring out the best of the trainees. The ability to manage their emotions helps them to understand the requirements of the trainees and the emotions of the trainees as well. Their ability to maintain better relationship with the trainees gives them satisfaction regarding their profession and their performance in the field of training. By this the researcher accepts the hypothesis that there is significant relationship between emotional intelligence and training outcomes.

III. Conclusion

The study assumes greater significance in the sense that today organizations want to earn a reasonable return on the amount invested on training and this greatly depends upon the trainers' ability to understand the requirements of the trainees and the organization as well. Relationship management inculcates set of competences that consists essential social skill, analyzing and influencing others and inducing desirable and favorable responses in others. Effective relationship management helps in developing others which is a hallmark of a trainer. The ability to sense others' reactions and fine tune responses and be persuasive is a significant characteristic of star performer and this ability is essential for trainers and it has emerged as a fundamental skill for effective leadership as well. The results of the present study shows that the ability of the trainer to maintain high levels of emotional intelligence drives them to perform well and also in bringing the best of trainees. This is the ultimate need of the training process and any lagging in emotional intelligence of the trainer would surely affect their relation with trainees and might hamper the outcomes as well. Hence there is a dire need for the trainers to undergo EI measurement process and equip themselves.

IV. Managerial implications

This is yet another study on emotional intelligence in addition to the existing literature on the same, though may not be highly innovative in an all pervasive context, it is a significant contribution to the trainers across the country for whom the study may be applicable to. This study gives a new direction of thinking about the role of emotional intelligence on the training outcomes. The trainers can now watch their emotions in order to perform well enough to impress the organizations in the training activities.

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Social Media Content Analysis – A Study on Fanpages of Electronics Companies

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Abstract

Social Media is now determined as an excellent communicative tool to connect directly with consumers. One of the most significant ways to connect with the consumers through these Social Networking Sites (SNS) is to create a facebook fanpage with brand contents and to place different posts periodically on these fanpages. According to different posts or contents placed on the fanpages, consumer responses in different ways. Usually users become fans of particular brand fanpages or put like, comments or keep sharing on particular posts of fanpages. These types of consumer activities in fanpages reflect brands' post popularity. Most importantly, in measuring social networking sites' effectiveness as well as analyzing metrics in terms of calculating engagement rate, number of comments/share and likings in fanpages play a vital role. So now, it is very important for the marketers to know the effectiveness of different contents or posts of fanpages in order to increase the fan responsiveness and engagement rate in the fan pages. In our study we have analyzed total 1325 brand posts from 17 international brands of Electronics companies. We analyzed the data of 9 months (From December 2015-August 2016) that are available online from Brand' fan pages. Finally we summarized the descriptive statistics of different posts in each Brand Fanpages.

Key words: Social media, Social networking sites, social media content analysis, social media metrics analysis, online marketing.

I. Introduction

In order to implement a successful social media marketing strategy, it is imperative to know and understand the user's behavior towards different posts on brand pages. It is important for the marketers to understand what types of contents motivate users to be engaged in a particular page. It is noticeable that users of the facebook fanpages tend to exhibit favorable brand related engagement and also contribute different brand promoting actions. Facebook brand pages is a current marketing tool and presently it is being unified as one of the chief components in the brand's marketing campaign to reach out to customers and fans. To keep the brand pages active and to promote the corporate fan pages it is vital to understand the behavior of the consumers online and marketers should also identify the motivational factors that encourage consumers to be engaged in fanpages. It is notable that users or fans of the brand pages tend to exhibit various brand related engagements and buying actions. The purpose of this research is to examine the motivation that influences customer engagement on a Facebook brand page. In order to have a successful social media marketing campaign, it is important to understand the behavior of customers on the brand pages and what motivates them to engage on a Facebook Brand Page which eventually should lead to purchase of the brand's products or services. (BEJTAGIĆ-MAKIĆ, 2013). With each new fan, the company not only gains a new potential active user but can also reach the fan's private network due to Facebook's technical features . . This implies that it is indispensable for companies to increase their fan base in order to achieve extensive awareness for its brands and products. In this study we explored the descriptive statistics of 17 Electronic companies, that will help the companies to get a clear idea about the types of contents and their variations in generating different consumer actions or engagement (Like, comments or shares).

