Volume 5, Issue 9 – Sep 2017

ISSN: 2054-7404

ARCHIVES OF BUSINESS RESEARCH

Society for Science and Education - United Kingdom

TABLE OF CONTENTS

EDITORIAL ADVISORY BOARD

DISCLAIMER

All the contributions are published in good faith and intentions to promote and encourage research activities around the globe. The contributions are property of their respective authors/owners and Archives of Business Research (ABR) is not responsible for any content that hurts someone's views or feelings etc.

Archives of Business Research – Vol.5, No.9
Publication Date: Sep. 25, 2017
DOI: 10.14738/abr.59.3648.

Hamzaee, R. G. (2017. Innovative Air-Transport Policy Formulation & Analysis Conducive to Economic Growth and Sustainability. *Archives of Business Research,* 5*(9),* 1-14.

Innovative Air-Transport Policy Formulation & Analysis Conducive to Economic Growth and Sustainability

Reza G. Hamzaee, Ph.D.*
BOG-Distinguished Professor of Economics
Department of Economics, Political Science, and Sociology
Missouri Western State University

ABSTRACT

The intuitive concept of strong economic effects of aviation and air transport has been unexceptionally supported by the abundantly clear evidence. Hence, formulation of a dynamic and sustainable policy, based on massive evidence, is considered as mandatory. Innovative policies would internalize major components of the existing positive externalities to enhance the success, efficiency, and viability of the industry, which would be conducive to economic development. This study applies an inductive method: Some evidence and empirically measured economic effects would lead to the formulation of an integrative economic policy framework that can be applied accordingly in the future.

INTRODUCTION

The economic impact of transportation, in general, and air transportation, in specific, has been clear and addressed appropriately at all times. Hence, the opportunity costs of any less than optimal and most efficient economic policy that would incorporate all the infrastructural growth potential into actual fruition would be too large. While in both of the following two tables, the economic contributions of civil aviation are demonstrated, in TABLE 2, billions of dollars of aviation-related manufacturing income are reported both for 2012.

TABLE 1: 2012 Economic Impact of Civil Aviation
(Percent of Top Ten States' GDP)

State	Contribution to GDP
Hawaii	17.9%
Nevada	12.1%
Arizona	7.9%
Alaska	7.5%
Florida	7.2%
Washington	6.7%
Colorado	6.2%
Georgia	5.7%
Utah	5.6%
California	4.7%

Source: U.S. Department of Transportation
Federal Aviation Administration, January 2015, p. 6
(Reorganized by the author)

TABLE 2: Total Economic Output (Manufacturing): Aircraft, Aircraft Engine, and Parts Manufacturing
Top Five States
(Top Five States, Billions of Dollars)

State	Manufacturing
California	34.9
Washington	25.4
Texas	16.3
Connecticut	13.4
Arizona	11.8

Source: U.S. Department of Transportation
Federal Aviation Administration, January 2015, p. 8
(Reorganized by the author)

It is also evident from TABLE 3 that in many other economic-benefit criteria, such as aviation's relative productivity, income, passengers carried, tourist travelers, etc., aviation and air transport industry have a significant and sustainable positive impact.

TABLE 3: Globalization & Aviation Benefits - 2014

Jobs Created	62.7 million
Relative Productivity: Aviation Jobs	3.8 times more productive than other jobs
Income	$2.7 trillion
If aviation were a country	21st biggest in GDP Size
Passengers Carried	3.3 billion (2014) 3.57 billion (2015)
Tourist Travelers	54% of all international tourists traveled by air
No of Commercial Airlines	1402
Commercial Aircraft in Service	26,065
Airports with Scheduled Commercial Flights	3,883
World-Wide Commercial Flights	32.8 million (2014) 34.8 million (2015)

Source: Aviation Benefits beyond Borders – Global Summary, ATAG, June 2016
(Reorganized & tabulated by the author)

The 20-year forecast of international air traffic growth seems to be promising, as is clear from TABLE 4.

TABLE 4: International Air Traffic Growth Forecast: 2014-2034

Africa	5.4%	APEC	3.9%
Asia-Pacific	5.1%	European Union	3.6%
Europe	3.6%	Small Island States	4.9%
Latin America & Caribbean	4.7%	Developing Countries	5.0%
Middle East	6.0%	OECD	3.5%
North America	2.7%	World	4.3%

Source: Aviation Benefits beyond Borders – Global Summary, ATAG, June 2016 (Reorganized & tabulated by the author)

RELATED RESEARCH BACKGROUND

The influence of transportation on different economies has never been ignored since ancient times. Civilization, as supported by socioeconomic, geopolitical and technological developments, has been leaning on transportation. As to air transport perspective, Button (2008) stresses appropriately:

> *From its earliest days, airlines were seen as having potential for providing high-speed mail services, and subsequently medium and long-term passenger transport. Technology now allows the carriage of much larger cargo pay-loads in a more reliable way. These strategic functions were used to pursue internal national policies of social, political, and economic integration within large countries such as Canada, the US, and Australia, but also took on international significance from the 1930s within the Imperial geopolitical systems centered mainly on the UK, France, Germany, and other European countries when technology allowed for intercontinental services to be developed. (p.7)*

Button (2008) has also highlighted the airlines' attempts in covering their costs through many ways, including subsidies, service bundling, and even vertical integration. He refers to some example of historical experiences such as American Airlines initiating the computer reservation systems (CRS). He also uses the experiences of strong business ties and cooperation between Boeing and Pan American on the one hand and those of Lockheed and TWA in building and using aircraft.

Hamzaee & Vasigh (2006) offered a theoretical framework, in which a mathematical model of airport-airlines cost-revenue sharing is recommended, which by itself would facilitate some internalization of external benefits in such a way that both independently operated entities would be incorporated into some sort of holding company.

Hamzaee & Vasigh (2001 and 2002) in their two other separate studies on enhancement of airport efficiency, applied benchmarking (2001) and total factor productivity model (2002), using many airports and airlines data at the time. Obviously airports' efficient operations would facilitate trade and the desired sustainable economic growth. In the following section, some theoretical model are formulated and offered through applying the existing knowledge on aviation strengths and challenges. A series of aviation (industrial) policy conducive to more investment and infrastructure effects on the economy would be the center piece of the proposed models.

THE FRAMEWORK AND METHODOLOGY

A Proposed General Framework:

$$Y_t = f(X_{it}, Tr_{jt}, Tec_{ht}) \tag{1}$$

Y_t = National output, real GDP in period t
X_{it} = Real spending on ith resource in period t, where i = 1, 2, …, n
Tr_{jt} = Real spending on jth transportation in period t, where j = 1, 2,…, m
Tec_{ht} = Real spending on hth type of technology in period t, where h = 1, 2, …, k

To stress the share of air transportation relative to all forms of transportation, let's adopt ATA_t defined in (2), as follows:

$$ATA_t = \frac{AAT_t}{\sum_{j=1}^{m} Tr_{jt}} \quad (2)$$

ATA_t = All Air Transport in period t as a fraction of the entirety of all the transportations made in period t, all measured in real spending.

Assuming an aggregate Cobb-Douglas production function, equation (1) can be restated as:

$$Y_t = \prod_{i=1}^{n} X_{it}^{\ i} \prod_{h=1}^{k} Tec_{ht}^{\ h} ATA_t \quad (3)$$

$$Y_t = {}_0 + \sum_{i=1}^{n} {}_i LogX_{it} + \sum_{h=1}^{k} {}_h LogTec_{ht} + \ Log\ ATA_t \quad (4)$$

An Infrastructure-Investment Enhancement Policy for Air-transport Industry:
In order to enhance air-transport industry, some real incentives need to be built into the taxation formula. That approach would introduce an effective cost-benefit perspective into operational management in an attempt to optimize their services and activities. The author suggests the following investment model that should incorporate some policy-variables, including both punitive as well as persuasive measures.

$$\mathbf{ATK = a_0 - a_1\,TAR - a_2\,FL + a_3\,RORA - a_4\,RSK} \quad (5)$$

ATK = Air-transport capital expenditures
TAR = Tax rates on air-transport revenues
FL = Fuel used for air-transport purposes
RORA = Rate of return on air-transport capital
RSK = Expected risk index on air-transport investment
a_i = all parameters for i = $_{0,\,1,\,\ldots.,\,4}$

The policy-focused tax rates on air-transport revenues are proposed to come into effect through the following formula:

$$\mathbf{TAR = t_0 - t_1\,dEMA + t_2\,PDIS - t_3\,APLA - t_4\,FAAC} \quad (6)$$

dEMA = Percentage change in a contribution index of air-transport related infrastructural activities

PDIS = Passengers dissatisfaction index

APLA = Airport-airline joint capital expenditures (more theoretical analysis on this in subheading 3, as will follow)
FAAC = FAA- Security Compliance Index, which would be possible to dynamically evolve for more effective enhancement of environmental safety and overall security
t_i = all parameters, for i = $_{0,\,1,\,\ldots,\,4}$

$$\textbf{ATAR = (1-TAR).BTR} \qquad (7)$$

Plugging (6) into (7), the following will be resulted:

$$\textbf{ATAR} = \textbf{(1-} t_0 + t_1 \textbf{ dEMA - } t_2 \textbf{ PDIS + } t_3 \textbf{ APLA + } t_4 \textbf{ FAAC).BTR} \qquad (8)$$

Equation (8) can be summarized in a general functional form of:

$$\textbf{ATAR = f (} t_0 \textbf{, dEMA, PDIS, APLA, FAAC, BTR)} \qquad (9)$$

ATAR = Air-transport after-tax revenues
BTR= Before-tax revenues of air-transport enterprises

After tax earnings of air-transport enterprises would be influenced by the general tax rates, percentage change in corresponding employment, passengers' satisfaction, the extent of airport-airline joint capital expenditures, compliance with the FAA safety and environmental regulations, and their actual activities, as measured by their before-tax earnings.

A Theoretical Model of Airline-Airport Integration: Review of a Previous Work
Related to my proposed theoretical framework of subheading 1 and 2, as discussed above, the author is providing a thorough excerpt of what was previously published (Hamzaee and Vasigh, 2006), where an airline-airport integrated operation optimization model, in which all three stakeholders, the airlines, airports, and their customers (of both airside and landside services) are incorporated. What connects the other two segments of my model with this segment of our theoretical work is APLA = Airport-airline joint capital expenditures (as introduced in the last section).

Various solutions for group optimization are analyzed. Beginning with the two general groups of airside and landside outputs to be produced, there are n different resources to be used by both airlines and airports. Therefore, the n resource constraints are defined as:

$$\begin{aligned} &a_{1AS} \quad Q_1 + a_{1LS} \quad Q_2 \quad\quad R_1 \\ &a_{2AS} \quad Q_1 + a_{2LS} \quad Q_2 \quad\quad R_2 \\ &\cdots\cdot \\ &a_{nAS} \quad Q_1 + a_{nLS} \quad Q_2 \quad\quad R_n \end{aligned} \qquad (1)$$

where,
a_{iAS} = the amount of the ith resource necessary to produce one indexed unit of airside output (landing & departure), for i = 1,2,…, n
a_{iLS} = the amount of the ith resource necessary to produce one indexed unit of landside services to customers at the airport, for i = 1,2,…, n

Q_1 = the total indexed quantity of airside output (quantity of a composite output of landing/passengers + take off/passengers + miles/passengers, or alike)

Q_2 = the total indexed quantity of landside output
R_i = The total quantity of the ith utilized resource, for i = 1,2,…, n

In Figure 1, as an illustrating example, five of the aforementioned hypothetical resource constraints are graphed. Obviously, to arrive at a relevant production possibility frontier (the darker portions of the five constraints), all of the nth resource constraints listed above in (1), must be simultaneously implemented. This model is proposed to include only one airport (at a time) as integrated with all the airlines chartered to have movement (traffic) through it. An integration of all the resource constraints for one airport and all the airlines using that airport would be summarized in constraint (2), as follows next.

$$\sum_{i=1}^{n} (a_{iFL} \quad Q_1 + a_{iLS} \quad Q_2) \qquad \sum_{i=1}^{n} R_i \qquad (2)$$

which is an integrative resource constraint of one airport - only – along with those of all the airlines using it. Such resources, as an example, could include - but not limited to - the following list:

R_1= quantity of Gas
R_2= number of pilots
R_3= number of airside personnel
R_4= number of aircraft
R_5= number of runways
R_6= number of maintenance bases
R_7= number of maintenance technicians and engineers
R_8= number of tower controllers
R_9= amount of computer hardware and software to utilize
R_8= number of airlines' on-land employees excluding airside personnel, technicians and engineers
R_7= number of landside operational employees
R_{10}= number of security personnel
R_{11}= number of janitorial employees
R_{12}= number of value of security facilities
R_{13}= number of airport restaurants

THE AIRLINES-AIRPORT BUDGET LINE

Then under competitive conditions, the following condition should hold:

$$P_1 = ATC_1 \qquad (3)$$

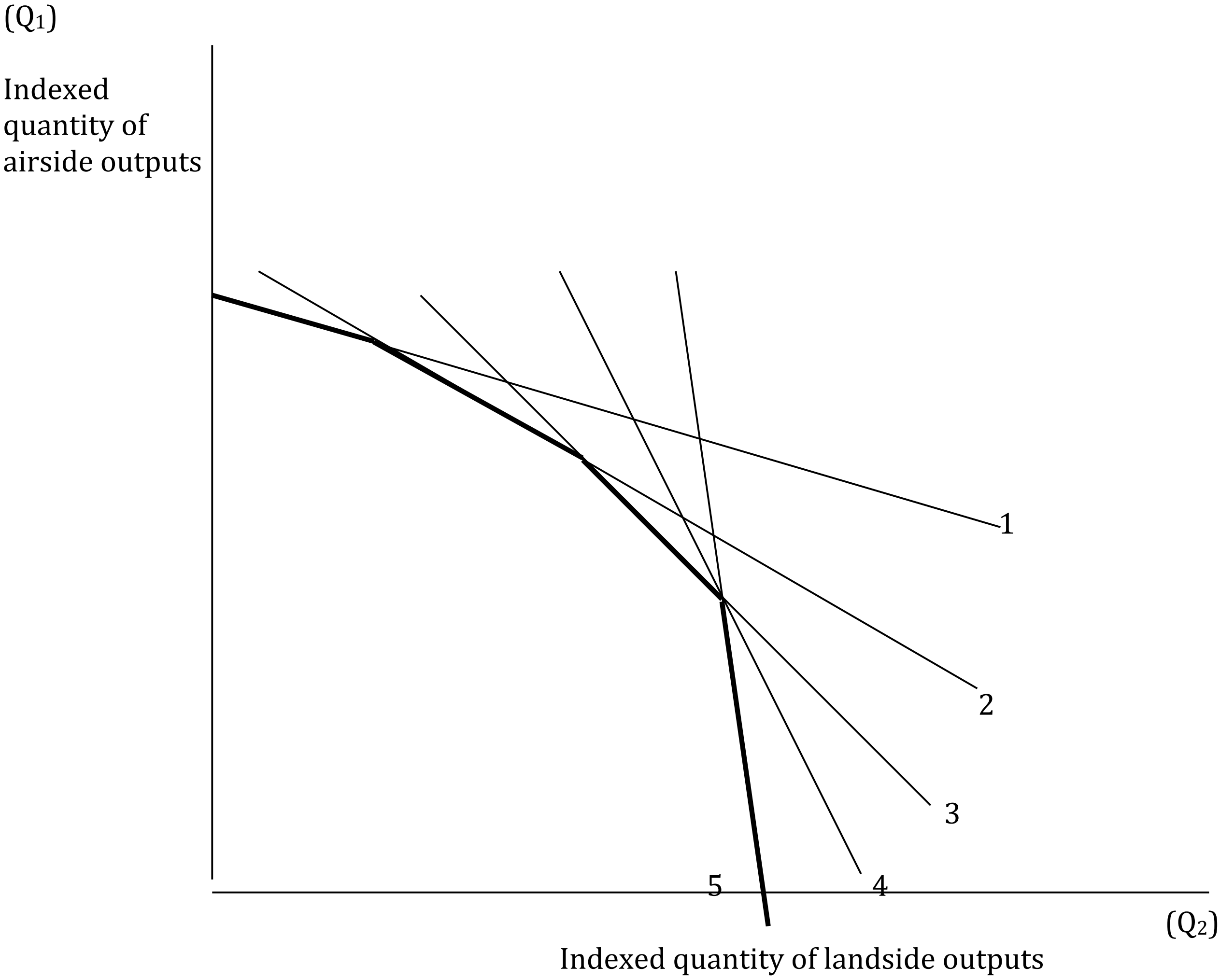


Figure 1.
An Integrated Airline-Airport Production Possibility Frontier

Also, by definition,

$$ATC_1 = \frac{\sum_{i=1}^{k} r_i R_i}{Q_1} \qquad (4)$$

which is the average resource cost, considering k different resources to be used for provision of airside output (Q_1).

P1= Indexed average price of a composite unit of output (landings/passengers, departures/passengers, plus miles/passengers of traveling)
Q_1 = Quantity of a composite output of landing/passengers (q_1) +
takeoff/passengers (q_2) + Miles/passengers (q_3)
ATC_1 = average total cost of all resources needed for each composite unit of the
airside output produced in a certain period of time
r_i = the rental price (cost) of the ith resource in production of airside output for
i = 1,2, …, k

Comparing (3) and (4), the following definition, under competition, will result:

$$P_1 = \frac{\sum_{i=1}^{k} r_i R_i}{Q_1} \tag{5}$$

Also, P_2, the price of an indexed quantity of landside output (Q_2), can be similarly defined as:

$$P_2 = ATC_2 = \frac{\sum_{j=1}^{m} r_j R_j}{Q_2} \tag{6}$$

where:
ATC_2 = average total cost of all land-side output supplied in a certain period of time
r_j = the rental price (cost) of the jth resource in production of landside output for j = 1,2, …, m
n = k + m

Then the following relationship (7) will represent the budget constraint for the passengers and/or general customers, which would also represent the airlines-airport budget constraint, assuming that their incomes under competitive conditions would be the same as their total costs:

$$P_1Q_1 + P_2Q_2 \leq B$$
$$B = B_1 + B_2 \tag{7}$$

B_1 = Airlines total budget
B_2 = Airport's total budget
B = B_1+ B_2 = Airportlines' total budget

Now, plugging (5) and (6) in (7), the following budget constraint will be resulted:

$$\left(\frac{\sum_{i=1}^{k} r_i R_i}{Q_1}\right) Q_1 + \left(\frac{\sum_{j=1}^{m} r_j R_j}{Q_2}\right) Q_2 \leq B$$

$$Q_1 = \left(\frac{B}{\frac{\sum_{i=1}^{k} r_i R_i}{Q_1}}\right) - \left(\frac{\frac{\sum_{j=1}^{m} r_j R_j}{Q_2}}{\frac{\sum_{i=1}^{k} r_i R_i}{Q_1}}\right) Q_2 \tag{8}$$

(Q1-Intercept) (Slope of the Budget Constraint)

$$\mathbf{Q_1} = \frac{\text{(Total airport-airlines integrated budget)}}{\text{(Airlines average cost of operation)}}$$

$$\frac{ATC_{landside}}{ATC_{airside}} Q_2 \qquad (9)$$

Now all the three stakeholders are put together into interaction, and find various possible optimization solutions to the model. In Figure 2, the optimum solution for all three groups is the same, Q^*_1 and Q^*_2 should be produced and consumed.

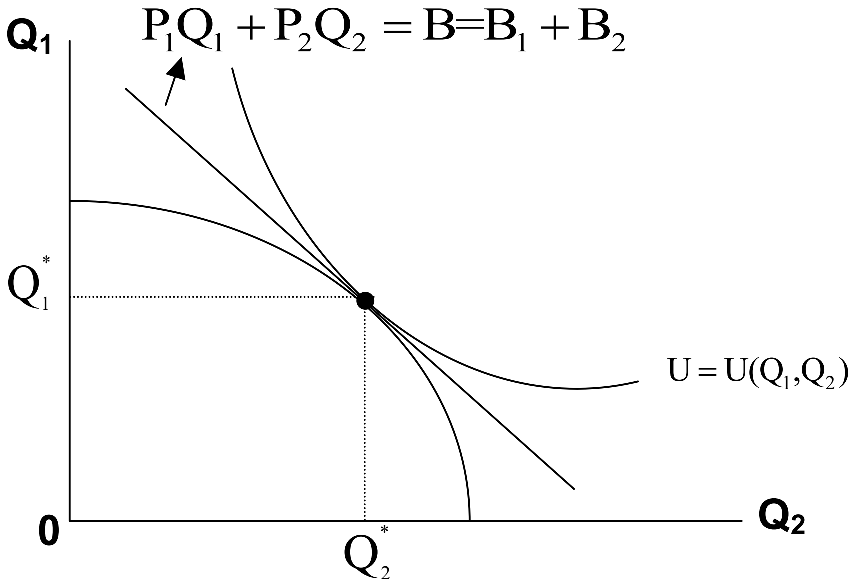


Figure 2
The optimum solution for all three groups is the same, Q^*_1 and Q^*_2
Should be produced and consumed

In Figure 3, consumers of both services would have a different optimal solution than the "airportlines" would. The consumers' preferences are more heavily towards airside than land-side services. However, for the "airportlines" more of the landside and less of the airside would be the best solution.

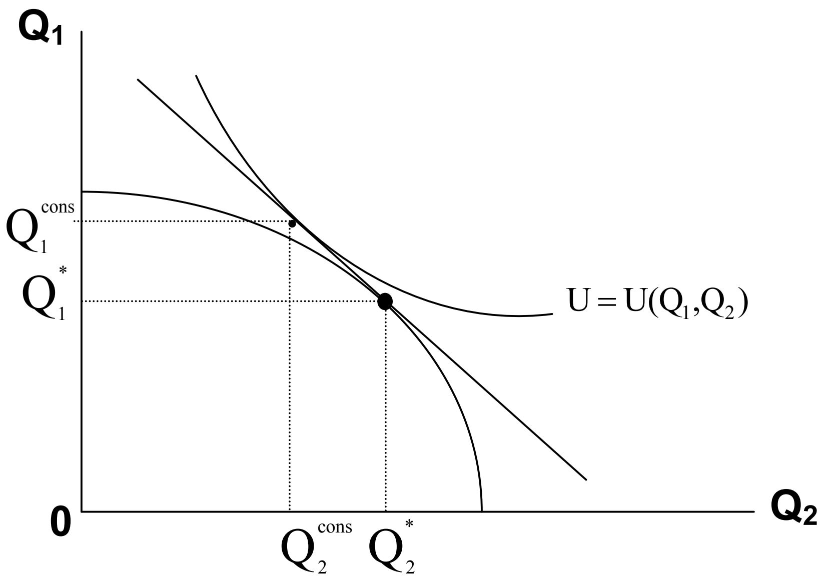


Figure 3
Consumers of both services would have a different optimal solution than would the "airportlines"

In the following case (Figure 4), the providers (airports and airlines or just "airportlines") will have again a different optimal solution than the consumers would. Consumers are preferring more landside than airside services.

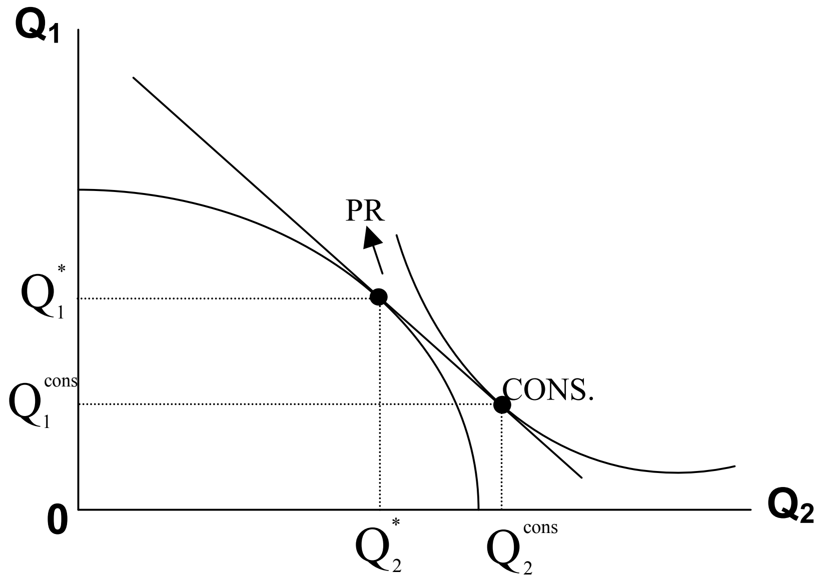


Figure 4
Consumers' biases are towards landside services

A TREND ANALYSIS OF SOME AVIATION DATA

Focusing on several frequently watched airlines performance indicators, the author has applied some trend analysis. The linear trend estimations (Figures 6 and 7) have been revealed as optimal, considering various minimum error criteria.