II. Literature Review

Social Media Overview

When discussing advertising and marketing strategy today the discussion would be incomplete without considering the use of social media (Parson, 2013)0. Users of Social media follow

different brands on fanpages and more than 50% users monitor brands on social media (Lisette de Vries, April, 2012). Now users are not only receiving information from online, they are also actively engaged in contributing their actions in brand communications activities. The emergence of social media has changed the consumers' role in storytelling from that of a passive listener to a more active participant (Sangeeta Singha, November,2012). There are different types of consumer brand-related activities and each one implies a different level of involvement (Prof. Peter Leeflang, 2012). Social media marketing is different than traditional methods of marketing; therefore, it requires special attention and strategy building to achieve brand image and loyalty (Erdogmus, 2012). An analysis of the top 100 brand Facebook pages indicated that a business can reach an additional 34 potential customers from one fan on its Facebook page (Fulgoni, 2011). Among a number of SNSs, Facebook is currently the world's most successful SNS (Aikaterini Manthiou, 2013). Research findings show managers that Facebook fan page content should provide valuable information, be fun and foster user interactions in order to improve user attitude and loyalty. (Carla Ruiz-Mafe, 2000). To enhance consumer brand experience, marketers are increasing engagement in brand communities by using social media technology enabling them to interact directly with customers (WIMMALA PONGPAEW, JANUARY 2014). One study reconfirmed that content-oriented needs and social interaction value of relationship-oriented needs had positive impacts on fan page usage intensity and fan page engagement, respectively (Ho, 2013). Thus, these fan pages in SNSs are acting as a cost effective marketing tool for firms to perform sustainable customer relationship management with their online consumers, which can boost up the sales volume through enhancing the purchase intention of consumers. (Kevin K.W. Ho E. W.-T., 2013). Many firms create their fan page in SNSs, which is a designated Web page in SNSs providing information related to the firms or their products concerned, with a view to develop their brand (Ho, 2013).

Fanpage and Its Requisite

By creating a fan page within Facebook, companies can profit from a range of technical features (Boyd, 2007).Prior research highlights that these technical features allow for a viral distribution and an interactive exchange of information (Gallaugher, 2010) .First, a company can initiate the interaction with users by publishing a company wallpost, i.e., writing on a fan page's message board (so-called "wall"). Thereby, companies can choose between a range of media types (e.g., status, link, photo, or app wallpost) in order to spread information the most adequate way (Yu, 2011) .Second, also the users of Facebook can interact with a company, for example by commenting on a company wallpost. These user comments are listed directly below the corresponding company wallpost in reverse chronological order. Moreover, some companies even allow users to create own user wallposts. In both cases, companies can monitor and even mediate the dialog with users, for instance by reacting with company wallposts or comments (Gallaugher, 2010).Furthermore, users can endorse company wallposts by liking them (Joinson, 2008) and thereby pushing them in real time into the news feeds of their friends (Debatin, 2009) .Besides this, users can actively and virally spread company wallposts among their friends via Facebook's implemented "share" button. In the context of Twitter, Kwak et al. (2010) found that 50% of the viral distribution occurs within an hour and 75% within less than one day. In the case of Facebook, it has been further shown that 70% of all likes on wallposts happen within 4 hours and about 95% are received within 22 hours (Miller., 2011).Thus, the majority of users' reactions on company wallposts and company comments can be assumed to happen within one day. Third, users can "like" a whole fan page (instead of liking a single company wallpost) and become explicitly a fan of this company. This "opt-in mechanism" for ongoing communication establishes a close contact to the company's fans (Harris, 2011). As every company wallpost is automatically pushed into the news feed of all fans, they can be easily kept up-to-date and a large audience can be reached. (Debatin, 2009). Taken together, the described technical features of fan pages within Facebook allow companies to distribute and exchange information virally and highly efficient within the OSN.