Before focusing on some relevant trend estimations, Figure 5 indicates the significance of domestic and international air cargo revenues in terms of both frequencies and levels.

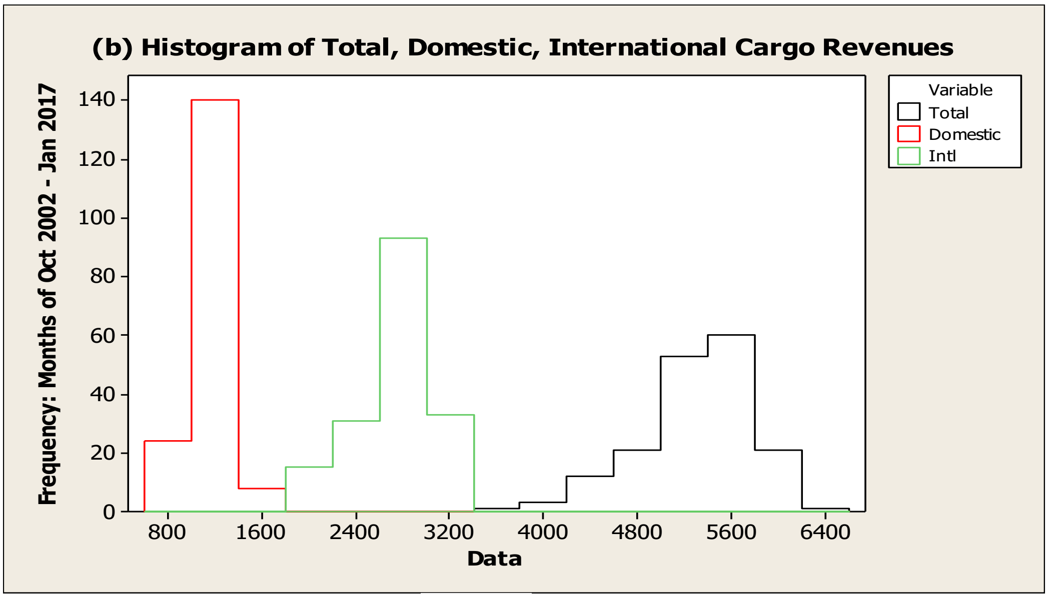
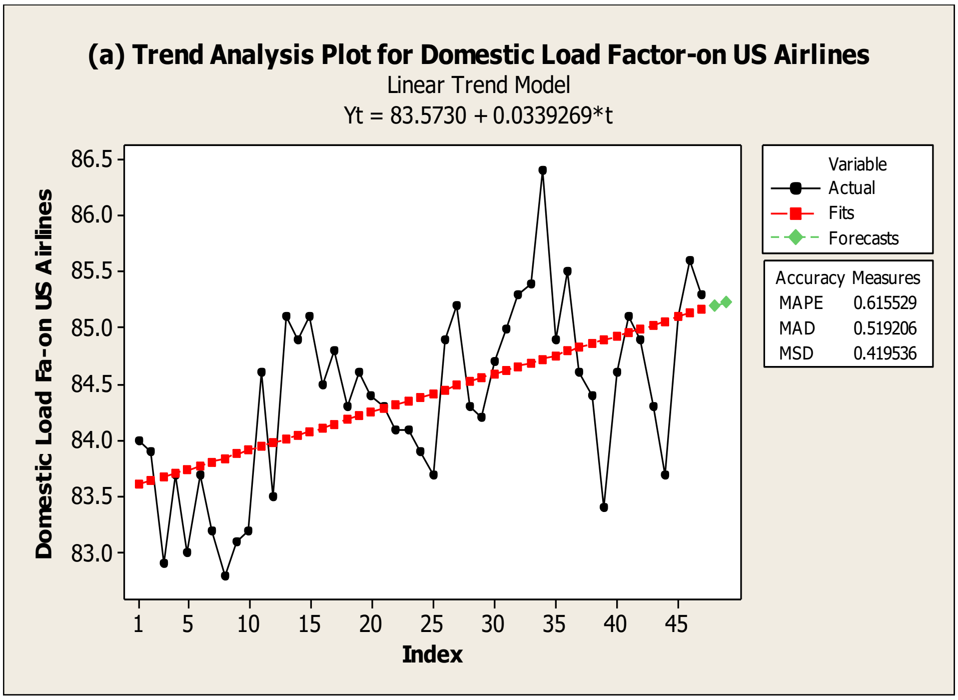


Figure 5
The Three Levels and Frequencies of Air Cargo Revenues

Load factor is a major profitability indicator in aviation. A high load factor is just about a high rate of passenger occupancy conducive to higher profit, given the high fixed costs of fuel, well-maintained aircraft, full flight crew and support staff. Load factor would reflect expected profit index and even a component of the expected risk factor for corresponding investors. As is clear in Figure 6, both trends of load factor and revenues are upward, despite shorter-term fluctuations.



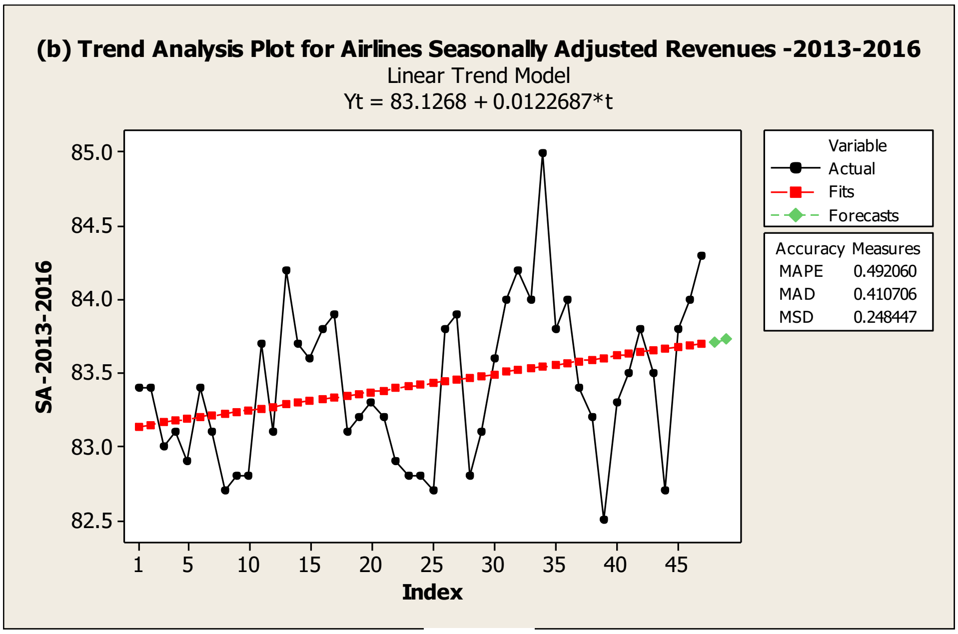
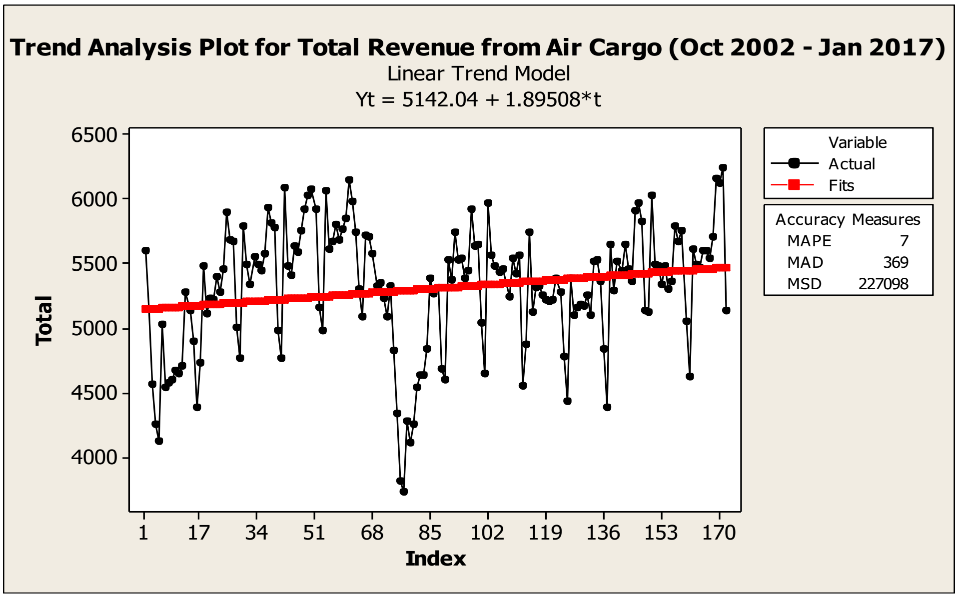


Figure 6
US Airlines' Upward Domestic Load Factor Trend (a) and Revenues Trend (b)

In Figure 7, however the trend behaviors for Air cargo revenues and international load factor are different than those depicted in Figure 6.



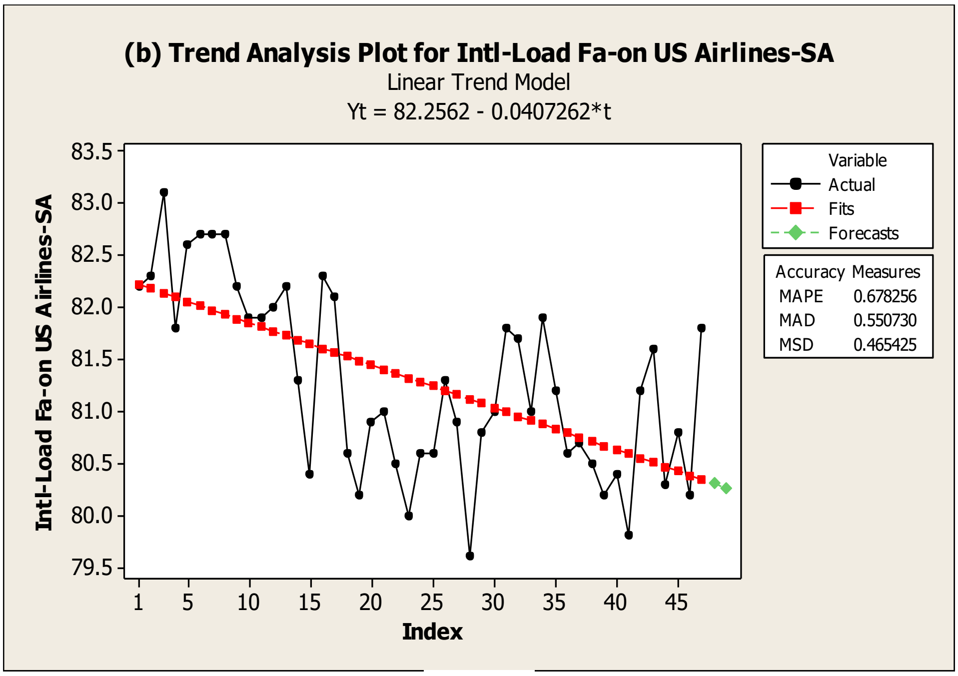


Figure 7
U.S. Cargo Airlines' Total Revenue Trend (a) and Downward International Load Factor Trend (b)

SUMMARY

The intuitive concept of strong economic effects of aviation and air transport has been unexceptionally supported by the abundantly existing clear evidence. Hence, formulation of a dynamic and sustainable policy is considered as mandatory. Innovative policies would internalize major components of the existing positive externalities to enhance the success, efficiency, and viability of the industry, which would be conducive to undoubted economic development for various nations. In this research, the author has formulated three theoretical models that would serve in enhancement of efficiency and efficacy of air transport investment and its subsequent infrastructure impact on the economy. Tax policy that would encourage more environmental improvement, passenger satisfaction, and job creation would play significant roles in the formulated framework. The author is continuing this research in search of more macroeconomic data, involving air transport performance indexation along with matching GDP, and other macroeconomic data.

References

Air Transport Action Group – ATAG. (July 2016). "A Country-by-Country Look at Aviation's Benefits." *Powering Global Economic Growth, Employment, Trade Links, Tourism and Support for Sustainable Development through Air Transport*, pp. 61-64.

ATAG. (June 2016). *Aviation Benefits beyond Borders – Global Summary*.

Button, Ken. (2008). "The Impacts of Globalization on International Air Transport Activity." Global Forum on Transport and Environment in a Globalizing World, held in Guadalajara, Mexico, November 10-12, 2008.

Gill, Michael. (April 2014). *Powering Global Economic Growth, Employment, Trade Links, Tourism and Support for Sustainable Development Through Air Transport. Aviation Benefits Beyond Borders.* Air Transport Aviation Group (ATAG), Geneva, Switzerland.

Hamzaee, Reza G., and Vasigh, Bijan. (May 2006). "A Collective Airport - Airline Efficiency Strategic Model." *The International Journal of Applied Management and Technology.* Volume 4, No. 1, pp.67-78.

Hamzaee, Reza G., and Vasigh, Bijan. (May 2002). "Total Factor Productivity Index (TFP) for Airport Efficiency." *Handbook of Airline Economics*. McGraw Hill Publishing Co., 2nd edition, May 2002, pp. 469-476.

Hamzaee, Reza G., and Vasigh, Bijan. (March 2001). "Airport Efficiency," *AVMARK_Aviation Economist Journal*.

March 2001 edition, pp. 10-12.

U.S. Department of Transportation: Federal Aviation Administration. (January 2015). The Economic Impact of Civil Aviation on the U.S. Economy: Economic Impact of Civil Aviation by State.

U.S. Department of Transportation: Data Sources: https://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/national_transportation_statistics/html/table_03_06.html

ABOUT THE AUTHOR

Reza G. Hamzaee: He has been actively serving Missouri Western State University (MWSU) since August 1984. He chaired the Dept. of Business & Economics @ MWSU in 1990-91. He has earned 8 teaching-excellence and research-excellence awards from MWSU, including two times of post-professorial promotions, under the title of "MWSU Board of Governors Distinguished Professor Award" in 2003 and 2008. He has received several research domestic and international grants. He also served WU's doctoral program at the School of Applied Management & Decision Sciences for the period of 1992-2014, as his invited second affiliation.

Archives of Business Research – Vol.5, No.9
Publication Date: Sep. 25, 2017
DOI: 10.14738/abr.59.3612.
Ung, V., & Norng, T. (2017). Gearing Service Quality into High Educational Institutes in Cambodia. *Archives of Business Research,* 5*(9),* 15-30.

Gearing Service Quality into High Educational Institutes in Cambodia

Dr. Veasna UNG
Vice Dean of Faculty of Tourism and Hospitality
National University of Management (NUM)
Phnom Penh, Cambodia

Tha NORNG
Director of University of Management and Economic (UME)
Branch of Banteay, Meanchey Province, Cambodia

ABSTRACT

In the challenging atmosphere of globalization era, the educational quality has not only become a major industry and need of the day but it is also an investment by the parents for their children. This quality focus on excellent learning process and public satisfaction on the service offered and it is bridge to attract and keep students who want to get universities in public sector as well as in private sector. Measuring student satisfaction is key point in determining service quality at higher educational institute. The main purpose of this paper is to evaluate students' satisfaction on services provided by universities in Cambodia. Specifically, the study found significant relationship between the five dimensions of augmented SERVQUAL (tangibility, reliability, assurance, technology, empathy, and responsiveness) or TRATER and students' satisfaction. Data was collected from 1368 students from both public and private sector universities/institutes are included in this study. The estimation results show that five dimensions (TREAT dimension: tangibility, responsiveness, empathy, assurance, and technology) have a significant, positive impact on the overall student satisfaction (OSS), with empathy being the most important predictor of student's satisfaction. Recommendations and implications for policy makers are discussed and guidelines for future research are also provided. Such discovery should help universities to conduct better strategic plan to meet students' satisfaction in particular and its overall performance in general.

Keywords: Perception and Expectation of Student, Service Quality, Augmented SERVQUAL, TRATER model, Students' Satisfaction, Higher Education Institute, Cambodia

INTRODUCTION

All sectors of society, including the education sector have been affected by unlimited change of information communication technologies around the globe (Sife et al.,2007). Many researchers and academicians also are interested in educational sector. And operation of each universities are challenging with each other on the basis of service offered. The services provided by many universities and comparing these services with competitors to determine status of competitive advantage are used to evaluate by these organizations (Ahmed et al., 2010). Actually, to take competitive advantage, it requires HEIs to continuously acquire, maintain, and build stronger relationships with students (Hanaysha etal., 2011). Given this, the universities should focus on the way of managing their students' perceived service quality (Sumaedi, and Bakti, 2011; Zafi ropoulos, Vrana,2008; Morales, and Caldereon,1999). Students' perceptions of service quality is cornerstone of universities–understanding 'service' in the broad sense, including both academic and nonacademic services in order to success in competitive environment and those perceptions are also a key influence on students' decisions when they are choosing or recommending a particular institution (Martínez-Argüelles, et al.,(2010), but educational services quality, student satisfaction has also been concern of many universities/ institutes (Legčević,2009).

Logically, quality service has contributed significantly to customer satisfaction (Bolton and Drew, 1991) and customer retention and positive word-of-mouth communications (Reichheld and Sasser, 1990). As like researcher, Letcher and Neves, (2010) pointed out that strive of service quality improving of universities approach to students satisfaction, good reputation or image of organizations, fast spread of positive word of mouth. So that the absent of service quality in educational institutes lead to pull down its image and competitive advantage.

Meanwhile, Students' needs and expectations can be satisfied was perceived as key variable (Tan & Kek, 2004). Student satisfaction helps to build self-confidence, and that self-confidence helps students develop useful skills, acquire knowledge, and become more confident, in what may be described as a virtuous cycle have been found by psychologists, and making customers loyal, organizations have strive to meet their needs and exceed their expectations (Oliveira, 2009). Core of assessment of student satisfaction have long been conducted to evaluate the effectiveness of different educational institute services in a narrower sense. The measuring of the effectiveness of particular academic programs is increasingly including assessment of student satisfaction (Letcher and Neves, 2010). So student satisfaction and service quality affect more on educational quality in university and are perceived as vital cornerstone in acquiring and sustaining competitive advantage, retaining the existing students and attracting the new ones, creating long term profitability as well as building brand name reputation of their universities.

Several techniques and approaches for measuring service quality has been proposed and are currently use in the high educational sector. Service quality (SERVQUAL) model given by Parasurman et al. (1988) is the widely attention and accepted for measuring service quality offered at the educational sector (Ahmed et al., 2010 and Oliveira, 2009). This model initially developed by Parasuraman et al. (1985) and later further refined by Parasuraman et al. (1988). Since its inception, the SERVQUAL model has been widely used in a large variety of service sectors, including HEs sector. Recent published studies on HEs sector have been carried out for many developing and developed countries, which include, among others Asia countries, Malaysia (Abu Hasan et al., 2007, Ilhaamie, 2010); Singapor (Tan and Kek, 2004); Pakistan (Malik et al.,, 200X); India (Singh and Khanduja, 2010) ; ans some european countries like UK (Barnes, 2006); Greek (Zafiropoulos and Vrana,2008).

With era of increased competitive environment and unlimited innovations world, universities in both public and private sector in Cambodia must face, among other challenges, an increasingly differentiated demand for education, the need to carry out more commercial activities in order to obtain new sources of funding, and new competitors that have to strive to fulfill their vital tasks and obligations by improving the educational service sector to win competitor as it is considered as to be a heart of university process. In this regard, the educational service areas were re-reformed in order to provide well educational service to students. Currently, many of the existing universities/institutes have been upgraded and modernized in era of growth of universities/institutes and students in Cambodia. Further, the training of educational staff and appropriate technology has also been important to many universities to meet the rising demand for students. In other words, some universities/institutes' service quality is not as expected by the students, due to its less quality. Some of the universities/institutes are reported not to meet the educational service expectations of the student such as basic skill staff needs, knowledge, courteous and compassion, proper communications with the students. This combined with less good quality of educational service has encouraged some students to study at abroad, especially in neighboring and western countries. Some public and private universities/institutes are reported to have taken the initiative to enhance the quality of their services by improving infrastructure, modernizing educational technology, reviewing monthly performance, preparing manuals and guidelines, initiating productivity improvement programs, and universities that offer superior service quality likely contribute the quality of education and tend to be student's satisfaction and loyalty.

The primary purpose of this study is to diagnose accurately service shortfalls in the universities, through assessing the expectation and the perceptions of the universities' students in Cambodia—both public and private universities. The model of measuring universities service quality was employed by researcher, the augmented SERVQUAL model or call new model of the TRATER to determine the factors that contribute to improve the student satisfaction in the higher educational institute/universities in Cambodia. To this end, research questions need to be formally formulate, and analysis are required scientifically and systematically answer the questions below

- Does the students' perception meet their expectation on service quality in universities sector in Cambodia?
- What are the factors that contribute most significantly to the students' satisfaction?

LITERATURE REVIEW

A key strategic issue on agenda of management can not separate from service quality. Assessing the service quality is an important factor for both academics and practitioners, and finally, the quality improvement technique was developed to build customer loyalty and achieve competitive advantage (Abdullah, 2006). Recently literature documents a number of methods used to measure service quality. As pointed out by Barnes, (2006), the SERVQUAL instrument represents a multi-item scale that can be used for measuring expectations and perceptions of service quality - as perceived among consumers. Extensive statistical analysis revealed significant correlations between certain dimensions depicted in the original concept in developing the research instrument. In their later studies, Parasuraman et al. (1988, 1990) reduced the original ten potentially overlapping dimensions to five testable dimensions such as he five widely used dimensions include *tangibles* (referring to physical facilities, appearance of personnel and equipment); *reliability* (referring to the ability to perform the promised service dependably and accurately); *responsiveness* (referring to the willingness to help customers and provide prompt service); *assurance* (referring to the knowledge and courtesy of employees and their ability to convey trust and confidence); and *empathy* (referring to the provision of caring, and personalized individual attention given to customers). This model has been conducted extensively within both practitioner and academic research for assessing service quality. The initial concept presented by Parasuraman et al., (1985) is more and more useful for focusing the importance of the potential service gap between customer expectations and perceptions in service organizations in over the last fifteen years. The SERVQUAL instrument consists of twenty-two parallel related expectation (E) and perception (P) statements that represent the five service quality dimensions. In order to obtain views for the statements, customers are required to select a response using likert scales that range from strongly agree to strongly disagree. This allows for the difference scores for each dimension to be calculated. The difference (P± E = Q) represents the measure of service quality (Q). Where Q is negative – a service gap exists. However, where Q is positive, customer expectations are being exceeded. A further section of the instrument provides for the measurement of the relative importance associated with each dimension. After the mean for each dimension has been calculated, the relative importance score can then be used to calculate a weighted average score for each dimension (Barnes, 2006).

In light of these criticisms, Buttle (1996) commons some future research directions; one of which is to continue to investigate the relationships among service quality, customer satisfaction, buying behavior, customer retention, behavioral intention, word-of-mouth communications and market share. Despite SERVQUAL model being criticized, it is more popular, and has been used for studies of service-providing organizations in many countries. SERVQUAL models was used and widely accepted by researchers and academicians in study of service quality model given by Parasuraman et al. (1988) and has been used to evaluate service quality provided by more high education institution such as in UK (Barnes, 2006); in Pakistan (Ahmed et al., 2010; Khan et al., 2011); in Malaysia (Mosahab, et al.,2010; Ilhaamie, 2010);in Brazil (Oliveira, 2009); in Greek (Zafi ropoulos and Vrana, 2008); and in India (Singh and Khanduja, 2010).

For a better chance of high educational institute to challenge have to emphasize the of students satisfaction and service quality. Actually, developing countries has become an extremely compete and great significant to society and government with providing quality higher education in recently era. As universities must face internationalization challenging with standard set of other educational institutes of the world. For attracting and keeping students cannot ignore a demand for better information and transparency about quality (Merican, et al. 2009). Aligning to education quality in high education sector, students and institutions create strong ties ; therefore, schools have to focus students for own financial benefits and in turn, and students emphasize on institutes to absorb knowledge and help to forge meaningful employment and also are one of the most important stakeholders. Students' concern for quality and measuring the quality of service provided to students are also interested for various researchers (Ahmed et al., 2010). Service quality in educational industry covers a variety of educational activities both inside and outside the classroom such as classroom based activities, faculty member/student interactions, educational facilities, and contacts with the staff of the institution and defined on the basis of students overall evaluation on the services they received which is part of their educational experience (Hanaysha, et al., 2011). As cited by Hanaysha, et al., (2011), Ahmed & Nawaz (2010) said that service quality is a key performance measure in educational excellence and is a main strategic variable for universities to create a strong perception in student's mind in relation to attraction, satisfaction and retention of students and it has direct impact on funding, job security and viability of educational institute (Low 2000). Veloutsou et al. (2004) indicated that the service and education quality lead students to make decision for selection of university. Generally, comparing what students want or expect against what they are really getting cannot separate from evaluating and judging the service quality to be satisfactory (Hanaysha, et al., 2011).

With purpose of improving service quality provided to students in educational institutes was conducted through student satisfaction survey (Low 2000). And one of the prime priories in education sector focus on student satisfaction in which leads to competitive advantage and word of mouth marketing for educational institutions (Ahmed et al., 2010). Satisfaction of students depends on teaching staff, enrolment and course organization and leads students to intent to return to schools, helps university to improve and keep its reputation, and increasing number of students (Navarro et al*.* 2005), intentions of further studies in the same institute, using ancillary services and lastly willingness to recommend others (Blackmore et al., 2006), direct bearing on performance of student (Chambel and Curral, 2005).

This research also borrowed one technology dimension from researcher of Ramsaran-Fowdar (2007) that conducted research in hotel industry in Mauritius incorporated two additional dimensions, core benefits and hotel technologies, to those of SERVQUAL model. Ramsaran-Fowdar's results suggest that the five conventional dimensions of SERVQUAL technology cannot be fully replicated to hotel industry.. The researcher has, however, adjusted some items of technology dimensions to fit current situation in HEI and pilot test was conducted on some students in 2 public universities and 2 private universities, the results also shown to be important attributes that high education students used for evaluating university service. One additional technologies dimension (including, equipment in each room such as LCD, air condition, connect wifi in classroom, university install of hardwares and software system to fulfill the need of students research, and university should provides computer science, IT and internet for students to do research and study).

In a more recent study in HEIs, Khan et al., (2011) determined the dimensions of service quality in Pakistan, they found that service dimension of empathy carries the heaviest weight in explaining student satisfaction, followed by responsiveness, reliability and assurance, but Ahmed (2010) found that tangible, empathy and responsiveness contribute significantly to student satisfaction. For Malaysia's high education sector, Abu Hasan et al., (2008) finds that high educational institutes, empathy, assurance, tangibles, responsiveness and reliability dimensions are found to be the significant predictors of overall student satisfaction, with empathy dimension making the most contribution.

RESEARCH DESIGN

Research approach and data collection method

Exploratory research, quantitative and qualitative approach were conducted for this research. This study was used augmented SERVQUAL dimensions, in particular tangibility, reliability, assurance, technology, empathy and responsiveness that researcher call new name (TRATER model) in order to investigate the relationship between these dimensions and student satisfaction in university sector. The research design also developed with references to a theory of perception of service delivery gaps between high education sectors' students and universities/ institute's service. Relevant information about student satisfaction, perceptions, expectations and socio-demographics in both public and private universities/institutes is obtained by the way of a survey conducted to collect a sample containing the needed information for the analysis. For the universities students, questionnaires were distributed to students that were selected randomly from the universities under study in different branches located inside and outside the capital city of Phnom Penh and some selected provinces. This research used a self-administered questionnaire method for collecting the required primary data, which is designed based on, among others. For the sake of simplicity, questionnaire is classified into five parts. The first part of the questionnaire contains Perceptions (P) of respondents, according to augmented SERVQUAL's six dimensions which are tangibility, reliability, responsiveness, assurance, empathy, and technology using a five pre-defined scale - "5 strongly satisfied", "4 satisfied", "3 neither nor", "2 dissatisfied", and "1 strongly dissatisfied". The second part of the questionnaire also applies the same concept used in the first part of the questionnaire. The aim is to collect the opinions of the respondents who are users of services provided by university sector in order to get a better understanding of the importance of augmented SERVQUAL in the Cambodia's context. The answers to the questionnaire are solely based on the respondents' experience and personal opinions regarding universities services, the researcher also used a scale of 1 (strongly unimportant) to 5 (strongly important) to indicate the level of importance. In the third section, overall student satisfaction of university will be obtained, while the fourth part of the questionnaire is used to get the information on the demographic factors of the respondents, and fifth part, open question was developed to gain more and freely information from respondents.

Once came up with the first draft of questionnaire, twenty questionnaires were handed out to the students, and they were asked whether the questions made sense to them and they were easy to understand. After refining questions, the well- improved questionnaire was developed. The survey was handed out directly to undergraduate students through volunteer students, lecturers and colleagues for approximately four months, starting from October 2015 to January 2016. Due to the fact that no incentive was offered to the respondents, their decision participating in the survey was of pure interest.

Sample size and sampling method

The target population in this research covered all the undergraduate students enrolled in both private and public university and the sampling unit included all the current full-time undergraduate students in university. Students who had completed at least one semester in university were targeted for this study because they are familiar with the business school faculty and services in comparison with those newly enrolled students. A series of general rules in determining acceptable sample sizes for research and he proposes that for any research intending on conducting multiple regression analysis, a sample size should be 10 times that of the number of variables (Roscoe, 1975). The sample size was 1800, and non-probability convenience and purposive sampling technique and simple random sampling were conducted to select potential respondents in this survey.

Analytical method

All data collected are fed into the Statistical Package for the Social Sciences (SPSS 20.) and/or Statistics Data Analysis (STATA12.1) for analysis. It is imperative that all information collected is strictly for this research only. Likewise, all information and the identity of the respondents are strictly confidential and will not be disclosed to any party in any circumstances. The statistical analysis of data includes descriptive statistics (frequency, mean, standard deviation, and chart), gap analysis and multiple regression analysis and other necessary testing. To report the most accurate results from the estimation of the regression model, several diagnostic tests need to be carried out. Other statistical diagnostic tests will also be conducted. These tests include multicollinearity checks, heteroskedasticity test and model specification test, known as Ramsey (1969)'s specification test. Since the data collected is cross-sectional, heteroskedasticity is often present in such as data set.

Proposed TRATER model

Based on the literature review presented above, TRATER dimensions, in particular tangibles, reliability, assurance, technology, empathy, and responsiveness, and have been utilized in order to investigate the relationship between these dimensions and students' satisfaction in both public and private sector. On the basis of the previous theoretical and empirical literature, the following model is used to examine the service quality dimensions that may affect the overall student satisfaction in educational services delivered by public and private university in Cambodia.

Model for this research

$$OSS = \beta_0 + \beta_1 Tangibility + \beta_2 Reliability + \beta_3 Assurance + \beta_4 Technology$$
$$+ \beta_5 Empathy + \beta_6 Responsiveness + +\varepsilon$$

where OSS denotes overall student satisfaction, and is error term, which is assumed to be normally distributed.

EMPIRICAL DATA ANALYSIS

Basic statistics

This research as well as estimation results in order to assess the factors that may affect student's satisfaction of service quality of the universities in Cambodia. Initially, a total of 1,800 questionnaires were distributed to students who once have been learning in universities in Cambodia. The return rate was 83% out of 1,800 surveys. Following cleaning process of the data, a sample of 1,368 observations is considered usable for the empirical data. The 1368 respondents in academic year were male 53.6% and female 46.4%, nearly 29% of respondents study in three year, followed by 27.4%, 25.5% and 15.5% in second, fourth and first year, respectively. Moreover, respondents from five state universities is National University of Management 14.6%, followed by Royal University of Law and Economic; Royal University of Phnom Penh; University of Health Science; and Royal University of Agriculture 9.2%; 9.0%; 5.5%; and 4.2%, respectively, and six private universities refers to Build Bright Univeristy 10.8%, followed by University of Management and Economic; Pannasastra University of Cambodia; Norton University; Cambodian Mekong University; Human Resource University 8.7%; 6.7%; 5.9%; 5.4%; and 5.3%, respectively. In addition, respondents is bachelor degree 82%; follow by master degree 12%, associate degree 4%; and Doctor degree 2%, respectively, With respect to students' preferences to choose university for study, the majority of the respondents seem to prefer university by good lecturers (51.5%), followed by *long-term experiences* (43.9%); *satisfy major for study* (nearly 42%); reasonable fee (40.6%), respectively.

Table 1: Average TRATER scores of universities in Cambodia

Dimension items		Expectation	Perception	TRATER score
Tangibility	The university has up-date classroom tools	3.99	3.47	0.52
	The university's classroom are visually appealing	3.97	3.54	0.43
	University instructors/staffs are well dressed and appear neat	4.15	3.84	0.31
	The appearance of the classrooms of the university is appropriate for the type of service offered	3.93	3.55	0.438
	Has hygienic bathrooms and toilets	3.98	3.24	0.74
	Average	4.00	3.53	0.47
Reliability	When they promise to do something by certain time, they do so	3.82	3.34	0.48
	They provide their service at the time they promise to do so	3.89	3.38	0.51
	They have knowledgeable about university area to answer my questions	3.99	3.61	0.38
	They are well-trained experienced	3.99	3.47	0.52
	They have good communication skills	3.88	3.45	0.43

	Accurate information about services	4.03	3.54	0.49
	Has timely housekeeping services	3.95	3.57	0.38
	Average	3.94	3.48	0.46
Assurance	University staff is willing to provide help Promptly	3.91	3.31	0.60
	University staff is ready to provide service	3.89	3.46	0.43
	Staffs willingness to help	4.12	3.71	0.41
	Average	3.97	3.49	0.48
Responsiveness	They are friendly	4.05	3.64	0.41
	They are consistently courteous with me	4.02	3.58	0.44
	They has ability to instill confidence in students	4.06	3.69	0.37
	Average	4.04	3.63	0.41
Empathy	They give special attention to the students	4.04	3.54	0.50
	University has availability of room service	4.16	3.73	0.43
	They understand the students' requirements	4.01	3.44	0.57
	They listen carefully to student's complaints	3.87	3.36	0.51
	They are willing to handle special requests	3.94	3.39	0.55
	They have students' best interest at heart	3.95	3.50	0.50
	Average	4.56	4.08	0.48
Technology	Equipment in each room such as LCD, air condition, connect wifi in classroom	4.04	3.49	0.55
	University install of Hard wares and Software system to fulfill the students research	4.01	3.39	0.62
	University provides Computer Science, IT and Internet for students	4.08	3.52	0.56
	Average	4.04	3.47	0.57

Respondents' expectations and perceptions of service quality are presented in Table1. As can be seen from the Table above, the TRATER scores for all items bear positive signs, indicating that expectations are greater than performance (E-P). Yet, perceived quality is less than satisfactory and a service-quality gap has materialized. So the university should strengthen their service quality in order to satisfy the students' needs, and also meet the domestic and global competition in 21st century.

Table 2 Comparison of students' expectation and perception on service quality of university

University	*Comparison*	*N*	*Mean*	*Gap Mean*	*SD*	*SE*	*T*	*P*
Public and private	*Expectation*	*1368*	*3.98*	*0.48*	*0.61*	*0.016*	*28.57*	*.000****
	Perception		*3.51*		*0.63*	*0.017*		
Public	*Expectation*	*582*	3.98	*0.49*	.574	.024	18.87	*.000****
	Perception		3.50		.561	.023		
Private	*Expectation*	*786*	4.00	*0.48*	.652	.023	21.44	*.000****
	Perception		3.52		.675	.024		

Notes: ***, ** and * denotes significance difference between perception on service quality and type of university/institute at the 1%, 5%, and over 10% significance level, respectively

For testing the difference between the mean score of students' expectations and perceptions of the university's service quality in Cambodia, the researcher carried out the compared T-test. The gap scores for each attribute are calculated by deducting the expectation means from the perception means. A positive score indicated that, students perceived service quality was exceeding the customer's expectations. On the contrary, a negative gap showed that the students perceived service quality which does not meet the customers' expectations. That is, the positive score showed superiority to the expected service while the negative scores showed poor quality. Paired-sample t-test between the respective mean of expectation and perception of all the 27 attributes showed that they were significantly different. In general, there were highly significant differences among the dimensions.

In order to compare the expectation and perception scores of TRATER model of each TRATER dimension and the hypothesis mentioned that students' perception meets the expectation in public sector as well as private sector, public university, and private university in Cambodia. Referring to table2, a high value of t-test statistic of 28.57; 18.87; and 21.44, respectively suggests that the null hypothesis is strongly rejected. Therefore, there is strong evidence that student's expectations on service quality in both public and private universities, state universities' expectation of students, and private universities' expectation of students on service quality exceed their perceptions. This indicates that a gap occurring in these dimensions, since positive value reflect higher expectations than perception in the TRATER model. This indicates that a gap occurring in these dimensions, since positive value reflect higher expectations than perception in the each of TRATER dimension

Table 3 Reliability of Individual Variable

Reliability Statistics Check				
TRATER Dimension	**Number of Valid**	**%**	**Cronbach's Alpha**	**No. of Items**
Tangibility	1,368	100	.822	5
Reliability	1,368	100	.881	7
Assurance	1,368	100	.805	3
Technology	1,368	100	.852	3
Empathy	1,368	100	.881	6
Responsiveness	1,368	100	.800	3
Overall student satisfaction	1,368	100	.830	3

Table 3 presents reliability statistics for all individual variables of interest. Items are grouped into the item-dimension correlations of both perceived service items for each of the six augmented dimensions and overall student satisfaction. These alpha values for overall instrument are high, while the reliability coefficients for the six augmented dimensions exceed the 0.7 cut off recommended by Hair et al. (2010). So combined all items (both dependent and independent variables items) are reliability because of their Cronbach's Alpha is much larger than the threshold of 0.7. As can be also seen from this table, Cronbach's Alpha estimated for tangibility scale was 0.822; reliability scale was 0.881; responsiveness sale was 0.800; assurance scale was 0.805; empathy scale was 0.881; technology scale was 0.843, and overall student satisfaction scale was 0.830. As the Cronbach's Alpha in this study was all much higher than 0.7, the constructs were therefore deemed to have an adequate reliability (Hair et al., 2010).

Following the previous theoretical and empirical literature, the following model is used to examine the factors that may affect the overall student satisfaction in university sector in Cambodia.

$$OSS = \beta_0 + \beta_1 Tangibility + \beta_2 Reliability + \beta_4 Assurance + \beta_5 Technology$$
$$+ \beta_5 Empathy + \beta_3 Responsiveness + \varepsilon$$

where OSS denotes overall student satisfaction, and is error term, which is assumed to be normally distributed.

The data set used for the analysis is from a survey of more a thousand students of universities in Cambodia. The data set contains detailed information on the explanatory variables--tangibility, reliability, assurance, technology, empathy, and responsiveness,--which are included in the model presented above.

Statistical diagnostic tests are of vital approach to determine the appropriate statistical models and estimation techniques to avoid misleading econometric results and hypothesis tests because of data set employed is cross-sectional data in which heteroskedasticity is often present in such a data set. So before presenting econometric results, the researcher reports several tests such as those for multicollinearity, based on variance inflation factor (VIF), heteroskedasticity and Ramsey's regression specification error (RESET) for functional form misspecification. There are a number of competiting tests for heteroskedasticity (Wooldridge, 2006). Only the modern tests are briefly discussed here. The first one is the Breusch and Pagan (1979) test for heteroskedasticity (Verbeek, 2004; Wooldridge, 2006), The second test is known as the general White test for heteroskedasticity. And the other hand, to conserve degrees of freedom, especially when a model consists of a moderate or large number of independent variables, Wooldridge (2006) proposes the special White test for heteroskedasticity, which incorporates the Breusch-Pagan and the general White tests. However, RESET test was used for this study because of a multiple regression model may suffer from functional form misspecification when it does not or insufficiently account for the relationship between the dependent and independent variables. Important or relevant variables may be excluded from the regression equation or the model, when a non-linear model is estimated as a linear model. Such misspecification will be detected by using the RESET test (*F* statistic), which is based on Ramsey (1969).

Table 4: Multicollinearity Check

Predictor Variable	**Collinearity Statistics**	
	Tolerance	**VIF**
Tangibility	.370	2.702
Reliability	.409	2.446
Assurance	.306	3.270
Technology	.469	2.134
Empathy	.283	3.538
Responsiveness	.364	2.744

Table 4 provides multicollinearity checks which are based on variance inflation factor (VIF). The VIF has been shown to be equal to $1/(1 \quad R_i^2)$, where R_i^2 is obtained from the multiple correlation coefficient of an explanatory variable X_i regressed on the remaining explanatory variables. Evidently, a higher VIF_i indicates R_i^2 to be near unity and therefore points to collinearity. In order to obtain a stable estimated slope parameters, VIF should be less than 5 (Studenmund, 2006). As can be seen from Table 4.5, VIF for all explanatory variables is much less than 5, confirming the absence of harmful multcollinearity. Therefore, estimated coefficients of the explanatory variables are considered to be stable. To avoid reporting misleading results, two additional tests such as heteroskedasticity test and RESET test were also performed. If there is the presence of heteroskedasticity, a regression with heteroskedasticity-corrected standard error should be applied for relevant tests to be valid.

Table 5: Estimation results with usual standard errors

Variable	**Coefficients**	**Std. Error**	**T statistics**	**Sig.**
Constant	.378	.064	5.872	.000
Tangibility	.175	.026	6.657	.000
Reliability	.014	.022	.636	.525
Assurance	.199	.027	7.368	.000
Technology	.161	.018	8.856	.000
Empathy	.224	.029	7.801	.000
Responsiveness	.124	.027	4.676	.000

No. of Obs = 1368	-Ramsey RESET Statistic $F(3, 1358) = 2.06$ (P-value = 0.103)
$R = 0.818$, $R^2 = 0.668$,	-Special case of White Test Statistic 82.918 (P-value = 1.4e-07)
Adjusted $R^2 = 0.667$	-Breusch-Pagan statistic: 12.527 Statistic (P-value = 0.0512)
Std. Error = 0.406, F = 457.34, P = .000	

For the sake of comparison, Table 5 that present the estimation results with usual standard error and with heteroskedasticity-corrected standard error. Overall student satisfaction is regressed on the six dimensions of service quality--tangibility, reliability, assurance, technology, responsiveness, and empathy. As discussed above, since heteroskedasticity often arise in cross-sectional data set, heteroskedasticity test was carried out in order for relevant statistical tests to be valid. It is found that the special case of White test statistic of 82.918 with p-value = 1.4e-07 is highly significant at less than the 1% significance level, pointing to a clear evidence of heteroskedasticity presence in the data set. To strong confirm this, BP test was also carried out. The significant BP statistic of 12.527 with p-value = 0.0512 is significant at the more than 5% level, suggesting the absence of heteroskedasticity. Ramsey's RESET test was also undertaken. RESET statistic (F-value) of 2.06 with p-value =0.103 is insignificant at any conventional significance level. This suggests that the model does not suffer from functional form misspecification. Interestingly, all the included explanatory variables have the expected positive signs, while the model fits the data set quite well as shown by the high value of R^2 of 0.668, which implies that about 66.80 % of the variation in the overall student satisfaction is explained by tangibility, reliability, assurance, technology, empathy, and responsiveness. Moreover, the value of F-statistic of 457.34 is highly significant at less than the 1% significance level. Coefficient on empathy is highly significant at the 1% significance level, indicating that empathy has indeed positively affected on overall student satisfaction. It means that a unit change in the response rate of universities in Cambodia for empathy item, *ceteris paribus*, leads to an estimated change in their overall student satisfaction of about 0.224. Similarly, technology is also highly significant at less than 1%. The estimated coefficient of about 0.224, implies that, holding other factors fixed, a unit change in the response rate of universities for empathy leads to a positive change in their overall satisfaction of about 0.166.

The coefficients on the other four explanatory variables—tangibility, responsiveness, technology, and reliability are also highly statistically different from zero at the 1% level, suggesting the evidence that these four variables have generated a positive impact on the overall student satisfaction in educational services of Cambodia's universities. The coefficients on assurance 0.199, tangibility of 0.175, technology of 0.161, and on responsiveness of 0.124 imply that for every one unit change in the response rate of universities for assurance, tangibility, technology, and responsiveness, holding other factors constant, lead to a positive change in their overall student satisfaction of 0.199; 0.175; 0.161; and 0.124, respectively. But coefficient on reliability is less significant at the more than 5% significance level, and indicating that reliability has positively affected on overall student satisfaction.

CONCLUSION AND RECOMMENDATION

In this respect, this study has been conducted in order to measure service quality and determine the dimensional structure pertinent to the universities sector in Cambodia. The main purpose of the study is to emphasize on comparison of expectation and perception of students of public and private university on service quality and the relationship between TRATER dimension and its attributes with overall satisfaction of students who once has been using educational service in universities in Cambodia. This research investigates the way of developing and improving service quality through student satisfaction. Also, the study is carried to help the universities make an informed decision to improve its service quality. Multiple regress was used for this analysis and in order to provide the best results possible, several important statistical tests such as multicollinearity checks, tests for heterskedasticity, and specification test based on Ramsey (1969)'s RESET test, were carried out in order to choose the best regression model and in order for other relevant tests to be valid. More ever, using the own surveyed data from 1368 individual students of universities' educational services, the estimation results show that tangibility, reliability, assurance, technology, empathy, and responsiveness, have generated a positive impact on overall student satisfaction of educational services provided in the Cambodia's universities sector. The findings signify the applicability of the TRATER model to the universities sector in Cambodia. To identify which dimensions of service quality contribute most to the overall student satisfaction, regressions using z-scores are run to obtain standardized coefficients or beta coefficients. The results show that all the five dimensions of service quality suggest a significant, positive effect on the overall student satisfaction. The estimated standardized coefficient on empathy of 0.224 makes the greatest contributions to satisfaction, following by assurance (0.199), tangibility (0.175), technology (0.161), and responsiveness (0.124). The mean of expectation of students on both public-private universities, and on separate public and private universities are greater than mean of students' perception that show that universities have to strengthen its service quality to meet students' needs in era of digital education.

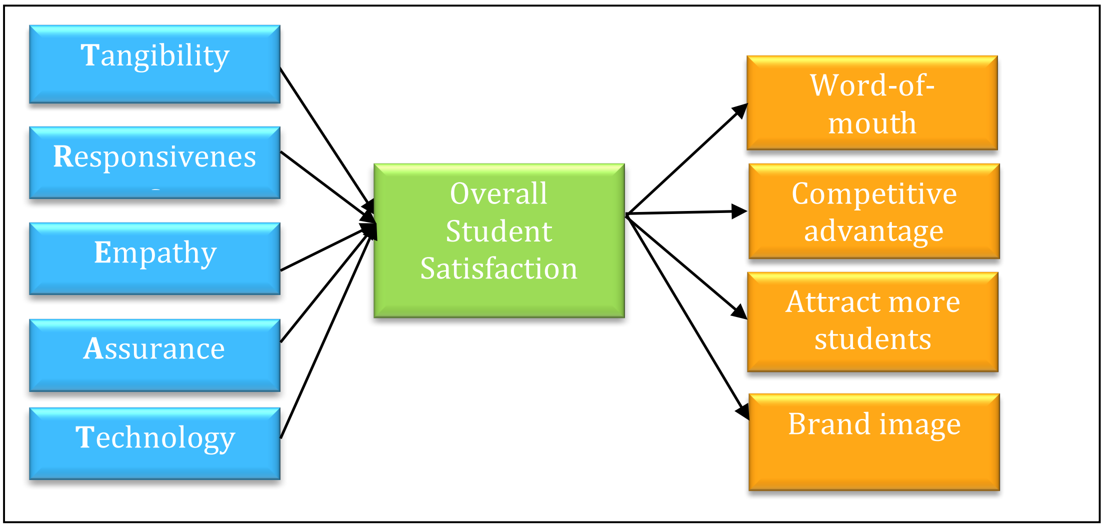
Through the findings of this study also present a number of implications and the recommendations for practitioners in either universities sector or in other service-providing organization of both profit and non-profit, while it also contributes to the established model of applications in university in Cambodia. The main theoretical contribution of the study demonstrates that the model related to a combination of tangibility, assurance, technology, reliability, empathy, responsiveness factors have a significant influence over the overall student satisfaction (OSS). Integrating findings of this research into established frameworks related to the model provides an explanation of how five factors (empathy, technology, tangibility, responsiveness, and assurance) are statistically and positively correlated to the overall student satisfaction. But factor of reliability is positively and less significantly correlated to universities' student satisfaction.