However, as mentioned in the previous section, the success of company fan pages varies and is not guaranteed (Chui, 2009).Therefore, multiple authors emphasize the necessity to measure whether

companies' efforts within Facebook are successful or not (Culnan, How large U.S. companies can use Twitter and other social media to gain business value., 2010) .In the context of (company) websites, it has consequently been proposed to draw on the number of unique users to quantify the reach of a website (Drèze X. a., 1998). Prior research directly related to OSN suggests to measure the success of an OSN by its number of active users (Hoffman, D.L. and Fodor, M., 2010). With respect to fan pages, Facebook provides a (non-publicly available) key metric for companies, which comprises these prior findings, that is the number of active users. In accordance to Facebook (2011b), we define the number of active users as the number of unique users (including fans and nonfans) that have directly visited the fan page, interacted with a company wallpost in their own news feed (i.e., without directly visiting the fan page), or reacted on a company wallpost (e.g., liked, shared, or commented). Thus, the usage of the full range of technical features is considered and a sound key metric for the attention and the viral impact that a fan page creates (i.e., the full extent of marketing efforts within Facebook) is provided.

Overview of Fanpages content Analysis

Many studies have been conducted on fanpages contents in terms of generating like, comments or shares. One study Results suggested that the richness of the content (inclusions of images and videos) raises the impact of the post in terms of likes. On the other hand, using images and a proper publication time are significantly influencing the number of comments, whereas the use of links may decrease this metric (Ferran Sabate, 2014) . The findings indicate that brand post vividness has a significant positive effect on brand post shares, but not on brand post likes. Brand post interactivity has a significant negative effect on both brand post likes and brand post shares. Brand post novelty and brand post consistency have a significant positive effect on both brand post likes and brand post shares. Finally, brand post content type has a significant positive effect on brand post likes, but not brand post shares (Tafesse, 2015). Results suggest the more richness of the content; the more likes and comments it gains. Moreover, comparing among four benefits components, a hedonic benefit is the most effective type of content that affect word-of-mouth most. As for publication time of the content, it is partly significantly influencing word-of-mouth (Tu, 2014). The results demonstrated that the posts on brand pages which with remuneration (content type), request for users to interact (medium interactivity), photos (low vividness) and posting during business hours (posting time) exert a significant effect on liking, commenting and sharing behavior (online engagement) (Lin, 2014). One study also showed that photo and app wallposts have more impact on the number of daily active users than status and link wallposts. Hence, companies should consider the usage of photo and app wallposts as a powerful way to increase the number of active users (Johannes Huber) 0. 504 Facebook fan page users completed the online survey and the results show that agreeableness is positively related to the willingness to share fan page information. The internal and external rewards are significantly correlated with information sharing behavior (Liu, 2012).
The results show that, there is a significant difference between the involvement of the Facebook fans and the argument quality of the posts (1Hui-Yi Ho, March 2013).

Requirements to Measure Fanpage Metrics

Despite these promising opportunities to market brands and products and to get in touch with (potential) customers, the success of fan pages varies and is by far not guaranteed (Chui, 2009). Therefore, it is necessary to measure whether a company's efforts to stimulate the interaction with existing and potential customers via fan pages in SNS are successful or not (Culnan, How large U.S. companies can use Twitter and other social media to gain business value. , (2010)). For this purpose Facebook provides a key metric called "number of active users" that comprises prior research on the measurement of a website's reach and the success of SNS in general (Drèze X. a., 1998) .Since this key metric considers the attention and the viral impact that a fan page creates (i.e., the extent of marketing efforts within Facebook companies try to maximize the number of active users on their fan pages. However, prior work mostly researched user activity in OSN in general (Cheung C. a., 2010) or private user-to-user activity (Schoendienst, 2011) . Even though a few studies take a look at fan pages and companies within SNS (Yu, 2011), the driving factors behind the number of active users on fan

pages are still unexplored. Thus, we empirically investigate – from companies' fanpage perspective – the factors influencing the number of active users on fan pages taking into account the different contents and posts' features that companies are using to stimulate users' activity and engagement on their fan pages in SNS.

III. Study Design

Different contents on fanpage encourage the users to act differently. After exploring all the contents of the electronic companies' fanpages, author discovered imporatant issues. In this paper we identified the effect of video and image contents on the consumer actions. Fanpage users' engagement involve in liking, sharing and commenting on the posts. After investigating, we discovered that all the video posting are not same. in case of electronic fanpages, some videos are created to show exctly product feature, showing know-how feature, describing details on how to use product. in this article author indicated this type of videos as **feature vodeo**.Simulteneously, there are some video that is created just to attract users in a commercial way with an entertaining feature. these videos are neither describing the products' nut and shell nor the using feature. This videos dont show or describe anything about how to use products. These videos are combination of music , human enteratining elements. Author in this paper indicated this types of videos as **entertaining video**. Similarly, in the fanpages there are deifferent types of images, some posts are only image containing product design or picture. Or the image may be just a profile picture or changing the cover photos or posting comapnies logos .The author in this paper indicated such types of image as **Only Image**. These types of image dont contains product details or any texts. Besides these, there are some image that contain details product links with a brief text. The link associated with these images may redirect the users to another social sites or company sites. These images indicate the details of product features through brief texts. We are indicating these images as **Image with Details** for the purpose of analyzing.