The findings of the regression analysis reveal that the students' perceived service quality provided by universities and the overall evaluation of service quality is determined largely by five factors; namely, "TREAT" (*Tangibility, Responsiveness, Assurance, Empathy, Technology).* The five significant dimensions have significant levels that do not exceed 0.05. It noted that empathy variable should be interested by universities such as giving special attention to the students, university has availability of room service, understand the students' requirements, listen carefully to student's complaints, and willing to handle special requests and have students' best interest at heart. And variable technology describes three items such as university has equipment in each room such as LCD, connect wifi in classroom, and AC , university install of hardwares and software system to fulfill the need of students research, and university should provides computer science, IT and internet for students. The tangibility variable describes availability of up-date classroom equipment, classrooms are visually appealing, well dressed and appear neat of staffs, the appearance of the classrooms of the university is appropriate for the type of service offered, and hygienic bathrooms and toilets. On the other hand, responsiveness variable describes three items, such as university staff is willing to provide help promptly, university staff is ready to provide service, and staffs willingness to help. Assurance variable shows three items, such as friendly, consistently courteous with students, and ability to instill confidence in students.

The results of this study also indicate that dimensions in SERVQUAL cannot be replicated fully to the university in Cambodia. Other dimension such as *technology'* (including equipment in each room such as LCD, connect wifi in classroom, and AC; university install of hardwares and software system to fulfill the need of students research; and university should provides computer science, IT and internet for students to do research and study) was equally critical when determining the attributes that students use to evaluate service quality of university in

Cambodia.

Since these five explanatory variables significantly influenced the overall student satisfaction, implying that improving each item in each of the five variables is expected to improve student satisfaction in the universities sector in Cambodia. It is shown evidently that the overall student satisfaction depends on TREAT (refer to tangibility, responsiveness, empathy, assurance, technology). Therefore, encouraging in publication of the information by the universities sector is also contributing to an effective decision making of managers, rector of university about the way of delivery service to meet students' needs.



The results of this study also present evident useful, vitally for university manager in Cambodia in identifying the factors and attributes that help to attract students and promote student satisfaction in their universities sector. Therefore, universities could realize a competitive advantage by emphasizing new model of TREAT in service delivery.

Cambodian students prefer human/personal interactions when dealing with universities sector. These findings suggest that universities sector managers should implement student-oriented strategies and install technology to satisfy students' needs. Frontline employees should be motivated and appropriately trained to understand students' needs, personalize services, provide individual attention, and generally demonstrate caring behavior in all of their interpersonal dealings with students. In the era of globalization and innovation, technology can be present in any business or universities sector. Actually, in class room should have modern LCD, fast speed internet and free wifi for students to do research. Universities managers should emphasize the "tangibility", "responsiveness" and "assurance" dimension of service quality, the important predictors of satisfaction among Cambodian students. Since "tangibility" focus on availability of up-date classroom equipment, classrooms are visually appealing, well dressed and appear neat of staffs, the appearance of the classrooms of the university is appropriate for the type of service offered, and hygienic bathrooms and toilets. "Responsiveness" refers to willing to provide help promptly by university staff, ready to provide service university staff is, and staffs willingness to help. And "assurance" emphasize on providing service promptly, university staff ready to provide service, and willingness to help students. Actually, service quality plays great role in supporting sustainable development in organization in both profit and non-profit sectors as service quality has preferable affect on customer satisfaction, customer loyalty, gain competitive advantage, and intent to get more students to register to learn in university.

A few limitations exists for this research. First, this research was conducted in Phnom Penh city, and few selected provinces in Cambodia. People's belief and attitudes about service quality can be significantly different across different geographic regions and universities in Cambodia. Furthermore, the sample respondents were limited to universities students who have had experience in using educational services. Therefore, further research may be devoted to focus on more universities or can expand toward primary or secondary school in Cambodia. Second, this study identified and empirically examined six factors that influenced universities students' satisfaction. However, there may be additional factors that may also exert an impact on overall student satisfaction in other service-providing sector. Further empirical research may be needed to identify these factors. At the national level, similar study could be replicated in other service sectors Cambodia, such as communication, finance, health, insurance, transportation, travel, etc. In a similar, at an international level, the study of service quality can be conducted in comparison between the local universities sectors with universities of other ASEAN countries if possible.

References

Abdullah,F.(2006), "Measuring service quality in higher education: HEdPERF versus SERVPERF", Marketing Intelligence & Planning, Vol. 24 No. 1, pp. 31-47

Ahmed, I., Nawaz, M. M., Ahmad, Z., Ahmad,Z., Shaukat, M. Z., Usman, A., Wasim-ul-Rehman & Ahmed, N. (2010). "Does Service Quality Affect

Students'Performance? Evidence from Institutes of Higher Learning", African Journal of Business Management, 4(12). 2527-2533.

Abu Hasan, H.F.A., Azleen Ilias, Rahman,R.A., Razak,M.Z.A. (2008), "Service Quality and Student Satisfaction: A Case Study at Private Higher Education Institutions", International Business Research, Vol.1 No. 3

Barnes, B.R. (2006), "Analyzing Service Quality: The Case of Post-Graduate Chinese Students", Leeds University Business School, Volume 2 / No. 2

Bolton, R.N. and Drew, J.H. (1991). "A Multistage Model of Customers Assessment of Service Quality and Value", Journal of Consumer Research, Vol. 17, pp. 375-384.

Breusch, T. S. and Pagan, A. R. (1979), "A simple test for heteroskedasticity and random coefficient variation", Econometrica, Vol. 47, pp. 1287-1294.

Buttle, F. (1996), "SERVQUAL: review, critique, research agenda", European Journal of Marketing, vol. 30, no. 1, pp. 8-32,

Chambel MJ, Curral L. (2005), "Stress in Academic Life: Work Characteristics as Predicators of Student Well-being and Performance", Appl. Psychol: Int. Rev., 54(1): 135-147

Hair, J.F, Black, W.C., Babin, B.J. and Anderson, R.E. (2010), "Multivariate Data Analysis: A Global Perspective", (10th Edition), New Jersey: Pearson.

Hanaysha,J.R.M, Abdullah,H.H., and Warokka,A., 2011, "Service Quality and Students' Satisfaction at Higher Learning Institutions: The Competing Dimensions of Malaysian Universities' Competitiveness", Journal of Southeast Asian Research, Vol. 2011

Ilhaamie, A. G. A. (2010), "Service Quality in Malaysian Public Service: Some Findings",International Journal of Trade, Economics and Finance",Vol.1,No.1

Khan,M.M., Muhammd,I.A., Nawaz,M. (2011), "Student's Perspective of Service Quality in Higher Learning Institutions; An evidence Based Approach", International Journal of Business and Social Science Vol. 2 No. 11 [Special Issue - June 2011]

Letcher, D.W. and Neves J.S. (2010), "Determinant of Undergraduate Business Student Satisfaction", Research in Higher Education Journal, pp. 1-26

Legčević,J. M. Sc. (2009), "Quality gap of educational services in viewpoints of students", Ekon. Misao Praksa DBK. GOD XVIII. (2009) BR. 2. (279-298).

Low L. (2000), "Are college students satisfied? A National Analysis of Changing Expectations", Noel-Levitz lowa City, IA.

Malik,M.E., Danish,R.Q. and Usman,A.(200X), "The Impact of Service Quality on Students' Satisfaction in Higher Education Institutes of Punjab", Journal of Management Research, Vol. 2, No. 2: E10

Martínez-Argüelles, M, Castán, J and Juan, A. (2010) "How do Students Measure Service Quality in e-Learning? A Case Study Regarding an Internet-Based University" Electronic Journal of e-Learning Volume 8 Issue 2 2010, (pp151 160),

Merican,F. Zailani,S. and Fernando,Y. (2009), "Development Of MBA Program-Service Quality Measurement Scale", International Review of Business Research Papers, Vol. 5 No. 4, pp.280-291

Morales, M. and Caldereon, L.F. (1999), "Assessing service quality in Schools of Business: Dimension of Service Quality in Continuing Professional Education", unpublished manuscript

Mosahab,R., Mahamad,O., and Ramayah,T. (2010), "Comparison of Service Quality Gaps among Teachers and Students as Internal and External Customers", International Journal of Marketing Studies Vol. 2, No. 2; Published by Canadian Center of Science and Education

Navarro MM, Iglesias MP, Torres PR. (2005b), "Measuring customer satisfaction in summer courses", Quality Assurance Educ., 13(1): 53-65.

Nyeck, S., Morales, M., Ladhari, R., and Pons, F. (2002), "10 years of service quality measurement: reviewing the use of the SERVQUAL instrument", Cuadernos de Diffusion, Vol. 7, pp.101-107.

Oliveira,O.J.D. (2009), "Adaptation and application of the SERVQUAL scale in higher education", present at POMS 20th Annual Conference Orlando, Florida U.S.A. May 1 to May 4, 2009

Parasuraman, A., Zeithaml, V. and Berry, L.L. (1985). A Conceptual Model of Service Quality and its Implications for Future Research, Journal of Marketing, Vol. 49, pp. 41-50.

Parasuraman, A., Zeithaml, V. and Berry, L.L. (1988). SERVQUAL: A Multiple Item Scale for Measuring Consumer Perceptions of Service Quality, Journal of Retailing, Vol. 64, pp. 12-40.

Parasuraman, A., Berry, L.L, and Zeithaml, V. A. (1990), "Guidelines for conducting service quality research", Marketing Research, Vol. 2, pp. 34-44.

Ramsaran-Fowder, R.R. (2007), "Developing a service quality questionnaire for the hotel industry in Mauritius", Journal of Vacation Marketing,Vol.13, pp.19-27

Reichheld, F.F. and Sasser, E.W. (1990). "Zero Defections: Quality Comes to Services", Harvard Business Review, Vol. 68, pp. 105-111.

Roscoe, J. (1975), "Fundamentals of Research Statistics for the Behavior Sciences", Holt, Rineheart and Winston, USA.

Sife,A.S, Lwoga,E.T, and Sanga,C., (2007), "New technologies for teaching and learning: Challenges for higher learning institutions in developing countries", International Journal of Education and Development using Information and Communication Technology(IJEDICT), 2007, Vol. 3, Issue 2, pp. 57-67.

Singh,R. and Khanduja, D. (2010), "SERVQUAL and model of Service Quality Gaps: A Framework for Determining and Prioritizing Critical Factors from Faculty Perspective in Higher Education", International Journal of Engineering Science and Technology, Vol. 2 (7), 3297-3304

Sumaedi,S., and Bakti,I.G.M.Y., (2011), "The Exploratory Study of Industrial Engineering Students' Perceived Quality Dimension", International Journal of Basic & Applied Sciences IJBAS-IJENS Vol: 11 No: 01

Tan,K.C & Kek,S.W.,(2004), "Service Quality in Higher Education Using an Enhanced SERVQUAL Approach Office of Quality Management", National University of Singapore, Singapore, Quality in Higher Education,Vol.10,No.1

Veloutsou C, Lewis JW, Paton RA. (2004). "University selection: information requirements and importance", Int. J. Educ. Manage.,18(3): 160-171.

Verbeek, M. (2004)," A Guide to Modern Econometrics",(2nd edition), Chichester: John Wiley.

Wooldridge, J. M. (2006), "Introductory Econometrics: A Modern Approach", (3th Edition), Ohio: South-Western.

Zafiropoulos,C. and Vrana, V. (2008), "Service quality assessment in a Greek higher education institute", Journal of Business Economics and Management, 9(1): 33–45

Archives of Business Research – Vol.5, No.9
Publication Date: Sep. 25, 2017
DOI: 10.14738/abr.59.3667.

Jones, D. A. (2017). Revival of "Dollar Diplomacy" As United States Foreign Economic Policy in 2017: Tradeoffs Exchanged to Maintain Trade and Restore Peace Along the Tottering Western Pacific Rim. *Archives of Business Research,* 5*(9),* 31-41.

Society for Science and Education

Revival of "Dollar Diplomacy" As United States Foreign Economic Policy in 2017: Tradeoffs Exchanged to Maintain Trade and Restore Peace Along the Tottering Western Pacific Rim

David A. Jones
Professor of Foreign Policy, International Law, International Management,
Institute of The Americas and Europe, Institute of International Relations,
Faculty of Management, University of Warsaw

ABSTRACT

Background, Objectives and Goals: From their auspicious meeting at the "Southern" White House, Mar-a-Lago, West Palm Beach, Florida on 5-6 April 2017, U.S. President Donald J. Trump and China's President Xi Jinping seem to have struck up a friendship accord intended to maintain, hopefully augment, Western trade with China and in the process diffuse burgeoning tensions along the Western Pacific rim caused by aggressive rhetoric and belligerent behavior of Kim Jong-Un, leader of the "Democratic" People's Republic of Korea [North Korea]. In the process, the United States appears to be recasting its foreign economic policy as a return to "Dollar Diplomacy," the hallmark of American foreign policy during the William Howard Taft presidency (1909 – 1913), mostly out of favour since then until the present moment. An objective of this paper is to clarify and articulate characteristics of "Principled Dollar Diplomacy" in the 21st century compared with its 20th century counterpart, to identify what will be its objectives and goals, then to assess the viability and sustainability of the same globally but especially along Asia's Western Pacific rim, connecting to South and West Asia then Europe along the ancient "Silk Road" of Eurasia as an integral part of President Trump's "Principled Realism" in foreign policy. Methods: Literature reviewed include historiographical documents reflecting both the current state of, and recent changes to, United States foreign economic policy globally, termed "Principled Realism" by President Trump as it interfaces foreign economic policy with foreign security policy, focusing particularly on what appears to be a tottering Western Pacific rim of mainland Asia, fragmented by hostile rhetoric, nuclear threats, China's unilateral South China Sea domination. Government reports by individual countries and trading partners plus journalistic accounts, together with diplomatic interviews have been reviewed. Attention is directed to changes in trade volume involving trading partners generally, together with trade values of both imports and exports across the first six months of the Donald Trump administration compared to similar periods in administrations of former American presidents from Theodore Roosevelt to Barrack Obama. Presidential rhetoric will be analysed as communicated to three categories of recipients: foreign heads of state or heads of government, United States business leaders, the global general public. Some historical records are included, comparing Chinese maritime belligerence along the Western Pacific rim with similar activities engaged in by Imperial Germany during World War I then by Nazi Germany during World War II, each with disastrous consequences. Expected Results: Ever since the Florida summit meeting between Presidents Trump and Xi, an economic dialogue appears to have emerged that has expanded into diplomatic discussions involving the DPRK, Association of South East Nations (ASEAN) partners trading with both China and the United States, India, Japan, South Korea. Predicated upon President Trump's self-assessment of his first 100 days in office, together with legitimate expectations of other nations, it should be possible to gauge the direction of "Dollar Diplomacy" across the first and second 100 days to predict the Strengths and Weaknesses of early changes in United States foreign economic policies over the first six months of the Trump Administration. Positive or negative results should be apparent in trade regimes, trade value, trade volume, as well as changes in rhetoric along the Western Pacific rim, and intensity of involvement if the

state parties themselves. Stated succinctly, this is China's chance to stand out and become a leader, potentially the leader, in Asia, and to work hand in hand with the United States and the Western Alliance to maintain continuity of "*Pax Americana*" for another 70 years or longer, an enduring peace from which, arguably, China has benefitted more than most countries, and stands to benefit much more across eight more decades of the 21st century. Amongst other factors, an expectation is to witness the United States and other Western Allies join with China in funding its "One Belt, One Road" or "OBOR" across Eurasia, because by partnering a *rapprochement* with DPRK, China and the United States should grow closer, greater and fairer trade should emerge between these two nations, that burgeoning friendship should draw in Japan and other huge trading partners of both. Possible as a successor to the ill-fated Trans-Pacific Partnership will be a sustainable "*Pax Pacifica*" reflecting core values of the West alongside China's stated commitment to decreasing poverty in developing countries, providing an enormous opportunity for the Trump and Xi Administrations to cooperate harmoniously. In addition to the Pacific rim as a region, the DPRK could benefit from Sino-American investment inside of its borders, particularly if China and the West could construct international joint ventures (IJVs) in the region with each functioning as a check and a balance on the other.

Keywords. Asia, China, "*Pax Pacifica*", "Principled Dollar Diplomacy", IJVs, "Spillover".

INTRODUCTION

Asia is basking in diverse controversy as the "Democratic" People's Republic of Korea (DPRK, North Korea) persists in displaying its military credibility notwithstanding United Nations (UN) sanctions, and as the People's Republic of China (PRC, China) continues to expand and enlarge its foothold over the East and South China Seas, testing the Alliance (Varandani, 2017). Collectively and each individually, these events challenge the *Pax Pacifica* and invite intervention from the United States, United Kingdom, plus rising Asian economic powers such as India and Japan together with Eurasian powers in decline such as the Russian Federation. States must select their partners prudently from an array that most noticeably includes China and the United States. Academic and journalistic pundits predict that China and the United States are heading to war (Allison, 2017, 2015; Farley, 2014; Gompert, Cevallos & Garafola, 2016). Definitely they are not, neither desires war against the other, each has too much to lose, as others have pointed out also (Buruma, 2017; Etzione, 2017). This is the point exactly and entirely: the West must make China and China's allies have more to lose than to gain through warfare. That is the objective of "Dollar Diplomacy" in revival, not through the fist but through the purse, as China transitions from an exporter to an importer. We do not live in and we are not heading toward the "post-American world" that Zakaria forecasted in 2009, nor is the West falling just because Asia is rising, as Rachman contends in 2017. As China changes from an exporting to an importing nation, fortunes will change as Guo and Gough have predicted (2016). Fortunes will change differently from predictions, however: China's "bubble" will burst as it becomes forced to buy from rather than to sell to the world, and the "China Dream" of displacing the United States as global hegemon, imagined by Liu (2010),[1] will fade into oblivion. The Western Alliance can help that "bubble" to burst, then help the Chinese people to join with the West to enjoy a higher quality of life for themselves and their posterity, by readopting a programme of "Dollar Diplomacy" if not worldwide, which would be ideal, then at

[1] The book *China Dream* is not available in English. For a review of this book, see Saunders, Phillip C. 2010. "Will China's Dream Turn Into America's Nightmare?" *China Brief*, Vol. 10, No. 7. Washington: Jamestown Foundation. http://www.jamestown.org/single/?no_cache=1&tx_ttnews%5Btt_news%5D=36217&tx_ttnews%5BbackPid%5D=7&cHash=19fc1b4da3. Kissinger attributes "marathon contest" and "duel of the century" to Saunders, 10. See Kissinger, Henry A. 2012. *On China*. New York: Penguin Books, 565, n.8.

least in every corner of the world where China is advancing its "New Silk Road" or "New Silk Route," together forming "One Belt, One Road" or "OBOR." Much of that currently is in South Asia, West Asia, and East Europe, with an aim of expanding across Eurasia then Europe.

BACKGROUND

"Dollar Diplomacy," as implied by this nomenclature itself, involves the expenditure of dollars in diplomatic endeavours (Trani, 2002). Although "Dollar Diplomacy" originated as a form of United States foreign economic policy during Theodore Roosevelt's administration (1901-1909), it is widely associated with the presidency of William Howard Taft (1909-1913), and President Taft used the words "Dollar Diplomacy" in his last message to Congress to characterise his foreign policy (Taft, 1912). Some presidential successors including mainly Herbert C. Hoover (1929-1933) denigrated "Dollar Diplomacy." It had its value, however, in the way Taft and his secretary of state, Philander Chase Knox, used it: to encourage *private sector* United States companies to invest in tottering regions of the world, most notably East Asia and Latin America, in an effort to stabilise governments, increase American influence and expand markets for American products, reduce to a minimum the need for military intervention, although that option remained (Nearing & Freeman, 1925, 266). President Taft summarised "Dollar Diplomacy" as "substituting dollars for bullets" in his fourth address to the Congress on 03 December 1912, 89 years to the day after enunciation of the Monroe Doctrine, with Taft declaring his policy to be:

> *one that appeals alike to idealistic humanitarian sentiments, to the dictates of sound policy and strategy, and to legitimate commercial aims. It is an effort frankly directed to the increase of American trade upon the axiomatic principle that the government of the United States shall extend all proper support to every legitimate and beneficial American enterprise abroad (Taft, 1912).*

Clearly, in "Dollar Diplomacy" the Taft administration envisioned enlargement of an American presence globally together with expanded sales abroad of products made in America, each boosting an American image worldwide as envisioned by its architect for East Asia, assistant secretary of state Willard Dickerman Straight (Kahn, 1974). Both are or should be core objectives of United States foreign economic policy in the 21st century as well. They seem to interface well with articulated foreign economic policies of President Donald J. Trump, labeled by Trump himself as "Principle Realism" recently (Fairouz, 2017).

What has been termed "Dollar Diplomacy in Reverse" is evidenced in some aspects of 21st century Chinese foreign economic policy since China's "Liberation" in 1949 (Jones & Liu, 2013), because China has invested its own United States Dollar reserves to build infrastructure in many parts of the world, Africa particularly. Most of the Chinese foreign investment is derived from China's sovereign wealth, however, meaning from the people's assets, much of that wealth coming from State Owned Enterprises (SOEs) that in turn are thinly-disguised vehicles crafted to launder state funds by corrupt current or former public officials. Many SOEs are controlled by "red princelings," scions of early communist leaders or their collaborators. This leads to faction rivalries, changing factions, cross-allegations of corruption such as against Guo Mingui (alias "Miles Kwok") who in turn is hurling corruption allegations against President Xi Jinping's anti-corruption "tsar," Wang Qishan, prompting the latter to request a "red alert" against Guo from Interpol, currently headed by former Chinese deputy national security head Meng Hongwei (Bao, 2017). It is convenient for China to have its operative in charge of Interpol, much as Nazi Führer Adolph Hitler found it convenient to install his henchman Reinhard Heydrich as president of the National Criminal Police Commission (NCPC), original name of Interpol, 1940 to 1942. It is evident that "China's robber barons take collusion to a whole new level" (X. Wang, 2017), as reported by the *South China Morning Post*, controlled by

Alibaba, itself an entity with obscure ownership (Ford, 2014), itself fraught with corruption in the form of counterfeit products leading it to with its subsidiary, Taobao, to be targeted as a "notorious marketplace" with "widespread availability of counterfeit and pirated goods" by the United States Trade Representative between 2008 and 2012 (Yan, 2014).

"Dollar Diplomacy" in the sense it was developed by Taft and Knox (with Straight for Asia) avoids sovereign wealth to a large extent, encouraging *private sector* investment from wealthy individuals, affluent corporations, searching for diversified portfolios and growth of wealth. Thus, it was intended not to become a drain upon parent country sovereign wealth, but instead an opportunity for *private sector* Foreign Direct Investment (FDI). In addition to East Asia, Cuba was recipient of significant "Dollar Diplomacy" investment in the Taft administration, with the United States receiving sharp criticism on account of the rapid decline in family ownership of farmland replaced by large corporate land holdings that left longtime Cuban landowners destitute (Perez, 1989, 137; Beals, 1933, 193). Some authors have reached the conclusion, as one articulated:

> *The state of affairs on the island changed in a way contrary to what [P]resident Taft and Secretary Knox intended. Instead of bringing prosperity, stability and contributing to the advent of a strong middle class, dollar diplomacy was responsible for a shift in the socio-economic structure of Cuba dominated by increasing poverty, dependency, disrupted families, and social conflict (Timoneda, 2008, 276).*

So "Dollar Diplomacy" revived in the 21st century must be more "principled" than it was in the past. Arguably, China's OBOR poses the same risk, but that risk should be reduced by competition in the form of Western including American "Dollar Diplomacy" alongside the Chinese "Silk Road" initiative. Stated differently, if China and other countries are bent on pursuing "Dollar Diplomacy" then the United States and the Western Alliance should do the same, to keep the playing field as level as possible. Risk will continue that "Dollar Diplomacy" recipient nations in any form will become export economies, at least up to the time when they reach full development, because of the proclivity of investors with any mindset to repatriate investment profits sooner than in the best interests of the recipient state's economy. Reaching the recipient population and raising their quality of life was addressed as a "core value" of China by Hong Xiaonan, dean at the Dalian University of Technology, at the 4th National Development Strategy Forum in China, Russia and Mid-Eastern European Countries held at Vistula University, Warsaw, Poland on 04 June 2017, to the day the 75th anniversary of the battle of Midway that secured China's freedom (Farley, 2017). At the same conference on the theme of "Future Trend of International Structure Change and Recombination Between China and Poland," co-sponsored by Vistula University and the Psychology Institution of Social Science of China, by invitation this author gave a lecture comparing China's professed "core values" to United States President Lyndon Baines Johnson's effort to deliver Federal funding directly to black and female citizens, part of America's "War on Poverty," to minimise scarfing by state and local government officials (Jones, 2016), at risk in China's own OBOR and in "Dollar Diplomacy" generally.

China casts itself in the peculiar cloak of "Advanced Economy" or AE by daylight, then of an "Emerging Market" at night, although it is difficult to witness China as being both at once.

Figure 1.

These G-20 members are set for the largest boost in per capita GDP rank

	1992-2022 Rank Change	2022 Rank	2022 PPP-Adjusted Per Capita GDP*	1992 Rank	1992 PPP-Adjusted Per Capita GDP*
China	69 ▲	64	$23,960	133	$1,261
India	27 ▲	107	$10,893	134	$1,261
South Korea	19 ▲	29	$49,772	48	$9,123
Indonesia	13 ▲	84	$16,887	97	$3,418
Australia	9 ▲	16	$60,534	25	$19,670

SOURCE: Tartar, Andre, and Wei Lu. 2017. "China's Rags-to-Riches Transformation Isn't Over Yet," ***Bloomberg*****. 25 Jun. https://www.bloomberg.com/amp/news/articles/2017-06-25/there-s-no-end-in-sight-for-china-s-rise-up-the-gdp-rankings, from International Monetary Fund data.**

Note: PPP values are in current international USD terms.

It stands to gain Purchasing Power Parity (PPP) markedly in the next five year period (Tartar & Lu, 2017), as Figure 1 below reflects, suggesting strongly that China is an AE masquerading as an EM, this charade unmasked by the huge FDI it is earmarking for its "Silk Road" initiative.

Alternatives to "Dollar Diplomacy"

Once President Taft was defeated in his bid for re-election in 1912, (Thomas) Woodrow Wilson as his successor reversed much "Dollar Diplomacy" and redirected America's attention toward the defence of Europe against Imperial Germany, to be followed a generation afterwards by the defence of Europe against NAZI Germany then the Soviet Union (Roberts, 1994; Roberts, 1997). That "Atlanticism" turned into an "Anglophile internationalist tradition" (Roberts, 2005) before coming into question on account of "fraying" European-American ties witnessed at least as far back as 2006 (Wither, 2006) but exacerbated during and following the Russian Federation's foray into Ukraine in 2014 and thereafter. Stronger by far than any other element of "Atlanticism" is the "special relationship" between the United Kingdom and United States. More than any other single factor, and more than most other factors collectively, it is this Alliance that will enable the United States and the West to "escape Thucydides's Trap" as Allison framed this issue in 2015 and 2017, if only because the "trap" articulated by Thucydides was the *absence* of an alliance rather than its existence. No alternative foreign policy including "Dollar Diplomacy" (that does not have to be an alternative policy) will effectively replace the Anglo-American Alliance, most evident currently in the North Atlantic Treaty Organisation (NATO) in Europe and the Middle East. An example of "Dollar Diplomacy" working in concert with NATO is the European Recovery Program (ERO), more commonly known as the Marshall Plan of 1948, where the infusion of USD 12 Billion plus another USD 1.5 Billion in loans was designed to reverse a European trade deficit with the United States, ultimately to make European nations strong trading partners with the United States. Critics of the Marshall Plan have emerged decade after decade (Hazlitt, 1947; Greenspan, 2008), with Greenspan arguing that regulatory reductions contributed as much as the infusion of money to European recovery. "Dollar Diplomacy" should be added to "Atlanticism" that must be maintained at full strength, potentially complemented by, a parallel "Pacificism" in the form of an increasingly stronger American-Japanese Alliance in Asia, coupled by an un-eroding Australian-New Zealand-British-American Alliance.

Dollar Hegemony

Rumours abound concerning what nations will join in China's initiative to invest substantial capital into infrastructure across Eurasia and elsewhere, and under what conditions. According to China, the United States is considering becoming China's partner on OBOR (Han, 2017), India has signaled conditions for its support (Pant, 2017), Japan has conditioned its support in China agreeing to greater OBOR transparency (Pollmann, 2017), free passage of Japanese shipping (including shipping of arms) across the South China Sea region (Kelly & Kubo, 2017) plus China agreeing to Japan selling arms to Association of Southeast Asia Nations (ASEAN) bloc then transporting them across the South China Sea (Yamaguchi, 2017). An unspoken "condition" looms in the background: that is that the universe of Chinese development projects continue to be invested in dollars, to maintain "Dollar Hegemony" as former United States Congressman and Libertarian Party presidential candidate Ron Paul put it in 2006. Perhaps this is one reason why the Japanese head of the Asian Development Bank (ADP), Takehiko Nakao, conceded recently at the ADP's 50th anniversary meeting that ADP and the Asian Infrastructure Investment Bank (AIIB) formed and led by China can partner (Flores, 2017). Care must be taken, however, that the funding extended to recipient nations is more than "paper" currency such as China continues to print with decreasing real value to back it up. Is China "moderating" its economic weaknesses, as B. Wang (2017) contends predicated upon data reflected below in Figure 2, or is the same data adumbrative of financial instability. If the latter, then that instability can spillover into emerging markets all along China's "Silk Road" and elsewhere.

Figure 2.

SOURCE: Wang, Brian. 2017. "China is moderating economic weaknesses and may become reliable global engine in 5-15 years," NextBigFuture. 25 Jun. https://www.nextbigfuture.com/2017/06/china-is-moderating-economic-weaknesses-and-may-become-reliable-global-engine-in-5-15-years.html

Principled "Dollar Diplomacy."

Amongst many internal Strengths and Weaknesses, external Opportunities and Threats of FDI or loans to Emerging Markets (Ems), one threat looms above the others: "neighbourhood spillover" that can occur when countries that are close to each other geographically or aligned economically, according to the International Monetary Fund (IMF), particularly where "China is the second-largest exporter of capital in the world, after the United States, and China's central bank is the largest purchaser of U.S. financial assets" (Spillover Report, 2014, 72). Accordingly, that report issued the following admonishment:

> *Over the past decade, there has been a dramatic increase in the degree of regional integration, especially in Asia. Intraregional trade represents an increasingly larger share of global trade. Cross-border financing flows among EMs in certain regions have expanded progressively since the early 2000s. As regional linkages strengthen, the exposure of countries to shocks originating in the biggest economies in the region rises. This underlines the significance of localized spillover effects from a deceleration in large Ems (Spillover Report, 2014, 73 [citations omitted]).*

An unspoken implication of "neighbourhood spillover" is the effect an important change or set of changes within China's economy would exert upon nations that are or will become recipients of Chinese "Dollar Diplomacy" along its "New Silk Road. To a lesser extent, perhaps, is the effect an important change or set of changes within the economy of one or more such recipient nations would exert upon the rest. It is for this reason, or these interfacing reasons, that the United States should partner with China on the latter's OBOR initiative, as well as compete with China's own "Dollar Diplomacy" by encouraging an American "Principled Dollar Diplomacy."

To be "principled" FDI must be transparent as Japanese prime minister Shinzo Abe notes (Pollmann, 2017), but more is required, including especially the following seven points:

1. "Dollar Diplomacy" must be subject to 21st century global auditing standards that require transparent accounting practices.
2. "Dollar Diplomacy" must involve funding that is balanced across geographic sectors, to minimise "neighbourhood spillover" effects.
3. "Dollar Diplomacy" must be functionally insured, meaning protected against willful losses such as "firesale" sell offs, expropriation, or "round-tripping" (where the done of FDI becomes the donor in reverse direction) by recipient nations or individuals in general to protect against inappropriate collaboration.
4. "Dollar Diplomacy" has to be goal-driven, tied specifically to clearly-articulated aims and objectives, so that recipients whether they be nations or private sector companies will be fully cognizant of the legitimate expectations of foreign direct investors.
5. "Dollar Diplomacy" requires periodic, impartial assessments to determine the impact of the same upon the population of recipient nations, to be conducted by respected international organisations, to ensure that what was intended to benefit recipients does not turn out to harm them, or to help some at the expense of others.
6. "Dollar Diplomacy" is likely to and should foster International Joint Ventures (IJVs), but these must be transparent, disclosed to the international community, to preclude peaceful intentions from becoming catalysts of belligerence.
7. "Dollar Diplomacy" must not become a mechanism for tax avoidance in either the nation from which the funding originates or the nation where funding is received, requiring full disclosure at time of funding of legitimate expectations for both the repatriation of the invested corpus and the repatriation of returns on investment.

CONCLUSION

"Dollar Diplomacy" in United States foreign economic policy has enjoyed mixed outcomes, with the positive far exceeding the negative. At an early stage in the Donald J. Trump presidency, some indications point to his inclination to revive "Dollar Diplomacy" and this would be good.

Several features of China's "One Belt, One Road" initiative across Eurasia are adumbrative of its adoption of "Dollar Diplomacy," and this provides the United States and the West with several options: join China, compete with China, do both, with the latter being the best option. American, British, and Japanese money particularly should be poured into some of China's "Silk Road" programmes to enable the West to gain access to details of Chinese ventures. In tandem, the same Western players should compete with China by way of their own "Dollar Diplomacy," thus securing recipient nations against the deleterious effects that will follow bursting of the "bubble" China's "Silk Road" is creating. All FDI should be "principled" meaning transparently audited, balanced across geographic regions, safeguarded from inappropriate collaboration.

List of sources

Allison, Graham. 2017. Destined for War: Can America and China Escape Thucydides's Trap? Boston: Houghton Mifflin Harcourt.

Allison, Graham. 2015. "The Thucydides Trap: Are the U.S. and China Headed for War?" The Atlantic. 24 Sep. https://www.theatlantic.com/international/archive/2015/09/united-states-china-war-thucydides-trap/406756/

Bao, Pu. 2017. "The Other Side of 'the Biggest Political Story in China'," Stratfor. 16 Jun. https://www.stratfor.com/article/other-side-biggest-political-story-china

Beals, Carlton. 1933. The Crime of Cuba. Philadelphia: J.B. Lippincott Co.

Behrman, Greg. 2008. The Most Noble Adventure: The Marshall Plan and How America Helped Rebuild Europe. New York: Free Press.

Brown, Matthew. 2017. "Singapore offers to help bankroll China's global ambitions," The Washington Post. 12 Jun. . https://www.washingtonpost.com/world/asia_pacific/singapore-offers-to-help-bankroll-chinas-global-ambitions/2017/06/12/ace022e2-4f4e-11e7-b74e-0d2785d3083d_story.html?utm_term=.32b0f38f7055

Buruma, Ian. 2017. "Are China and the United States Headed for War?" The New Yorker. 19 Jun. http://www.newyorker.com/magazine/2017/06/19/are-china-and-the-united-states-headed-for-war

Etzioni, Amitai. 2017. Avoiding War with China: Two Nations, One World. Charlottesville, VA: University of Virginia Press.

Fairouz, Mohammed. 2017. "Principled realism and an emerging Trump doctrine," The National. 22 May. http://www.thenational.ae/opinion/comment/principled-realism-and-an-emerging-trump-doctrine

Farley, Robert. 2014. "Asia's Greatest Fear: A U.S.-China War," The National Interest. 09 Jun. http://nationalinterest.org/feature/asia-flames-us-china-war-10621

Farley, Robert. 2017. "Why USS Enterprise Is The Best U.S. Navy Ship Ever," The National Interest. 23 Jun. http://nationalinterest.org/blog/the-buzz/why-uss-enterprise-the-best-us-navy-ship-ever-21293?page=2

Flores, Mikhail. 2017. "ADB chief: AIIB can be partner in filling Asia's infrastructure gap," Nikkei Asian Review. 04 May. http://asia.nikkei.com/Spotlight/ADB-Annual-Meeting-2017/ADB-chief-AIIB-can-be-partner-in-filling-Asia-s-infrastructure-gap

Ford, John. 2014. "No One Who Bought Alibaba Stock Actually Owns Alibaba," The Diplomat. 24 Sep. http://thediplomat.com/2014/09/no-one-who-bought-alibaba-stock-actually-owns-alibaba/

Gompert, David C., Astrid Cevallos, Cristina L. Garafola. 2016. War With China: Thinking Through the Unthinkable. Santa Monica, CA: Rand Corporation. file:///C:/Users/Windy/AppData/Local/Temp/RAND_RR1140.pdf

Greenspan, Alan. 2008. The Age of Turbulence: Adventures in a New World. New York: Penguin.

Guo, Owen, and Neil Gough. 2016. "As China Shifts from Exporter to Importer, Fortunes Change," The New York Times. 18 Oct. https://www.nytimes.com/2016/10/18/business/energy-environment/as-china-shifts-from-exporter-to-importer-fortunes-change.html

Han, Miao. 2017. "China Says Trump Open to Cooperating on Silk Road Projects," Bloomberg. 23 Jun. https://www.bloomberg.com/news/articles/2017-06-23/china-says-u-s-is-willing-to-work-on-belt-and-road-initiative

Hazlitt, Henry Stuart. 1947. Will Dollars Save the World? New York: D. Appleton – Century.

Jones, David A. 2016. “Microfinancing Abroad Along China’s ‘One Belt, One Road’: Replicating the Wokai, Kiva and Other Experiments Worldwide and the American ‘War On Poverty’ Experience Internationally,” Proceedings of the Ninth Annual Conference on Global Business, Economics, Finance and Banking (AP 16 Hong Kong), 1-10. 11-13 Aug. http://globalbizresearch.org/HongKong_Conference_2016_Aug/docs/doc/Global%20Business,%20Economics%20&%20Sustainability/HK631_Abstract.pdf

Jones, David A., and Hanzhen Liu. 2013. “From ‘Renminbi Diplomacy’ to ‘Dollar Diplomacy’ in Reverse: Changes in Chinese Foreign Economic Policy Since 1950,” in Ma, Ming, ed. 2013.

Advances in Social and Behavioral Sciences. Singapore: Singapore Management and Sports Science Institute, Vol. 4, 68-72.

Kahn, Helen Dodson. 1974. “Willard D. Straight and the Great Game of Empire,” in Merli, Frank J., and Theodore A. Wilson, eds. 1974. Makers of American Diplomacy: From Theodore Roosevelt to Henry Kissinger. New York: Charles Scribner’s Sons.

Kelly, Tim, and Nobuhiro Kubo. 2017. “Arms show offers Japan venue to build military ties in Southeast Asia,” Reuters Africa. 11 Jun. http://af.reuters.com/article/worldNews/idAFKBN19208K?sp=true

Ku, Julian. 2017. “Why the U.S. Can’t Take Sides in South China Sea Sovereignty Disputes, Even Against China,” Lawfare. 19 Jun. https://lawfareblog.com/why-us-cant-take-sides-south-china-sea-sovereignty-disputes-even-against-china

Liu, Mingfu. 2010. Zhongguo Meng: Hou Meiguo Shidai de DaGuo Siwei yu Zhanlüe Dingwei [China’s Dream: Major Power Thinking and Strategic Posture in a Post-American Era]. Beijing: Zhongguo Youyi Chuban Gongsi [China Friendship Publishing Company]. The foreword and 3700 character table of contents are available at http://www.amazon.cn/mn/detailApp/ref=sr_1_1?_encoding=UTF8&s=books&qid=1270207625&asin=B003554FE4&sr=8-1.

Locke, Alex. 2017. “Trump is breaking all of Obama's rules in Syria — and it seems to be working,” Business Insider. 12 Jun. http://www.businessinsider.com/trump-obama-syria-iran-strike-red-line-2017-6?IR=T

McCleary, Kelly. 2017. “China sails into disputed waters, prompting protest by Japan,” Cable News Network (CNN). 25 Jun. http://edition.cnn.com/2017/06/24/asia/china-japan-disputed-islands/index.html

Nearing, Scott, and Joseph Freeman. 1925. Dollar Diplomacy: A Study in American Imperialism. New York: B.W. Huebsch and Viking Press.

Pant, Harsh V. 2017. “Unless China changes tack, India won’t be the only country opposing One Belt, One Road,” Quartz Media. 23 Jun. https://qz.com/1012929/unless-china-changes-tack-india-wont-be-the-only-country-opposing-one-belt-one-road/?utm_source=YPL&yptr=yahoo

Paul, Ronald E. 2006. “The End of Dollar Hegemony,” Resilience.org. 20 Feb. http://www.resilience.org/stories/2006-02-20/end-dollar-hegemony/

Perez, Louis. 1989. Lords of the Mountain: Banditry and Peasant Protest in Cuba, 1878-1918. Pittsburgh: University of Pittsburgh Press.

Pollmann, Mina. 2017. “Even Japan Is Now Considering Joining China's One Belt, One Road,” Russian Insider. 15 Jun. http://russia-insider.com/en/politics/even-japan-now-considering-joining-chinas-one-belt-one-road/ri20114?ct=t%28Russia_Insider_Daily_Headlines11_21_2014%29&mc_cid=7c8b7ce690&mc_eid=f34613da8c

Rachman, Gideon. 2017. Easternization: Asia's Rise and America's Decline From Obama to Trump and Beyond. New York: Other Press.

Raleigh, Helen. 2017. “China’s ‘Project Of Century’ Aims To Unseat U.S. As World’s Top Power,” The Federalist. 12 Jun. http://thefederalist.com/2017/06/12/chinas-project-century-aims-unseat-u-s-worlds-dominant-power/

Roberts, Priscilla. 1994. “The first world war and the emergence of American Atlanticism, 1914-1920,” Diplomacy and Statecraft, Vol. 5, No. 3, 569-619. Nov. http://www.tandfonline.com/doi/ref/10.1080/09592299408405947

Roberts, Priscilla. 1997. “The Anglo-American Theme: American Visions of an Atlantic Alliance, 1914-1933,” Diplomatic History, Vol. 21, No. 3, 333-364. Jul. https://www.researchgate.net/publication/229788660_The_Anglo-American_Theme_American_Visions_of_an_Atlantic_Alliance_1914-1933_Prize-winning_article_1997_Arthur_Miller_Prize_for_the_best_British_article_in_American_studies_British_Association_of_Ameri

Roberts, Priscilla. 2005. "Paul D. Cravath, The First World War, and the Anglophile Internationalist Tradition," Australian Journal of Politics and History, Vol. 51, No. 2, 194-215. Jun. file:///C:/Users/Windy/AppData/Local/Temp/cravath%20article-1.pdf

Roberts, Priscilla, ed. 2006. Behind the Bamboo Curtain: China, Vietnam and the World Beyond Asia. Stanford: Stanford University Press. file:///C:/Users/Windy/AppData/Local/Temp/Behind%20the%20Bamboo%20Curtain.pdf

Ross, Eleanor. 2017. "South China Sea: Chinese Military Planes Raise New Concerns of Conflict in Asia," Newsweek. 23 Jun. http://www.newsweek.com/south-china-sea-chinese-military-planes-raise-new-concerns-conflict-asia-628479

Rothman, Noah. 2017. "The End of Atlanticism," Commentary. 17 Jan. https://www.commentarymagazine.com/foreign-policy/europe/the-end-of-atlanticism-nato/

Saunders, Phillip C. 2010. "Will China's Dream Turn Into America's Nightmare?" China Brief, Vol. 10, No. 7. Washington: Jamestown Foundation. http://www.jamestown.org/single/?no_cache=1&tx_ttnews%5Btt_news%5D=36217&tx_ttnews%5BbackPid%5D=7&cHash=19fc1b4da3.

Shim, Elizabeth. 2017. "China drills, finds 'burning ice' in South China Sea," United Press International (UPI). 12 Jun. http://www.upi.com/Top_News/World-News/2017/06/12/China-drills-finds-burning-ice-in-South-China-Sea/5861497281536/

Spillover Report. 2014. International Monetary Fund (IMF) Multilateral Policy Issues Report. Washington: International Monetary Fund. 29 Jul. http://www.imf.org/external/np/pp/eng/2014/062514.pdf

Taft, William Howard. 1912. Fourth Annual Message to the Congress. Washington: National Archives. 03 Dec. https://millercenter.org/the-presidency/presidential-speeches/december-3-1912-fourth-annual-message

Tartar, Andre, and Wei Lu. 2017. "China's Rags-to-Riches Transformation Isn't Over Yet," Bloomberg. 25 Jun. https://www.bloomberg.com/amp/news/articles/2017-06-25/there-s-no-end-in-sight-for-china-s-rise-up-the-gdp-rankings

"The Hidden Motives of the Chinese Silk Road," Yale Global. 24 June 2017. http://oilprice.com/Energy/Energy-General/The-Hidden-Motives-Of-The-Chinese-Silk-Road.html

The United States and China in Power Transition. Cleveland, OH: 2017, Progressive Management Publications. https://www.amazon.com/United-States-China-Power-Transition/dp/1521319685?SubscriptionId=AKIAJTPUO22B732H2OVA&tag=ndkglobal-20&linkCode=xm2&camp=2025&creative=165953&creativeASIN=1521319685#reader_1521319685

Timoneda, Joan Carreras. 2008. "Dollar Diplomacy: Fallacies and Consequences of Foreign Investment in the Cuban Economy, 1909-1924," Association for the Study of the Cuban Economy (ASCE), 275-283. 30 Nov. http://www.ascecuba.org/c/wp-content/uploads/2014/09/v18-carrerastimoneda.pdf

Trani, Edward P. 2002. "Dollar Diplomacy," Encyclopedia.com. http://www.encyclopedia.com/history/united-states-and-canada/us-history/dollar-diplomacy

Varandani, Suman. 2017. "North Korea Ready To Attack US? Kim Jong Un's Regime Won't Negotiate Over Nuclear Program, Report Says," International Business Times. 25 Jun. http://www.ibtimes.com/north-korea-ready-attack-us-kim-jong-uns-regime-wont-negotiate-over-nuclear-program-2557077

"Voice of America director cut short Guo Wengui live interview," BBG Watch. 01 May 2017. http://bbgwatch.com/bbgwatch/voice-of-america-director-cut-short-guo-wengui-live-interview/

Wang, Brian. 2017. "China is moderating economic weaknesses and may become reliable global engine in 5-15 years," NextBigFuture. 25 Jun. https://www.nextbigfuture.com/2017/06/china-is-moderating-economic-weaknesses-and-may-become-reliable-global-engine-in-5-15-years.html

Wang, Xiangwei. 2017. "Opinion: China's robber barons take collusion to a whole new level," South China Morning Post. 14 May. http://www.scmp.com/week-asia/opinion/article/2098421/billionaire-wus-detention-signals-chinas-clean-financial-sector

Wither, James. 2006. "An Endangered Partnership: The Anglo-American Defence Relationship in the Early Twenty-first Century," European Security, Vol. 15, No. 1, 47-65. 17 Jul. http://www.tandfonline.com/doi/abs/10.1080/09662830600776694

Yamaguchi, Mari. 2017. "Japan seeks to expand arms deals with Southeast Asia," ABC News from AP. 12 Jun. http://abcnews.go.com/International/wireStory/japan-seeks-expand-arms-deals-southeast-asia-47979260

Yan, Sophia. 2014. "Alibaba has a major counterfeit problem," Cable News Network (CNN). 12 Sep. http://money.cnn.com/2014/09/11/technology/alibaba-counterfeit-ipo/index.html

Zakaria, Fareed. 2009. The Post-American World. New York: W.W. Norton.

Archives of Business Research – Vol.5, No.9
Publication Date: Sep. 25, 2017
DOI: 10.14738/abr.59.3581.
Obiora, S. C., & Csordás, T. (2017). The Case of Alternative Versus Traditional Financing: A Literature Review. *Archives of Business Research,* 5*(9),* 42-53.

The Case of Alternative Versus Traditional Financing: A Literature Review

Sandra Chukwudumebi Obiora
School of Management and Economics
University of Electronic Science and Technology of China

Tamás Csordás
School of Management and Economics
University of Electronic Science and Technology of China

ABSTRACT

Receiving a loan from the bank has in the recent decades become a more difficult procedure with a gradually worsening percentage rate of loan application successes. Small and commercial banks are faced with several external challenges and pressures that affect their lending behaviors and force them to ration credit. Thus, they employ the cookie cutter approach to screening loan applications which tend to leave the borrowers at a greater disadvantage. Even worse, Small and Medium-sized Enterprises who are often in great need of start-up capital are faced with not just the progressively strenuous process of putting in an application at the bank for a loan which by itself goes beyond a day, but also a high chance of its rejection. On the other hand, alternative financing methods in the form of peer to peer lending, crowdfunding, and other online platforms come not just with a different level of ease of applications, but also several marketable benefits for the entrepreneur. This paper works to offer an unbiased and wider view of the current state of alternative financing growth (with a case study from China) while contrasting it with the situation of bank lending and the different levels of ease of loan access the alternative procedures offer. Also, it exposes not just upon the innovation and growing list of advantages of alternative financing, but also the risks involved for the lenders, and how risk is allocated. Finally, the paper presents an insight into the future of the alternative financing market.