We have investigated 17 global electronic brands' fanpages and the posts related to video and image. Calculated the number of video and image posting on each fanpages during the last 9 months. Also calculated the number of comments, like and sharing for each posting . Finally we explored different posts' impacts on consumers engagement activities (Like, Comment, Share).

IV. Analysis and Discussion

Operationalization of Variables

In this study we in explain brand post popularity or consumer engagement activities as the number of likes, comments and shares of each brand post.

Table 1: Variable clarifications

Variable Name	Characteristics
Only Image post	• Profile/cover pictures post • Products' image post
Image with Details post	• Image with details text about product • Image with a link od products' details • Image with a link to other social site • Image with a link to company website
Feature Video	• Video demonstrating all parts of a product • Video about tips and user manual. • Video describing products' technical issues • Video related to upgrading issues
Entertaining video	• Videos that do not show product features exactly • Video demonstrating company image • Other entertaining video not related to products

Data Collection procedure

Sampling Technique: Non-probability sampling technique is used to select Brand pages. We selected those brand pages which are active in posting content regurarly on fanpages. Also Fanpages was selected according to the number of active users in fanpages of Brands.

Table 2: Collected Data from Fanpages from the month of December 2015- August 2016.

Company Name	Only Image posts	Image with Details Posts	Feature video posts	Entertaining Video posts	Total Posts	Total Comments	Total Likes	Total shares
ACER Malaysia	22	80	3	3	108	2168	37388	2710
Blackberry	4	54	6	0	64	1931	35812	4656
DELL Malaysia	5	26	2	4	37	58	888	95
Electrolux	13	61	3	0	77	154	6073	1182
IBM	5	41	10	12	68	1390	37874	5955
INTEL	19	77	30	22	148	15829	3752768	61319
LENOVO	11	35	9	33	88	4653	434453	11818
LG	0	44	12	4	60	2823	114109	4828
Microsoft	2	20	10	19	51	24597	373619	124278
NOKIA	9	19	13	0	41	10609	142587	6455
OPPO	6	39	13	7	65	4235	212953	12183
PHILIPS	7	11	0	3	21	1158	250508	1983
PLYSTATION	14	49	39	7	109	71626	894218	129318
Samsung TV	18	48	3	5	74	10413	2206566	28044
Samsung Elec	0	41	21	53	115	61126	1662850	100581
SONY EXPEDIA	29	107	8	14	158	22483	1716800	37639
XBOX	3	31	26	1	61	22072	301220	23166
TOTAL	167	783	208	187	1325	253226	12107486	548844

Descriptive Statistics of the Variables:

1. Only Image:

We explored total 17 International fanpages for the duration of 9 months to collects the number of only image posting on their pages.

Table 3: Only Image posting Statistics

Company Name	Only Image Posts	Total Comments on Image posting	Total like on Image postings	Total share on Image posting
ACER	22	447	8388	540
BLACKBERRY	4	800	8420	423
DELL	5	13	197	5
ELECTROLUX	13	43	976	160
IBM	5	352	13813	1290
INTEL	19	2511	578970	4498
LENOVO	11	516	22020	528
LG	0	0	0	0

MICROSOFT	2	132	1534	86
NOKIA	9	3346	45551	1087
OPPO	6	274	27550	450
PHILIPS	7	828	185839	1226
PLAYSTATION	14	10004	54772	3734
SAMSUNG TV	18	1976	426274	5969
SAMSUNG Ele	0	0	0	0
SONY EXPEDIA	29	6165	446340	7842
XBOX	3	1544	71234	1508

Descriptive Statistics

Particulars	N	Minimum	Maximum	Mean
Only image	17	.00	29.00	9.8235
Total com	17	.00	10004.00	1703.0000
Total like	17	.00	578970.00	111286.9412
Total share	17	.00	7842.00	1726.2353
Valid N (list wise)	17			

2. Image with details:

We have collected data on Images containing details information about products from Fanpages

Table 4: Image with Details post Statistics

Company Name	Total post	Total comments	Total Like	Total Share
ACER	80	1640	28300	2138
BLACKBERRY	54	998	23253	4114
DELL	26	41	648	89
ELECTROLUX	61	140	4922	914
IBM	41	555	16335	2707
INTEL	77	9024	2971974	27261
LENOVO	35	1337	189434	1572
LG	44	2270	98943	3088
MICROSOFT	20	4901	84036	19075
NOKIA	19	5259	77790	3408
OPPO	39	2096	148009	4058
PHILIPS	11	287	63264	635
PLAYSTATION	49	25361	410607	34646
SAMSUNG TV	48	8102	1770240	20836
SAMSUNG Elec	41	16858	735595	12736
SONY EXPEDIA	107	14140	1188828	23840
XBOX	31	8200	109014	4256

Descriptive Statistics

Praticulars	N	Minimum	Maximum	Mean
Image with detail	17	11.00	107.00	46.0588
Totalcom	17	41.00	25361.00	5953.4706
Total like	17	648.00	2971974.00	465952.4706
Total share	17	89.00	34646.00	9727.8235
Valid N (list wise)	17			

3. Feature Video Posts:

From Fanpages of 17 companies we collected data on the videos containing products' details descriptions and specifications.

Table 5: Descriptive statistics of Feature video posts

Company Name	Total post	Total comments	Total Like	Total Share
ACER	3	44	359	32
BLACKBERRY	6	133	4139	119
DELL	2	4	17	1
ELECTROLUX	3	11	175	108
IBM	10	371	4427	1072
INTEL	30	3323	160796	25235
LENOVO	9	692	60236	1915
LG	12	456	12062	1397
MICROSOFT	10	8813	134775	82628
NOKIA	13	2004	19245	1960
OPPO	13	1573	29627	6812
PHILIPS	0			
PLAYSTATION	39	35110	416412	89219
SAMSUNG TV	3	131	3466	528
SAMSUNG Elec	21	27680	655749	66610
SONY EXPEDIA	8	121	3606	534
XBOX	26	12220	120024	17276

Descriptive Statistics

Particulars	**N**	**Minimum**	**Maximum**	**Mean**
FeatureVideo	17	.00	39.00	12.2353
Comment	16	4.00	35110.00	5792.8750
Like	16	17.00	655749.00	101569.6875
Share	16	1.00	89219.00	18465.3750
Valid N (list wise)	16			

4. Entertaining Video Posts:

In this part we collected video postings that are not describing products features or user's manual descriptions in details.

Table 6: Descriptive statistics of Entertaining posts

Company Name	**Total post**	**Total comments**	**Total Like**	**Total Share**
ACER	3	44	359	32
BLACKBERRY	0	0	0	0
DELL	4	0	22	0
ELECTROLUX	0	0	0	0
IBM	12	112	3299	886
INTEL	22	971	42028	4325
LENOVO	33	2180	163509	7842
LG	4	97	3104	343

MICROSOFT	19	10751	153265	22489
NOKIA	0	0	0	0
OPPO	7	128	4814	364
PHILIPS	3	43	1405	122
PLAYSTATION	7	1151	12428	1719
SAMSUNG TV	5	204	6586	711
SAMSUNG Elec	53	16588	271506	21235
SONY EXPEDIA	14	538	7725	1141
XBOX	1	108	948	126

Descriptive Statistics

	N	Minimum	Maximum	Mean
Comment	17	.00	16588.00	1936.1765
Like	17	.00	271506.00	39470.4706
Share	17	.00	22489.00	3607.9412
EntertaingVideo	17	.00	53.00	11.0000
Valid N (listwise)	17			

V. Conclusion

The four types of Posts (Only Image post, Image with Details, Feature Video posts and Entertaining Video) have significant and different impact on producing consumer engagement in fanpages. Image with details have more contribution in generating Consumer engagement than Only Image post. As well, Feature Videos are more effective in generating engagement than Entertaining video. The Standard Deviation of brand posts and engagement activities are also high. Most electronics fanpages are encouraged to post Images with details compared to other posts.

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