Keywords: Alternative financing, Traditional financing methods, SMEs, Credit rationing, Innovation, Bank Loans

INTRODUCTION

Although the term 'Alternative finance' is one expressed in different ways, it can be understood as being the non-traditional methods of financing or fund sourcing in place of the traditional financing method which mainly alludes to receiving a bank loan. Today, alternative financing and the presence of online platforms that connect lenders and borrowers have become inseparable concepts.[1] Over the last two decades, Peer to Peer lending (P2P), and Crowdfunding among others have grown to become formidable instruments of financing.[2] In fact, the market for alternative finance as of 2014 in the UK was forecasted to £1.74 in funding provided, and P2P lending more than tripling in size in the space of one year.[3] In China, the total size of the market has already reached 101.7 billion US dollars as of 2015.[4]

Although alternative financing is gradually rising and becoming more prominent in the financing scene, traditional financing still greatly outweighs it in terms of popularity as a source of funds. The traditional means of borrowing money has been and still remains the most popular method for borrowers who are looking most often to raise capital for their businesses. Some of these borrowers are usually owners or aspirants of small businesses looking to generate start-up capital. Currently, although there still exists a big disparity between the market value of the commercial banks compared to the alternative financing industry, the rise of the alternative financing industries cannot be denied. [5]

The OECD explains that Traditionally, most people opt to borrow from their friends, family members, or they go through the processes of gaining a loan from the bank.[6] Yet, through time, and in very recent history, several alternative methods such as using credit lines, venture capitalists, or even online lending are now available for exploitation.[7] First, when we simply consider the keystone report by the Institute of International Finance who look to discover ways to fix the capital financing issues of SMEs in Europe explain that 4 impediment sets exist for those SMEs seeking financing. These include the case of creditworthiness, competitiveness of SME, the state of banks with limited abilities to manage risks and crisis, as well as the barriers that exist for alternative financing providers. [8]

Prior literature review works carried out thus far on the topic of alternative financing look more at other aspects of it. We can consider the conference paper by Kaustubh and Aditya Sontakke which [9] focuses on the growth of crowdfunding as a type of alternative financing method in seven regions of the world including Africa, MENA, East Asia, Latin America, South Asia, and China. The paper reaches the conclusion that of all these regions, China is predicted to become a key contributor to the development of alternative finance.

At the same time, we have a working paper in the FESSUD project funded by the European Union Seventh framework programme by Isaacs [10] delves deeper into alternative finance but rather than analyze its chronological advancement over time, rather looks in details at alternative types of finance. In fact, it strains more on the different pressures that have arisen from financialization. He further considers peer to peer financing but in the light of stakeholder value banking, as well as alternative currencies.

In both cases, though the titles suggest that alternative financing is addressed up front and in an all-encompassing manner, they do not however consider the different yet highly necessary dynamics of alternative financing methods. We can consider alternative financing in more details first by providing an overview of its general conception, its growth through the decades. After which we look into the current strain on SME aspirants as regards receiving bank loans, the contrast between these methods with the traditional financing methods, and the rising competition that is becoming evident with. Finally, it is necessary to consider the risks involved as regards these two methods, as well as the advantages, or even the innovative strategies of efficiency being carried out by alternative financing producers like this paper aims to do.

The struggle to generate capital for SMEs

Amongst the challenges that SMEs face from the onset, capital generation count as the one of the most formidable foes and roadblocks that most start-ups are faced with. For the UK, the rate at which applications for bank loans are rejected, lies at 38% of applications. [2] A working paper by Gordon, an administrator of U.S Small Business Administration, who was also a cabinet member for the former president Obama's cabinet and McCartney in their research on small business lending explains that small enterprises act as a core to the competitive level of the American economy since they employ up to 50% of the country's private sector workforce. [5]

Figure 11: About 40 Percent of Small Businesses Apply for Credit
Percentage of Small Businesses Applying for Credit

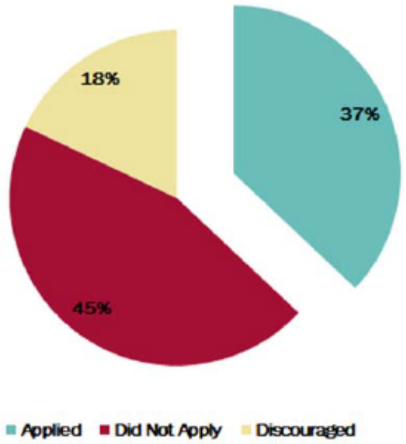
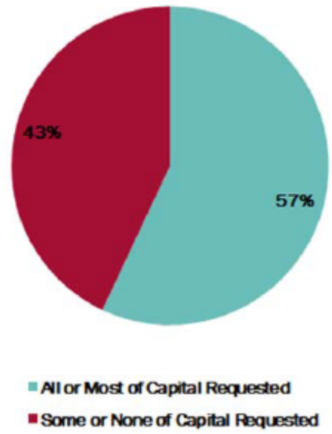


Figure 12: 40 Percent Applying for Credit Get Rejected or Less Credit Than Desired
Percentage of Small Businesses Receiving Credit



Source: Federal Reserve (Atlanta), "Small Business Credit Survey", Fall 2013.

Considering the charts above, we find that Small businesses are faced with a number of challenges when borrowing from the banks[11] and Cole and Rebel explain these reasons among which information opaqueness counts as a top reason for why commercial banks fail to lend out money to most SME borrowers. [12] These reasons were coined as far back as 2004 with the same 'cookie cutter' issue reverberations which involve relying majorly on the financial statements of an aspiring borrower. This is done in order to decide on giving the loan based on the borrowers financial capability to pay back rather than the character and financial statement approach done by smaller banks or financing firms. [6] [13] We also find that in some cases, the process of checking credit of the small business borrowers is more stringent than ever [14] and in when they are lent money they have to suffer higher interest rates. [15][16].

Bank Credit rationing and its implications for SMEs

To comprehend the level of difficulty faced by SMEs, it is important to consider the issue even more from the banks perspective as traditional finance providers. Credit rationing is a process that occurs when banks are operating under rather serious financial stress.[17] In essence, when banks experience trouble financing themselves as an institution, they are forced to ration their credits.[17] Following the analysis of the Stigliz-Weiss a 1981 rationing model done by Agur, which indicates that rationing of credit itself rises from adverse selection. In essence, the borrowers all have an equitable return to their projects, however their projects have different levels of risk due in large to their limited liabilities. This then enforces that the higher risk borrowers possess larger expected returns, and will also most likely pay higher interest rates back. Thus, with the basic outcome being that if R0 refers to project returns, we observe that the bank therefore receives

Min[R0 + C, (1+r)B] from each borrower it lends money to. [18]

What this system of credit rationing implies for the SMEs, or smaller scale lenders is therefore a higher level of difficulty as many of these Small and Medium sized enterprises are not necessarily willing to bear great risks, and due to their limited liabilities and smaller levels of collateral usually unable to make the bank's stringent financial screening process. This in fact places them at a disadvantage, and decreases their overall probability of receiving a loan from the banks.[19]

The choice between traditional and alternative business financing methods

Since people began to practice business, there have been a long trend of methods by which businesses have been financed. These methods though quite old are still in practice today in several modified yet similar forms which mainly include using personal savings and funds, getting loans from family members and friends getting a loan from the banks. A pioneering research by OECD explains that lending money from the banks is the most prevailing method and common source of external financing for most SMEs and entrepreneurs [1]

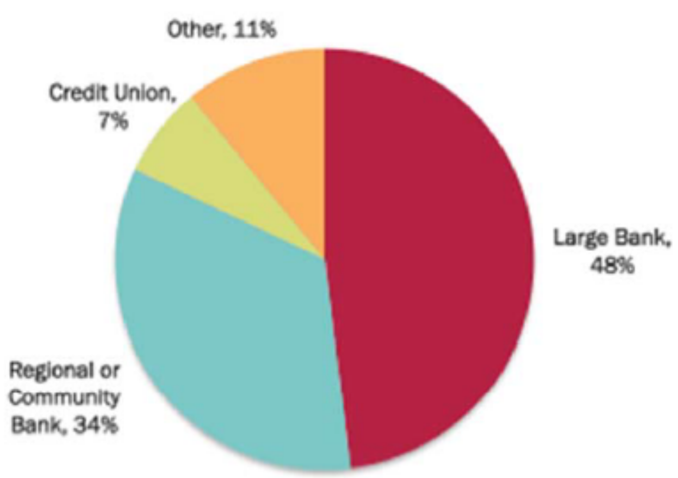
Compared to the traditional methods, the report aims to throw light at other key methods such as crowdfunding, asset based finance, lending, and leasing, alternative debt systems such as corporate bonds, covered bonds, crowdfunding, all systems that work as the alternatives to straight debt.

The rise of Alternative financing sources

Although the key traditional financing method of using bank loans for financing SME startups is still the most predominant financing method till today at the rate of being 72 times larger in terms of net worth when compared with alternative sources , the rapid rise in alternative financing methods cannot be denied. In fact with the aid of the graphs below, we find that as of 2014 when these studies were carried out, gradually but surely, SMEs are leaning more towards other sources beyond the standard bank loan in order to provide capital for their businesses. Also, we find that overall till date alternative finance sources are slowly but surely becoming more prominent, making up a growing portion of 'others' in which we find peer to peer lending, crowdfunding growing in capacity among other alternative financing forms on the rise.

Figure 5: Primary Financial Institution

Percentage of Total Small Businesses Surveyed

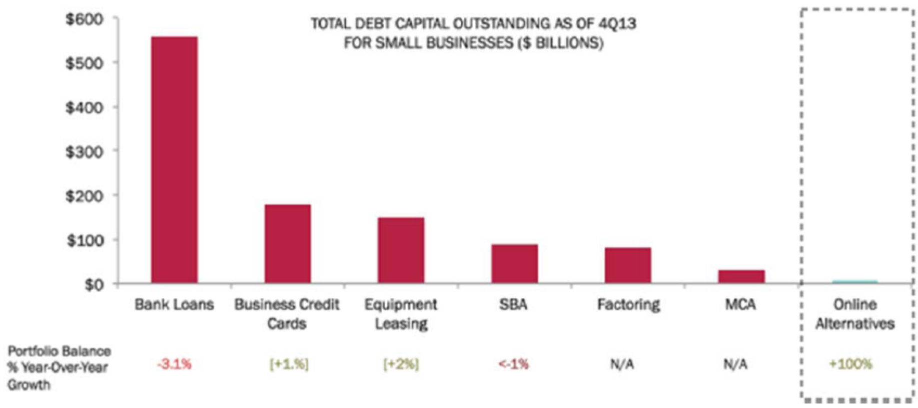


[6]

Among these, alternatives like peer to peer lending (P2P), Crowdfunding, and venture capitals are in the forefront.[20] In a research carried out by Akorsu and Agyapong in Ghana a prominent West African country, identify these standard issues which limit the ability for SME loan aspirants from receiving the capital they require. These issues seem even more pronounced in West Africa and thus a need for an SMEs network funds which is the main idea of this paper[21] At the same time, research by Yiu, Su and co, on alternative financing as regards private firm performance, we see that in the case of China, the Bank loan issue is still quite prominent and finally posit that in China's case alternative sources like underground financing and venture capitals are the more popular means that work.[22]

Source: National Federation of Independent Businesses, "Small Business, Credit Access, and a Lingering Recession", (January '12) and Federal Reserve's Survey of Small Business Finances (Released in '07).

Figure 28: Online Loan Market is Small, But Growing Fast
Total Debt Capital Outstanding as of 4Q13 for Small Businesses ($ Billions)



Source: Bank loans data taken from FDIC Call Reports; SBA data sourced from SBA publicly available information; Credit card data sourced from creditcards.com; remainder sourced from interviews with industry experts, and authors' analysis. [6]

History of alternative financing

The cookie cutter approach versus 'soft information' analysis of the banks

Today, as the number of SMEs increase around the world it is becoming more and more evident that the banks are just not willing to lend money out like they used to with rapidly decelerating figures on the success rate of loan applications. The banks are faced with a big issue of having to collect collateral when the borrower fails to pay which tends to increase costs, and waste resources. As such, the banks use that which is known as the cookie cutter approach according to Cole and co.'s words refer to standard categories and criteria which is gotten from financial statements the banks use to assess who is worthy of receiving a loan. [7] These statements include, but are not limited to one's credits, current and past loans, all their bank accounts, the different debts incurred, their ID numbers for different finance related statements. At the same time, the banks require one's insurance information, copies of their returns, their future ratio agreements, their complete financial statements including their balance sheet, income statements, their audited documents, accounts payable, just to name a few. [58]

Although this cookie cutter practice is a bit more unique to the larger banks compared to the smaller banks, the alternative financing sources tend to look more at the character of the borrower rather than looking strictly at the financial statements which in many cases are not the true indicators of a person's business potential, or even their drive to repay their debt to the bank.

When we look more into the character analysis method of lending to borrowers we find that large banks tend to completely ignore the aspect of character, and are in several instances more favorable to larger firms, and highly selective of the SMEs they choose to lend to. [23][24]David Gaddis in his analysis of dominant banks and their impact on content and bank loan terms addresses the issue of big bank domination of the entire processes which in turn has a negative impact on the smaller lenders and borrowers. In fact, in the US today, there are 3 main banks that control more than a half of the commercial banks of the US with the syndication process. [25]

In essence, the banks conduct a rigorous time consuming application process which in itself acts as a means to dissuade borrowers, many of whom get discouraged and instantly feel unfit for receiving a bank loan.[26][27] In other foundational research on the different ways corporate loan lending done by finance companies in comparison to banks carry out their analysis. They find that the financing companies compared with banks tend to lend to more or arguably riskier borrowers more especially those who are leveraged. [28] Also, emphasis is laid by Gambacorta and co on the issue of bank capital which has a big influence on each bank's lending behavior after looking in detail at a sample of 40 Italian banks who finds that the well-capitalized banks are better able to protect their ability to lend even in the face of monetary policy shocks in its external environment.[29][30][31]Interestingly, Berger and co look more into the ability of smaller banks compared to larger banks to consider 'soft' information compared to the cookie cutter, hard information approach the larger commercial banks use to decide those worthy of loans.[32] De La Torre et al go into even further details of banks relationship with SMEs, and the real struggle for capital generation through bank loans.[33]

Case study: Internet financing in China, and the diminishing overall role of banks

Internet financing in China is a phenomenon that is rapidly evolving. It is becoming a formidable financial instrument that supports SMEs and entrepreneurs in China. In fact, a major boost has been seen in East Asian countries such as Singapore, Indonesia, Malaysia, and more especially China. Due to this rise, China's state controlled banks are beginning to lose their share of the 44.8 trillion-yuan worth of the deposits of household [61] China has in fact as of 2017 become the world's largest P2P market. This is also due to the government's encouragement of online financing. One such major online platform of internet financing in China is Alipay which as of 2014 boasted of 300 million users who through the platform have access to various financial services that are gradually replacing the role of the banks. The users do not only use it to make all form of utility payments, and online purchase payments, but also save money on it for interest, as well as participate in the crowdfunding services offered therein.

When we consider China alone as a case, we can see and clearly understand that Alternative financing even in form of internet financing services is already challenging the status quo and traditional methods of accessing financial services standardly provided by the banks.

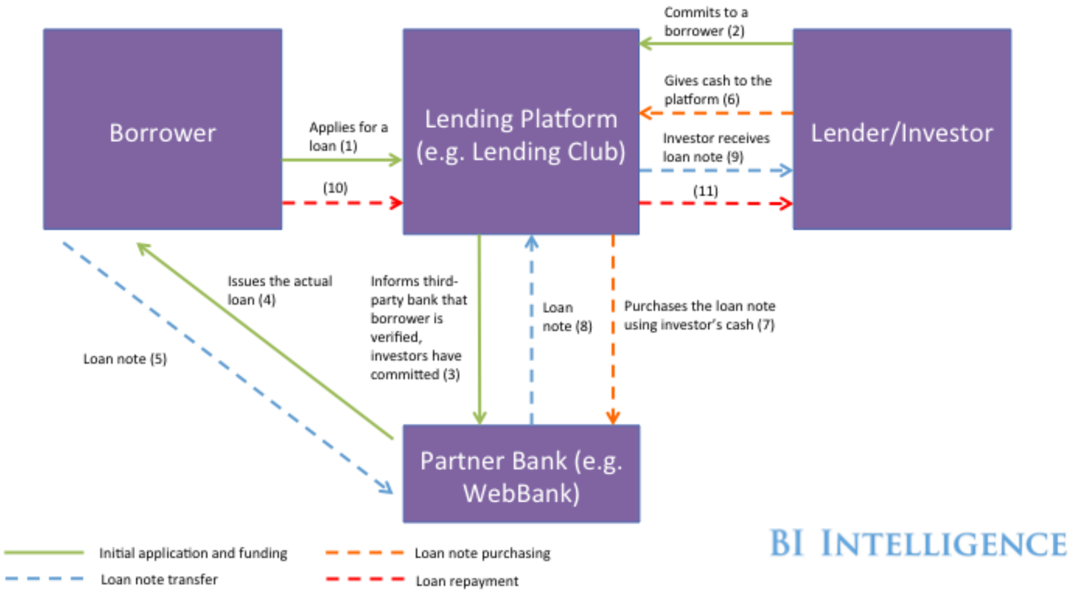
Efficiency and Innovations in Alternative financing

Today, due to the rapid progression of technology, many processes which were in the past impossible such like the introduction of ATMs and several online banking services[34]to replace long waits at the bank in front of a clerk. In fact, businesses are progressing faster, and formerly longwinded processes such as job applications of the jobs of Human resource staff which formerly involved endless processes of file keeping has now been transformed into online quicker and easier processes with the onset of EHRM. In the same light, the rapid evolution of the internet has also brought about different variations of online lending, processes that were almost unimaginable only a few decades back.

The alternative financing online platforms have revolutionized the way money is being borrowed.[35][20] In fact, we find that an average bank loan application even before consideration takes a whopping 25 hours to complete while most online platforms offer less convoluted processes with 30 minutes to an hour being enough to complete the application process for a loan to an alternative finance source. [6]

Peer to Peer Lending (P2P)

More foundational research on alternative financing sources, more known as Group lending in general rather than the more specific names for it in its online dimensions considers effective cost of borrowing, and the important role peer selection plays in the success of loan receipt via this alternative source.[36][37] However, commercial and online Peer to Peer (P2P) lending as we know it today began in 2005. We find that in this form of lending, the financial institutions play only an intermediary role on the online based platforms where in private individuals in social networks online initialize lending and borrowing.[38][39] A clearer more graphical explanation is shown below with the help of arrows to show the connection of the borrower to the financing source or in the more social light, 'lending club'. Source: Business Insider [59]

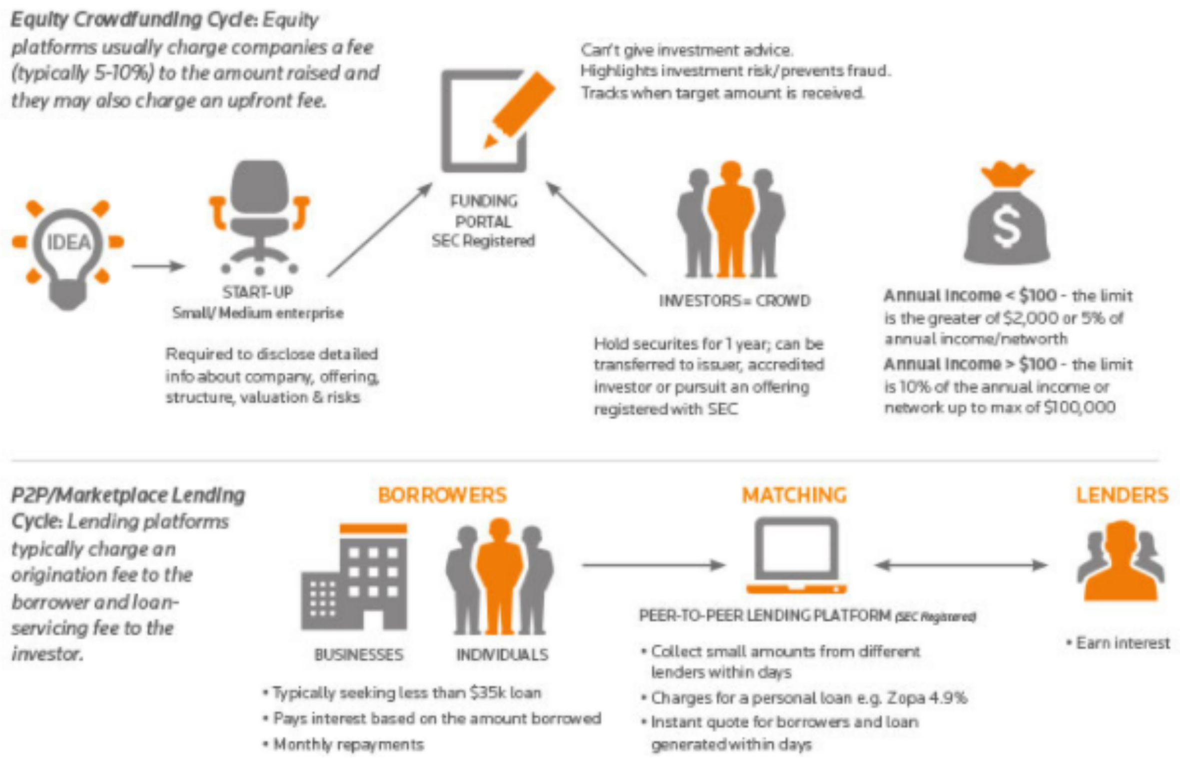


*This is a simplified graphic showing how a loan is processed through a peer-to-peer marketplace – revenue sources such as fees are not included

We see here that the financial institutions such as the banks only play an intermediary role at most, and have no right to necessarily accept or reject the offering of a loan to a borrower. This throws light to its efficiency as the notion to lend or not to lend is not a necessarily institutionalized procedure reliant on bank capital reserves, or even standardized cookie cutter processes. In essence, one can clearly see that the future of peer to peer lending is now becoming a sweet blend of internet innovations, and gregarious and aggressive entrepreneurship sparking innovation.[40]

Crowdfunding

Besides peer to peer lending, we can also consider the considerable ease with which borrowers earn funds through crowdfunding. Crowdfunding in simplistic terms as the name implies refers to the procedure of raising funds for a venture in many small quantities from a large number of people 'crowd'.[41][42][43] Many researchers have considered the topic of crowdfunding from different perspectives. From the aspect of efficiency over bank loans[44], in terms of strategies to motivate the crowds[45], or even in terms of the advantages crowdfunding has for SMEs as an alternative finance source. Below is a graphical representation of this process Source: Thompson Reuters [60]



Some of the key benefits and advantages this model of crowdfunding possesses include first that the crowd has a wisdom in itself, and is able to decipher which projects look successful. This wisdom is also able to remove delusions from the borrower's minds and help them even produce better ideas and modifications.[46] Next, crowdfunding unlike other alternative financing methods like peer to peer lending, or even angel investments do not have to worry about losing any portion of future equities from initial stage, the lack of geographical barriers due to the online nature of the agreements, and product promotion among other benefits.[47]

Alternative financing and risks

Although alternative financing may appear at first to not consider the risk of lending as seriously as the banks do it is also faced with the same uncertainties the banks work to avoid. Risk which mainly revolve around the borrower's ability to pay back with interest in due time. It is truly arguable that from the lenders perspective, rather than being an investment, lending is more like gambling simply because of the unfavorable profit model being worked with. Simply put their probability times the payoff presents unfavorably higher chances of risk especially for smaller borrowers whose financial status of ability to pay back are simply dubious and difficult to estimate at best. Simply put:

Expected return = (Gain on success chance x probability of success) + (Losing on a loss chance x Probability of loss).

In the case of peer to peer lending, lenders look to reduce risk by screening through multiple peers, and ascertaining a peer's creditworthiness using soft information as mentioned earlier, and their ratings from other lenders.[48] However, in the case of crowdfunding, the risk is shared among a large group of lenders which then minimizes each lenders risk level when considered with the simple probability times payoff model.[49]

Despite all the benefits already outlined regarding alternative financing, it is important to present a more balanced view where in the prevailing disadvantages can be reviewed, in other words the risks. E. and B. Lee analyze this in their empirical investigation considers more serious issues of information asymmetry [50]in the lending and borrowing process posing a risk for the lenders, and even the general lack of financial expertise most of the members of these online platforms possess.[51] Looking more in details at Herding which arises from abundance of information that is imperfect.[52][53]

In fact, the serious issues of moral hazards which places the lenders at a great disadvantage cannot be ignored when considering the rise of alternative financing.[54] We can even say that the security issues of online theft [55][56] and the jeopardy and susceptibility to hacking and phishing apply in full to online procedures of lending and borrowing money as alternative financing methods.[57]

CONCLUSION AND INSIGHTS

The paper aims to consider and analyze the overall state of alternative financing with a more detailed look at two prevailing forms: peer to peer lending, and crowdfunding, as compared to traditional financing method which is primarily the process of receiving a bank loan. This paper goes on to consider not just the benefits of the alternative financing but also the innovation, efficiency, effectiveness, and also risks involved.

Nonetheless, currently, it can be said that the benefits outweigh the disadvantages of alternative financing especially as an alternative form to the traditional process that has become far more convoluted for many considerable reasons in the recent decades. In fact, it can be predicted that with the rate at which the internet is becoming more instrumental to businesses, lending and borrowing will also shift slowly but surely to become a predominantly online process. We can point to the ease of access, the efficiency, and even marketability of alternative financing sources. At the same time, the continued pressure on both small and commercial banks by the bigger banks to employ the cookie cutter approach rather than the soft information consideration strategy throws light on the probability of an even lower probability for borrowers especially for SMEs to gain access to capital to start and run their businesses.

In fact, with added bonuses of simultaneous product promotion, quicker application processes, less stringent evaluation processes, and the overall ease of access to these platforms and in essence lenders, it can clearly be seen that alternative financing will in no time become the main way to generate capital. However, whether this will become a convoluted process like the bank loans due to increased popularity in the far future, 10 or 20 decades from now, is a phenomenon yet to be deeply analyzed, clearly considered, or nearly forecastable.

References

1. F. Allen, E. Carletti, J. Qianc, and P. Valenzuela, "Financial Intermediation, Markets, and Alternative Financial Sectors," *Handb. Econ. Financ.*, no. PA, pp. 759–798, 2013.
2. M. Segal, "What Is Alternative Finance ?," *Off. Advocacy*, vol. 1, no. Economic Research Series, pp. 1–4, 2016.
3. P. Baeck, L. Collins, and B. Zhang, "Understanding alternative Finance," *UK Altern. Financ. Ind. Rep. 2014*, no. November, pp. 1–95, 2014.
4. L. Deer, "Understanding the scale of online alternative finance in China." *Frontiers of Finance in China*, [Accessed: 29-Jul-2017].

5. K. G. Mills, "The State of Small Business Lending: Credit Access during the Recovery and How Technology May Change the Game," *Harv. Bus. Rev.*, no. 15–4, pp. 1–31, 2014.
6. L. Cusmano, "New approaches to SME and Entrepreneurial Financing: Broadening the Range of Instruments," *OECD Anal. Rep.*, pp. 1–109, 2015.
7. A. General, "Improving access to finance for small and medium-sized enterprises," no. November, 2013.
8. Bain & Company, "RESTORING FINANCING AND GROWTH TO EUROPE ' S SMEs: Four sets of impediments and how to overcome them," p. 52, 2013.
9. C. Paper, K. Sontakke, M. Studies, and N. Mumbai, "Study of Alternative Finance – Review of global literature Study of Alternative Finance – Review of global literature," *Res. Gate*, vol. Conference, no. February, p. 10, 2016.
10. E. Union and S. F. Programme, "Working Paper Series No 170 Alternative forms of finance : A literature review Alternative forms of finance : A literature review," *FESSUD*, no. 266800, pp. 1–72, 2016.
11. J. Moules, "SME concerns at bank loans," *Financial Times*, 2011.
12. R. A. Cole, L. G. Goldberg, and L. J. White, "Cookie Cutter vs. Character: The Micro Structure of Small Business Lending by Large and Small Banks," *J. Financ. Quant. Anal.*, vol. 39, no. 2, p. 227, 2004.
13. G. J. Benston, "COMMERCIAL BANK PRICE DISCRIMINATION AGAINST SMALL LOANS: AN EMPIRICAL STUDY," *J. Finance*, vol. 19, no. 4, pp. 631–643, 1964.
14. K. Mitchell and D. K. Pearce, "Lending technologies, lending specialization, and minority access to small-business loans," *Small Bus. Econ.*, vol. 37, no. 3, pp. 277–304, 2011.
15. J. E. McNulty, M. Murdock, and N. Richie, "Are commercial bank lending propensities useful in understanding small firm finance?," *J. Econ. Financ.*, vol. 37, no. 4, pp. 511–527, 2013.
16. A. Rostamkalaei and M. Freel, "The cost of growth: small firms and the pricing of bank loans," *Small Bus. Econ.*, vol. 46, no. 2, pp. 255–272, 2016.
17. S. Cenni, S. Monferrà, V. Salotti, M. Sangiorgi, and G. Torluccio, "Credit rationing and relationship lending. Does firm size matter?," *J. Bank. Financ.*, vol. 53, pp. 249–265, 2015.
18. I. Agur, "Credit rationing when banks are funding constrained," *North Am. J. Econ. Financ.*, vol. 23, no. 2, pp. 220–227, 2012.
19. M. Agostino, D. B. Silipo, and F. Trivieri, "The effects of screening and monitoring on credit rationing of SMEs," *Econ. Notes*, vol. 37, no. 2, pp. 155–179, 2008.
20. L. Neville, "Alternative Financing," *Global Finance*, pp. 22–26, 2012.
21. P. K. Akorsu, D. Agyapong, and C. Author, "ALTERNATIVE MODEL FOR FINANCING SMEs IN GHANA," *Int. J. Arts Commer.*, vol. 1, no. 5, pp. 136–148, 2012.
22. D. W. Yiu, J. Su, and Y. Xu, "Alternative financing and private firm performance," *Asia Pacific J. Manag.*, vol. 30, no. 3, pp. 829–852, 2013.
23. P. E. Strahan, "Borrower Risk and the Price and Nonprice Terms of Bank Loans," *Natl. Bur. Econ. Res.*, pp. 1–36, 1999.
24. B. Narteh, "SME bank selection and patronage behaviour in the Ghanaian banking industry," *Manag. Res. Rev.*, vol. 36, no. 11, pp. 1061–1080, 2013.
25. D. G. Ross, "The 'Dominant Bank Effect:' How high lender reputation affects the information content and terms of bank loans," *Rev. Financ. Stud.*, vol. 23, no. 7, pp. 2730–2756, 2010.
26. C. Mac an Bhaird, J. S. Vidal, and B. Lucey, "Discouraged borrowers: Evidence for Eurozone SMEs," *J. Int. Financ. Mark. Institutions Money*, vol. 44, pp. 46–55, 2016.
27. L. Han, S. Fraser, and D. J. Storey, "Are good or bad borrowers discouraged from applying for loans? Evidence from US small business credit markets," *J. Bank. Financ.*, vol. 33, no. 2, pp. 415–424, 2009.
28. M. Carey, M. Post, and S. A. Sharpe, "Does corporate lending by banks and finance companies differ? Evidence on specialization in private debt contracting," *J. Finance*, vol. 53, no. 3, pp. 845–878, 1998.
29. L. Gambacorta and P. E. Mistrulli, "Does bank capital affect lending behavior?," *J. Financ. Intermediation*, vol. 13, no. 4, pp. 436–457, 2004.
30. F. Rodríguez-Fernández, "Bank Lending, Financing Constraints and SME Investment," *Australas. Financ.*,

no. April 2008, pp. 1–40, 2008.

31. M. Zaini Abd Karim, S.-G. Chan, and S. Hassan, "Bank Efficiency and Non-Performing Loans: Evidence from Malaysia and Singapore," *Prague Econ. Pap.*, vol. 19, no. 2, pp. 118–132, 2010.
32. A. N. Berger, N. H. Miller, M. A. Petersen, R. G. Rajan, and J. C. Stein, "Does function follow organizational form? Evidence from the lending practices of large and small banks," *J. financ. econ.*, vol. 76, no. 2, pp. 237–269, 2005.
33. A. de la Torre, M. S. Martínez Pería, and S. L. Schmukler, "Bank involvement with SMEs: Beyond relationship lending," *J. Bank. Financ.*, vol. 34, no. 9, pp. 2280–2293, 2010.
34. T. Pikkarainen, K. Pikkarainen, H. Karjaluoto, and S. Pahnila, "Consumer acceptance of online banking: an extension of the technology acceptance model," *Internet Res.*, vol. 14, no. 3, pp. 224–235, 2004.
35. M. T. Price, "Alternative financing for growing businesses," *BusinessWest*, vol. 10, no. 3, p. 44, 1993.
36. M. Ghatak, "Group lending, local information and peer selection," *J. Dev. Econ.*, vol. 60, no. 1, pp. 27–50, 1999.
37. M. Lin, "Peer-to-Peer Lending : An Empirical Study," in *15th Americas Conference on Information Systems*, 2009, p. 8.
38. A. Bachmann *et al.*, "Online peer-to-peer lending - A literature review," *Journal of Internet Banking and Commerce*, vol. 16, no. 2. 2011.
39. I. Galloway, "Peer-to-Peer Lending and Community Development Finance," *Community Dev. Invest. Cent. Work. Pap.*, vol. 21, no. 3, p. 20, 2009.
40. S. C. Moenninghoff and A. Wieandt, "The Future of Peer-to-Peer Finance," *Zeitschrift für Betriebswirtschaftliche Forsch.*, vol. August/Sep, pp. 466–487, 2013.
41. Fundable, "The History of Crowdfunding," *Fundable*, 2013. .
42. J. Hemer, "A snapshot on crowdfunding," *Enconstor*, p. 39, 2011.
43. M. Kuti and G. Madarász, "Crowdfunding," *Public Finan. Q.*, vol. 59, no. 3, pp. 355–366, 2014.
44. M. Rossi, "The New Ways to Raise Capital: An Exploratory Study of Crowdfunding," *Int. J. Financ. Res.*, vol. 5, no. 2, p. p8, 2014.
45. H. Klaebe and R. Laycock, "How to work the crowd : A snapshot of barriers and motivations to crowdfunding," *Artsupport Aust.*, no. July, p. 12, 2012.
46. M. A. Stanko and D. H. Henard, "How crowdfunding influences innovation," *MIT Sloan Manag. Rev.*, vol. 57, no. 3, pp. 15–17, 2016.
47. Z. Golić, "Advantages of crowdfunding as an alternative source of financing of small and medium-sized enterprises," *Proc. Fac. Econ. East Sarajev.*, no. 8, pp. 39–48, 2014.
48. R. Iyer, A. I. Khwaja, E. F. P. Luttmer, and K. Shue, "Screening in new Credit Markets: Can individual Lenders infer Borrower Creditworthiness in Peer-to-Peer Lending," 2009.
49. P. Belleflamme, T. Lambert, and A. Schwienbacher, "Crowdfunding: Tapping the right crowd," *J. Bus. Ventur.*, vol. 29, no. 5, pp. 585–609, 2014.
50. P. M. Healy and K. G. Palepu, "Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature," *Journal of Accounting and Economics*, vol. 31, no. 1–3. pp. 405–440, 2001.
51. E. Lee and B. Lee, "Herding behavior in online P2P lending: An empirical investigation," *Electron. Commer. Res. Appl.*, vol. 11, no. 5, pp. 495–503, 2012.
52. A. Sufi, "Information asymmetry and financing arrangements: Evidence from syndicated loans," *J. Finance*, vol. 62, no. 2, pp. 629–668, 2007.
53. W. Kang, "Herd Behavior in Financial Markets," *Int. Bus. Res.*, vol. 6, no. 6, pp. 279–310, 2013.
54. S. Wang and H. Zhou, "Staged financing in venture capital: Moral hazard and risks," *J. Corp. Financ.*, vol. 10, no. 1, pp. 131–155, 2004.

55. K. K. R. Choo, “Money laundering and terrorism financing risks of prepaid cards instruments?,” *Asian J. Criminol.*, vol. 4, no. 1, pp. 11–30, 2009.

56. G. Yan, “Risk types and risk amplification of online finance,” *Inf. Technol. J.*, vol. 12, no. 3, pp. 494–497, 2013.

57. S. Vandoninck, L. D’Haenens, and K. Roe, “Online Risks.,” *J. Child. Media*, vol. 7, no. January 2014, pp. 60–78, 2013.

58. T. Berry, "10 Things the Bank Will Ask When You Need a Business Loan", *Bplans Blog*, 2017. [Online]. [Accessed: 27- Jul- 2017].

59. E. Bakker, "PEER-TO-PEER LENDING: How digital lending marketplaces are disrupting the predominant banking model", *Business Insider*, 2017. [Online] [Accessed: 27- Jul- 2017].

60. "Crowdfinancing: Driving innovation for the financial sector | Thomson Reuters", *Thompson Reuters*, 2017. [Online]. [Accessed: 27- Jul- 2017].

4. C. Larson, "Alipay Is Starting to Look Like the Future of Chinese Banking", *MIT Technology Review*, 2017. [Online]. [Accessed: 29- Jul- 2017].

Archives of Business Research – Vol.5, No.9
Publication Date: Sep. 25, 2017
DOI: 10.14738/abr.59.3623.
Puaschunder, J. M. (2017). Nudgital: Critique of Behavioral Political Economy. *Archives of Business Research,* 5*(9),* 54-76.

Nudgital: Critique of Behavioral Political Economy

Julia M. Puaschunder*
Columbia University
Graduate School of Arts and Sciences
116th Street Broadway, New York, USA

*Financial support of the Eugene Lang College of The New School, Fritz Thyssen Foundation, the Janeway Center Fellowship, New School for Social Research, Prize Fellowship, the Science and Technology Global Consortium, the University of Vienna, and Vernon Arts and Sciences is gratefully acknowledged. The author thanks the students of the New School Eugene Lang College Spring 2017 'Behavioral Economics' class for most excellent feedback on the presented ideas and/or earlier versions of this paper. All omissions, errors and misunderstandings in this piece are solely the author's.

ABSTRACT

Behavioral Economics revolutionized mainstream neo-classical economics. A wide range of psychological, economic and sociological laboratory and field experiments proved human beings deviating from rational choices as standard neo-classical profit maximization axioms failed to explain how human actually behave. Human beings rather use heuristics in their day-to-day decision making. These mental short cuts enable to cope with a complex world yet also often leave individuals biased and falling astray to decision making failures. What followed was the powerful extension of these behavioral insights for public administration and public policy making. Behavioral economists proposed to nudge and wink citizens to make better choices for them and the community. Many different applications of rational coordination followed ranging from improved organ donations, health, wealth and time management, to name a few. Yet completely undescribed remains that the implicit hidden persuasion opens a gate to deception and is an unprecedented social class division means. Social media forces are captures as unfolding a class dividing nudgital society, in which the provider of social communication tools can reap surplus value from the information shared of social media users. The social media provider is outlined as capitalist-industrialist, who benefits from the information shared by social media users, or so-called consumer-workers, who share private information in their wish to interact with friends and communicate to public. The social media capitalist-industrialist reaps surplus value from the social media consumer-workers' information sharing, which stems from nudging social media users. For one, social media space can be sold to marketers who can constantly penetrate the consumer-worker in a subliminal way with advertisements. But also nudging occurs as the big data compiled about the social media consumer-worker can be resold to marketers and technocrats to draw inferences about consumer choices, contemporary market trends or individual personality cues used for governance control, such as, for instance, border protection and tax compliance purposes. To draw attention to this implicit struggle within society is important for various reasons: Addressing the nudgital society allows to better understand the laws of motion of governance in the digital age, leading to the potentially unequal accumulation and concentration of power. Technological improvement in the age of information has increased the possibilities to control the innocent social media users and reap the benefits of their existence in hidden persuasion. In the age of populism, nudging can be criticized to be used by the ruling class to exploit the governed populace. In modern democracies, the right to rule was recently plundered in democratic votes through misguiding information of alternative facts and fake news circulated on social media. The socio-ethical crises that are rooted in the contradictory class division of the nudgital society are presented in this paper for the first time and from there on demand for further description and research on

capitalism and democracy in the digital age. The paper advocates for a democratisation of information, education about nudges and well-informed distribution of transparent governance control.

Keywords: Behavioral Economics, Behavioral Political Economy, Democratisation of information, Education, Exchange value, Governance, Libertarian Paternalism, Nudging, Nudgital, Right to delete, Right to be forgotten, Social media, Social media capitalist-industrialist, Social media consumer-worker, Social media slavery, Surplus Value, Use value, Winking, Winkital.

INTRODUCTION

Since the end of the 1970ies a wide range of psychological, economic and sociological laboratory and field experiments proved human beings deviating from rational choices and standard neo-classical profit maximization axioms to fail to explain how human actually behave (Kahneman & Thaler, 1991). Human beings were shown to use heuristics in the day-to-day decision making as mental short cuts that enable to cope with information overload in a complex world (Bazerman & Tenbrunsel, 2011; Kahneman & Tversky, 1979; Thaler & Sunstein, 2008).

From there on, the emerging field of behavioral insights targeted at using human heuristics and biases to improve decision making in different domains ranging from health, wealth and prosperity (Thaler & Sunstein, 2008). Behavioral economists proposed to nudge and wink citizens to make better choices for them with many different applications. Behavioral Insights teams have been formed to advise individual governments around the globe – for instance, Australia, Canada, Colombia, Germany, Italy, the United Kingdom, and the United States (World Development Report, 2015). But also intergovernmental entities such as the European Commission, or global governance institutions, such as the World Bank and the International Monetary Fund, have started using nudges and winks to improve society (World Development Report, 2015).

While the motivation behind nudging appears as a noble endeavor to foster peoples' lives around the world in very many different applications (Marglin, 1974), the nudging approach raises questions of social hierarchy and class division. The motivating force of the nudgital society may open a gate of exploitation of the populace and – based on privacy infringements – stripping them involuntarily from their own decision power in the shadow of legally-permitted libertarian paternalism and under the cloak of the noble goal of welfare-improving global governance. Nudging enables nudgers to plunder the simple uneducated citizen, who is neither aware of the nudging strategies nor able to oversee the tactics used by the nudgers. The nudgers are thereby legally protected by democratically assigned positions they hold or by outsourcing strategies used, in which social media plays a crucial rule.

In the digital age, social media revolutionized human communication around the globe, yet also opened opportunities to unprecedentedly reap benefits from information sharing and big data generation. The law of motion of the nudging societies holds an unequal concentration of power of those who have access to compiled data and who abuse their position under the cloak of hidden persuasion and in the shadow of paternalism. In the nudgital society, information, education and differing social classes determine who the nudgers and who the nudged are. Humans end in different silos or bubbles that differ in who has power and control and who is deceived and being ruled. The owners of the means of governance are able to reap a surplus value in a hidden persuasion, protected by the legal vacuum to curb libertarian paternalism, in the moral shadow of the unnoticeable guidance and under the cloak of the presumption that some know what is more rational than others (Camerer, Issacharoff, Loewenstein, O'Donoghue & Rabin, 2003). All these features lead to an unprecedented contemporary class struggle between the nudgers (those who nudge) and the nudged (those who are nudged), who are divided by the implicit means of governance in the digital scenery. In this light, governing our common welfare through deceptive means and outsourced governance on social media appears critical. In combination with the underlying assumption of the nudgers knowing better what is right, just and fair within society, the digital age and social media tools hold potential unprecedented ethical challenges.

The following article addresses the connection of nudging and social class structure in order to derive conclusions about implicit societal impetus of nudging and winking in the 21st century. Alongside of providing an overview of behavioral sciences with an application in the public domain; the following paper will take a critical approach in the economic analysis of contemporary public governance through nudging and winking enabled through social media. Drawing from some of the historical foundations of political economy, the paper seeks to advance the field of behavioral economics through a critical stance on behavioral sciences and new media use for guiding on public concerns in the digital age (Heilbroner, 1988, 1999).

In its totality, the article offers a critical analysis of behavioral economics with an emphasis on political economy. By revealing the contradictions of the social media age of the nudgital society, light is shed on the implicit class struggle rooted in the nudgital social relations of production. Pointing out the limitations of behavioral insights to inform about public choices accurately will be the basis of the critique of a certain ruling class nudging a wide populace by the help of social media. An analysis of the process of the circulation of information leads to conclusions about the metamorphosis of big data and their circuit. By shedding light on the inherent class division in those who nudge (the nudgers) and those who are being nudged (the nudged), the article proposes further analysis strategies to unravel how the use of behavioral economics for the greater societal good in combination with the rise of social media big data creation may hold unknown socio-ethical downfalls. The paper thereby takes a heterodox economics stance in order to search for interdisciplinary improvement recommendations how to more inclusively alleviate public sector concerns in the digital age.

The article is structured as follows: An introduction to behavioral economics nudging is followed by a description of social hierarchy in the nudgital society. The underlying structures that lead to a class division in those who nudge and those who are being nudged are captured for the first time in order to draw conclusions about the hidden downfalls and risks of the nudgital society. Implications of invisible governance through nudging lead to open questions about ethics in the information age and recommendations for societal and democratic improvement in the 21st century. The paper closes with a preview of potential future directions of the novel insights gained on the nudgital society. Challenging contemporary behavioral insights theory is aimed at moving together towards a more inclusive future wiser, more self-informed and protected digital society.

BEHAVIORAL ECONOMICS

Behavioral Economics revolutionized decision-making theory. By studying human decision making fallibility and its consequences, behavioral economics argues that people make decisions based on rules of thumb heuristics that dominate human choices (Gigerenzer, 2014, 2016; Kahneman & Tversky, 2000). Laboratory experiments have captured heuristics as mental short-cuts easing mentally constrained human in a complex world (Cartwright, 2011; Sen, 1977; Simon & Bartel, 1986). Mental short cuts were outlined to simplify decision making and substitute difficult questions with easy applicable automatic behavioral reactions (Kahneman, 2003). An impressive line of research has shown that heuristics lead to predictable and systematic errors (Tversky & Kahneman, 1974). Heuristics cause people to make choices much faster, but ultimately less logically than more careful, long-form, decision making. These cognitive mental shortcuts therefore set humans on a path to erroneous choices. From these insights gained, decision making failures became studied in order to improve human decision making outcomes over time and in groups (Camerer & Loewenstein, 2004).

Behavioral economists have recently started to nudge – and most recently wink – people into favorable decision outcomes, offering promising avenues to steer social responsibility in public affairs (Akerlof, 2009; Kahneman, 2011). Individuals were nudged into doing things they naturally would not have considered doing. Most recently, behavioral economics innovatively became applied in the public administration and policy domain as a cutting-edge approach to capture the power of real-world relevant economics for the improvement of society. Drawing from a line of research on bounded rationality, behavioral economics accounts for one of the most prominent approaches to minimize societal downfalls and implement social welfare maximization. Behavioral economics is thereby seen as a real-world relevant means to enable global governance in the world economy and improve societal advancement on a global scale (World Development Report, 2015). Yet questionable is whether or not economic calculus can be applied onto the governance of human activity within society without ethical oversight (Puaschunder, 2010). Heuristics may be studied to help explain why people may act illogical and how their fast and impulsive decision making can be turned against them. As a novel application of political economy, the behavioral insights approach appears to be limited and hold unforeseen risks of social class division in the digital age (Bowles, Edwards & Roosevelt, 2005; Sidanius & Pratto, 1999; Tajfel & Turner, 1979).

THE NUDGITAL SOCIETY

In order to understand the impetus of the nudgital society, we need to study the laws of governance in the age of information. From primitive communication between human beings, a civilization of information transfer with centralized state authority and market value in communication control has emerged. In the 21st century, the turnover of information and the aggregation of social informational capital has revolutionized the world. In the wake of the emergence of new social media communication and interaction methods, a facilitation of the extraction of surplus value in shared information has begun. In the following the main ideas behind the social media marketplace are dissected in order to show how surplus value through access to amalgamated information over distance and time is realized and an implicit social class division between the nudgers and the nudged evolved in the digital age.

Imagine signing up for a free social media tool, such as Facebook, Instagram or Twitter. You will connect with other people and constantly upload information about yourself, your life and your friends in order to share and benefit from shared information. New media online communication tools have made the world flat. No social hierarchies exist when considering one can follow powerful peoples' news on Twitter and the opportunity to connect and feedback influential individuals' web-appearances. No distance in space and time seem to matter in the light of our all opportunities to instant messaging around the globe 24/7, send messages post-humously and compile massive amounts of big data on a constant basis, which can be stored eternally. All these information flows can be combined to find fascinating behavioral insights and learn about market trends thanks to unprecedented computational power in the 21st century. Computational procedures for data collection, storage and access in the large-scale data processing has been refined for real-time and historical data analysis, spatial and temporal results as well as forecasting and nowcasting throughout recent decades. All these advancements have offered a multitude of in-depth information on human biases and imperfections as well as social representations and collective economic trends (Minsky, 1977;

Moscovici, 1988; Wagner & Hayes, 2005; Wagner, Lorenzi-Cioldi, Mankova & Rose, 1999; Puaschunder, 2015). But are these features of the digital age solely positive advancements of humankind or do they hold problematic emergent risks for humanity and implicit danger of societal stratification (Centeno, Nag, Patterson, Shaver & Windawi, 2015)? Are the behavioral insights gravitating towards an elite that holds the power to reap benefits from the many who innocently share personal information by giving in to the humane-imbued need for expression and interpersonal communication? Do the novel computational power advantages lead to a divided society and an unequal distribution of political power and unequal means to steer collective action (deRooij, Green & Gerber, 2009)?

The article examines the relationship between heuristics, nudging and social class in the digital age. Thereby the paper argues that the strategic use of heuristics differs across social classes. Nudging becomes a prerogative of the elite, who has more information given a difference in access to compiled information. In the nudgital society, information about others plays a key role in determining a competitive advantage. The digital age has brought about unprecedented opportunities to amalgamate big data information that can directly be used to derive inferences about people's preferences in order to nudge and wink them in the nudgitalist's favor. Social classes have different levels of education and insights about the nudgital act, which lead to different confidence levels in their economic choices to act on the nudgital insights and to abstain from opt-out devices. Those who reap surplus value are naturally blessed with higher income levels and elevated educational backgrounds coupled with self-confidence, which leads to less susceptibility to fall for nudges and winks. These elite circles are more confident in their decision making and respond more well-informed to opt-out options.

In today's nudgital society, information has become a source of competitive advantage. Technological advancement and the social media revolution have increased the production of surplus value through access to combined information. Human decisions to voluntarily share information with others in the search for the humane pleasure derived from communication is objectified in human economic relations. Unprecedented data storage possibilities and computational power in the digital age, have leveraged information sharing and personal data into an exclusive asset that divides society in those who have behavioral insights derived from a large amount of data (the nudgers) and those whose will is manipulated (the nudged).

The implicit institutional configuration of a hidden hierarchy of the nudgital society is structured as follows: Different actors engage in concerted action in the social media marketplace. The nudgital-brokers are owners and buyers of social media space, which becomes the implicit means of the production. In the age of instant global information transfer, the so-called social media industrialist-capitalist provides the social media platform, on which the social media consumer-workers get to share information about their life and express their opinion online for free. In their zest for a creation of a digital identity on social media platforms, a 'commodification of the self' occurs (Pincus in speech, March 30). Social media consumer-producer-worker are sharing information and expressing themselves, which contributes to the creation of social media experience.

The hidden power in the nudgitalist society is distributed unevenly, whereby the social media consumer-workers are slaves, who receive no wages in return for their labor, falling for their own human nature to express themselves and communicate with one-another. Social media consumer-workers also engage in social media expression as for their social status striving in the social media platforms, where they can promote themselves. By posing to others in search for social status enhancement and likes, they engage in voluntary obedience to the social media capitalist-industrialist who sells their labor power product of aggregated information to either capitalists or technocrats. The social media consumer-worker's use value is inherent in their intrinsic motivation to satisfy a human need or want to communicate and gain respect from their community. The use value of the commodity is a social use value, which has a generally accepted use-value derived from others' attention and respect in the wake of information sharing in society. The social media provider gives the use value an outlet or frame, which allows the social media consumer-worker to express information, compare oneself to others and gain information about the social relation to others. The consumer-laborer thereby becomes the producer of information, releasing it to the wider audience and the social media industrialist. This use value only becomes a reality by the use or consumption of the social media and constitute the substance of consumption. The tool becomes an encyclopedic knowledge and joy source derived from the commodity.

But the use of social media is not an end in itself but a means for gathering more information that can then be amalgamated by the social media capitalist-industrialist, who harvests its use value to aid nudgers (Marx, 1867/1995). It is a social form of wealth, in form of social status and access to knowledge about others that the use value materializes on the side of the industrialist in the exchange value. For the social media industrialist, who is engaged in economic and governmental relations, the exchange value of the information provided by his or her social media consumer-laborers is the information released and consumption patterns studied. In exchange this allows to derive knowledge about purchasing and consumption patterns of the populace and therefore creates opportunities to better nudge consumers and control the populace. With the amalgamated information the social media industrialist-capitalist can gain information about common trends that can aid governmental officials and technocrats in ensuring security and governance purposes. Further, the social media platform can be used for marketing and governmental information disclaimers.

Exchange value is a social process of self-interested economic actors taking advantage of information sharing based on utility derived from consuming the social media. The social media industrialist-capitalist can negotiate a price based on the access to the social media consumer-worker's attention and sell promotion space to marketers. The exchange value of the commodity of information share also derives from the subjective perception of the value of amalgamated data. Exchanged information can be amalgamated by the social media industrialist-capitalist and traded to other market actors. Exchange value is derived from integrating everything the worker is and does, so both in his creative potential and how he or she relates to others. Exchange value also stems from the exchange of the commodity of amalgamated information that enables an elite to nudge the general populace. The amalgam of information as a premium signals the average opinion and how the majority reacts to changing environments, which allows inferences about current trends and predictions how to react to market changes.

Underlying motives may be the humane desire for prestige and distinction on both sides – the industrialist-capitalist's and the consumer-worker's. From the industrialist-capitalist's perspective, monetary motives may play a role in the materialization of information; on the consumer-worker's side it is the prestige gained from likes, hence respect for an online identity created. The benefits of the superior class are the power to nudge, grounded on the people's striving for prestige and image boosts. Emotions may play a vital role in seducing people to share information about themselves and derive pleasure for sharing (Evans & Krueger, 2009; Horberg, Oveis & Keltner, 2011; Lerner, Small & Loewenstein, 2004). Social norms and herding behavior may be additional information sharing drivers (Paluck, 2009). The realization of prestige stems from creating a favorable image of oneself online, which signs up the workers in a psychological quasi-contract to provide more and more information online and in a self-expanding value. Prestige is also gained in the materialization of information as asset by the capitalist-industrialist, who reaps the surplus value of the commodification of the self of the consumer-worker (Marx, 1867/1995). The social media capitalist-industrialist therefore increases their capital based on the social media consumer-worker's innocent private information share. The social media capitalist-industrialist also accumulated nudgital, the power to nudge.

This information sharing opens a gate for the social media provider to reap surplus value from the information gathered on social platforms and to nudge the social media consumer-producers or resell their amalgamated information to nudgers. Crucial to the idea of exploitation is the wealth or power of information in the digital age. Surplus of information can be used to nudge in markets and by the force of governments. To acknowledge social media consumers as producers lead to the conclusion of them being underpaid workers in a direct wage labor exploitation. Surplus gravitates towards the social media owning class. Information becomes a commodity and commodification a social product by the nature of communication. Commodification of information occurs through the trade of information about the consumer-worker and by gaining access to nudge consumer-workers on social platforms. The transformation of a labor-product into a commodity occurs if information is used for marketing or governance purposes to nudge people. In the contemporary big data society, the nudged social media user therefore end up in a situation where they are unwaged laborers, providing the content of entertainment within social media, whereas the social media industrialist-capitalist, who only offers the information brokerage platform, reaps benefits from the amalgamated information shared. Not just labor power but the whole person becomes the exchange value, so one could even define the consumer-worker as utility-slave.

The technological complexity of digital media indicates how interrelated social, use and exchange value creation are. All commodities are social products of labor, created and exchanged by a community, with each commodity producer contributing his or her time to the societal division of labor. Use value is derived by the consumer-worker being socially related insofar as private consumption becomes collective. The use value thereby becomes the object of satisfaction of the human need for social care and want for social interaction. The use value becomes modified by the modern relations of production in the social media space as the consumer-worker intervenes to modify information. What the consumer-worker says on social media, for the sake of communication and expression but also in search for social feedback, is confined by the social media industrialist-capitalist, who transforms the use value into exchange value by materializing the voluntary information share by summing it up and presenting it to nudgers, who then derive from the information marketability and nudgitability of the consumer-workers. All information sharing has value, or labor value, the abstract labor time needed to produce it. The commodification of a good and service often involves a considerable practical accomplishment in trade. Exchange value manifests itself totally independent of use value. Exchange means the quantification of data, hence putting it into monetary units. In absolute terms, exchange value can be measured in the monetary prices social media industrialist-capitalists gain from selling advertisement space to nudging marketers but also to public and private actors who want to learn about consumer behavior in the digital market arena and influence consumers and the populace. The exchange value can also be quantified in the average consumption-labor hours of the consumers-workers. While in the practical sense, prices are usually referred to in labor hours, as units of account, there are hidden costs and risks that have to factored into the equation, such as, for instance, missing governmental oversight and taxing of exchange value.

Overall, there is a decisive social role difference between the new media capitalist-industrialist and the social media consumer-worker. The social media provider is an industrialist and social connection owner, who lends out a tool for people to connect and engage with. As the innovative entrepreneur who offers a new media tool, the industrialist also becomes the wholesale merchant in selling market space to advertisement and trading information of his customers or workers, who are actively and voluntarily engaging in media tools (Schumpeter, 1949). The social media consumers turn into workers, or even slaves if considering the missing direct monetary remuneration for their information share and since being engaged in the new media tool rather than selling their labor power for money in the market place holds opportunity costs of foregone labor. While selling their commodity labor power, the social media consumer-workers are also consumers of the new media tool laden information, which can be infiltrated with advertisement. The social media capitalist-industrialist not only reaps exchange value benefits through access to people's attention through selling advertisement space, but also grants means to nudge the consumers into purchasing acts or wink the populace for governance authorities (Marx, 1867/1995). The social media capitalist-industrialist thereby engages in conversion of surplus value through information sharing into profit as well as selling attention space access and private data of the consumer-workers.

When the new media consumer-workers' amalgam of provided information gets added up to big data sets, it can be used by capitalists and governance specialists. Over time the nudgital society emerges, as the nudging social media industrialist-capitalists form a Gestalt of several bits and pieces put together about the nudged social media consumer-producer-worker-slaves. Information gets systematically added up providing invaluable behavioral insights. Information in its raw form and in amalgamated consistency then gets channeled from the broad working body on social media into the hands of a restricted group or societal class. This circulation of information and the distribution into those who provide a medium of information exchange and those who exchange information that then forms a society in those who nudge and those who are nudged implying an inherent social class divide.

In the nature of exchange, nudgital becomes an abstract social power, a property claim to surplus value through information. Value can be expropriated through the exchange of information between the industrialist-capitalist and the nudgitalist. Exchange value has an inherent nature of implicit class division. Exchange value represents the nudgitalists' purchasing power expressed in his ability to gain labor time that is required for information sharing as a result of the labor done to produce it and the ability to engage in privacy infringements. The social media industrialist-capitalists implicitly commands labor to produce more of data through social nudging and tapping into humane needs to communicate and express themselves, whereby he or her use a reacting army of labor encouraging information share through social gratification in the form of likes and emoticons. The reacting army of labor is comprised of social media users, who degrade into hidden laborers that are not directly compensated for their information share and cheerleading others to do the same. The nudgital society's paradox is that information sharing in the social compound gets pitted against privacy protecting alienation.

The social relations of production in the social media domain and existing within economic exchange of big data are yet rather uncaptured. The social concept of information value therefore need to be highlighted in order to derive conclusions about the labor theory of social media exchange value. While social media appears to create a flat and more egalitarian society, and social hierarchies have indeed become flat in the availability to connect with different social strata around the world on an instant basis, a domination occurs in human society through the nudgers, who gain access to private information of social media users. Their amalgamation of data individuals' private information allows to predict trends but also to manipulate the consumers and populace. While for the consumer-worker information sharing seems no concern since it is with his/her preferred circles, the industrialist-capitalist gains an elevated position through the exchange value, leveraging him into a quasi-bourgeois class thanks to the voluntary, innocent information share of his or her workers.

Nudgers and nudged form different social classes. The nudgers are those who augmented a higher than average amount of information value in society, while simultaneously diminishing the privacy and economic value creation of the nudged. Decision making biases and heuristics come to play to create illusions in order to maximize economic value. The implicit governance system of the nudgital society continues to operate behind the backs of the nudgers and the nudged as the nudgers gain big data information over time and different media spaces.

The insights gained about the nudgital society, lead to the demand to rewrite economics. Standard neo-classical economic theories do not hold, when it comes to the nudgital society. In constant striving to increase his or her power, the social media capitalist-industrialist constantly seeks to accumulate power in the form of information about others in order to use this information to reap exchange value through selling the amalgam of the information to create nudges for capitalists and technocrats. Since the social media industrialist has no direct contract with social media consumer-producers, he or she cannot coerce or enforce work discipline rather than having to entertain the workforce. Social media capitalist-industrialists therefore constantly have a need to find novel ways to entertain their online entourage workforce to stay online in order to better amass information. The marginal utility of consumption rate is – contrary to neoclassical economic theory – increasing as the more time one spends on social media, the more pleasure is derivable as for making more connections and having a more complex network with more access to information of a wider variety of people. Contrary to the falling rate of profit concept prevailing in economic models (Shaikh, 2016), the rate of profit for the nudgital society therefore increases over time and with claiming nudging space. The rate of profit is rising with the more people being engaged in the network and the capitalist-industrialist's successful efforts to restlessly and insatiable accumulate information. The more people join a network, the more time they may spend on the social media tool and the more likely they are assumed to release information and voluntarily share information. There is no falling rate of profit as information value gains rise exponentially when considering the Gestalt the capitalist-industrialist can form. So contrary to classical economic market models, the rate of profit for the new media industrialist-capitalist is assumed to be rising with the more people engaging in his or her market tool. Yet there is a tendency of the rate of profit to fall if other social media contestants invent other social media tools that distract workers from their task of sharing information. The industrialist-capitalist is thereby in a constant battle with other social media providers for attention of customer-workers. Since the customer-workers are non-financially rewarded, their attention has to be drawn by the industrialist-capitalist, who only technically intervenes, not actively contributes information. The capitalist-industrialist is under constant pressure of the market needing to track the wants and needs of consumers and keeping them motivated to engage on social media and share information in order to collect information of individuals throughout all social strata of society. This process may not only be influenced by economic and technical factors but also socio-political and cultural ones, insofar as it involves property rights, claims to private resources and consumes time while being at risk to infringe upon quality and safety of use. In addition, negative market forces are fake news and alternative facts. Alternative facts can curb people's motivation to engage in social media and spend time on certain social networks.

The falling rate of profit in the nudgital world could also be falling if people start getting bored by social media and not upload information as they used to. This leads to a constant struggle for new social media tools and entertainment features where to derive novel utility or expanded utility from. Novel and newly designed systematic encouragements (e.g., the like button) and the development of technological capabilities of all kinds become an integral consequence for the circuit of information accumulation. The constant need to create surplus value and to protect oneself against forces that erode information sharing is alleviated by technological innovations. When innovation takes the form of a new product, the capitalist enjoy a monopolistic profit advantage, which yet may often be short-lived. Novel surplus may derive from activities on social media that bring unique novel pleasure or use values that yield a profit to their organizers in the institutional structure of the system and its technical apparatus. The state of the market determines the social media capitalist-industrialist's impetus. The social media capitalist-industrialist's productive activity is an ongoing process determined by attention people give to social market tools. The market reality is the conservation, transfer and addition of Gestalt of market data released from social media consumers' living labor and the subsequent sales of outputs for money units. The information release and sales of information is the socially determining factor in the nudgital economy. Price fluctuations may occur through differences in information collected.

The imposition of exclusivity of access to information holds social implications. The possibility of the industrialist-capitalist to use the information and the ability to produce a situation on social media that attracts consumer-workers at a cost to yield an adequate and predictable income or reap their foregone profit holds an implicit social stratification. The hidden possessor's elevated position in the amalgamation of information drives a class division and distinction of authority, which becomes visible in understanding the nudgitalist's actions. The capitalist social formation includes that the dominant class renews its social control through transforming information into money. Thereby the end goal of the capitalist-industrialist is to gain as much of the public's information in light of the end goal of accumulation of wealth. In reinventing newly designed information sharing tools and options, there is a systematic encouragement and development of technological capabilities of all kinds to share information and keep the information flow alive. Pleasure of the use value of information sharing yields to an inferior position as capital expands for the information shared and privacy gets infringed upon and people are being nudged. With the information gathered, consumer profiles can be obtained that help to nudge people into making decisions, may that be purchasing or voting choices. There is also the authority to gather information that may be used against civilians when entering nations at borders or in extending visas or when checking on their tax honesty. The domination of the nudgital society then lies insofar as there is a right to deny others access based on the interpretation of data that can be used to control the populace and may also be turned against them in democratic votes.

The augmentation of information leads to the manifestation of power of a dominant class of nudgers, who only entertain their workers for the final purpose to generate information that then gets transferred to use value in nudging into purchasing decision and civilian order. Social media is therefore a process that uses online tools to constitute different social classes in their dynamic existence. The owners of social media power are the momentary embodiment of the nudgital society, whereas the users of social media tools are carrying on their activity of production of nudgital information surplus value. Their property of information and privacy gets shared, which allows the amalgamation of information and possession of user profiles and customer and civilian tendencies of the social media capitalist-industrialist, who can then materialize the surplus value gained. Exploitation occurs in the private information materialization of the social media capitalist-industrialist. The social media consumer-worker's individual privacy is not respected as the relation between the nudger social media capitalist-industrialist and the nudged is one by hidden domination and exploitation, in which one party holds an amalgam of information about the other that is also gathered implicitly. The social media consumer-worker loses their right to privacy and has no access to the whole product of their labor. Certain economic hierarchies in the digital age thus form certain unfair social strata. An alienation of all classes of society emerges as a consequence, in which communication and information sharing holds novel unprecedented risks. Private property of private information gets turned into a collective big data that is only accessible by a refined group of people – a state that leads to an implicit social class division. The social media consumer-worker becomes poorer the more information is shared and the more wealth he or she produces for the social media capitalist-industrialist. The increasing value of information amalgamated proceeds in direct proportion with the loss of privacy property and the devaluation of human dignity. The laborer no longer owns his or her privacy as he or she enriches others with their products of labor, who benefit from their work. The labor force is thereby alienated through the underlying social division arising in the contrast between nudging and being nudged. The natural relations created by this implicit structure is the power that lies in the nudgital society. The nudgital society thereby implies a trade-off between privacy and pleasure derived from information sharing. Revealing the technicalities of the nudgital society and the implicit relation of domination and slavery naturally leads to an alienation of workers and the demand for protecting their right to privacy and protected free speech.

IMPLICATIONS OF THE NUDGITAL SOCIETY

The wider impetus of this article is to build a scientific foundation for the politics of modern social media use and reveal the law of motion of the modern nudgital society. The nudgital hierarchy unfolds based on the social media mode of production. The use value is thereby the utility derived from sharing and receiving information; the exchange value the social media industrialist-capitalist gains from access to information that can be computed into big data that allows deriving behavioral insights for markets and governance technocrats. The use value is thereby the utility of consuming social media, the want-satisfying power of a good in the classical political economy sense. The information released by the consuming workers becomes an exchange value in big data sold to marketers and technocrats to gain information about nudgebility of potential consumers and general populace (Kurz, 2016). The exchange value is retrieved from simple information circulation and the circulation of value as nudgital, the power to nudge.

The machinery of the social media industrialist-capitalist is the social media users' production as a self-acting automata and the consumer-worker gaining gratification through likes and delving into a phantasy world of the self. Information amalgamation can become an act of critical social consequence, which is capital-oriented towards making use of use value in the form of exchange value in the materialization of information. The nudgitalist exploitation begins when information gets turned against individuals. A Gestalt through the bits and pieces of the individually shared information creates an unfavorable condition in terms of consumer exploitation and in front of governmental authorities. People end up in a subordinate position of their information being turned against them within the digital society. Not only does the social media consumer-workers' dependence on communication media infringes on their privacy. Their social relations get exposed and they lose their privacy to those owners of the means of social media production. Information can also be used to nudge people into making choices, may that be consumer decision or may that be their political choices.

The nudgitalist exploitation also holds when technocrats use heuristics and nudges to create selfish outcomes or undermine democracy. Ethical abysses of the nudgital society open when the social media is used for public opinion building and public discourse restructuring. Social media not only allows to estimate target audience's preferences and societal trends but also imposes direct and indirect influence onto society by shaping the public opinion with real and alternative facts. Government officials' gaining information about the populace that can be used to interfere in the democratic voting process, for instance in regards to curbing voting behavior or misinformation leading people astray from their own will and wishes. The social intertwining of the media platform and the democratic act of voting has been outlined in recent votes that were accused to have been compromised by availability heuristic biases and fake news. Data can also be turned against the social media consumer-worker by governance technocrats for the sake of security and protection purposes, for instance, social media information can be linked together tax verification purposes.

Governments have been transformed under the impact of the digital revolution. Instant information flow, computational power and visualization techniques, sophisticated computer technologies and unprecedented analytical tools allow policy makers to interact with citizens more efficiently and make well-informed decisions based on personal data. New media technologies equip individuals with constant information flows about informal networks and personal data. Novel outreach channels have created innovative ways to participate in public decision making processes with a partially unknown societal impact at a larger scale, scope and faster pace than ever before. Big data analytics and the internet of things automate many public outreach activities and services in the 21st century. Not only do we benefit from the greatly increasing efficiency of information transfer, but there may also be potential costs and risks of ubiquitous surveillance and implicit persuasion means that may threaten democracy. The digital era governance and democracy features data-driven security in central and local governments through algorithmic surveillance. Open source data movements can become a governance regulation tool. In the sharing economy public opinion and participation in the democratic process has become dependent on data literacy. Research on the nudgital society holds key necessary information about capacity-building and knowledge sharing within government with respect for certain inalienable rights of privacy protection. The nudgital society's paradox that information sharing in the social compound gets pitted against privacy protecting alienation requires an ideological superstructure to sustain and tolerate hidden exploitation.

All these features are modern times phenomena as the technology and big data creating computational power is currently emerging. The transferability of the commodity of information itself, hence the big data amalgamation over time and space to store, package, preserve and transport information from one owner to another appears critical. The legal leeway to allow private information sharing implicitly leads to individuals losing their private ownership rights to the commodity of information upon release on social media and the right to trade information. The transferability of these private rights from one owner to another may infringe on privacy protection, human rights and humane dignity upholding mandates.

Not only pointing at the ethical downfalls of the nudgital society, also defining social media users as workers is of monumental significance to understand the construction of the nudgital society and bestow upon us social media consumer-workers labor rights. The technical relationship between the different economic actors are completely voluntary and based on trust (Puaschunder, 2016a, b). The creation of use value is outsourced to the community (e.g., in likes) and the share of information about the workers from the social media capitalist to the market or nudgitalists remains without a clear work contract and without protection of a labor union. The worker-employer relationship needs to be protected and a minimum wage should settle for the market value of the worker producing during the working day. Wages would be needed to maintain their labor power of the workers minus the costs of the production. Unpaid laborers should not only be compensated for their opportunity costs of time but should enjoy the workers' privilege of right to privacy, prevention of misuse of the information they share and have the right to access to accurate information but also protection from nudging in the establishment of the right to voluntary fail.

The nature of making profit from information in exchange value is questionable. Information exchange of the industrialist-capitalist is different than neoclassical goods and services trade insofar since for the capitalist-industrialist making money off privacy and the consumer-workers share of information without knowledge and/or control over the recipient of the amalgamated mass of privacy released. Workers are never indifferent to their use value and their inputs may also produce unfavorable outcomes for them. The exchange value will sell for an adequate profit and is legally permitted, yet it can destroy the reputation and standing as well as potentially the access of the individual to country entrance if considering the proposed social media information release mandate at border controls. Care must be taken for privacy infringement and the product of amalgamated big data and how useful it is for society.

By shedding light on these risks of the social media age and the implicit dynamism of capitalism forming around information, a social formation of social media workers' right can be heralded. Social media user-workers should be defined to hold inalienable rights to privacy and be forgotten (part 4.1), to be protected from data misuse of information they share (part 4.2), they should be granted the right to access of accurate information (part 4.3) and – in light of the nudgitalist audacity – the right to fail (part 4.4).

People's right to privacy and to be forgotten

The transformation of a use value into a social use value and into a commodity has technical, social and political preconditions. Information gets traded and ownership of privacy transferred in information sharing. Upon sharing information on social media, the consumer-worker bestows the social media capitalist-industrialist with access to previously private information. The social media capitalists then transforms the information into use value by offering and selling the bundled information to nudgitalists, who then can draw inferences about certain consumer group's preferences and guide their choices.

Overall, the nudgital society leads to a dangerous infringement upon the independence of individuals in their freedom of choice and a social stratification into those who have access to the amalgamated information of social media consumer-workers. There is a trade-off between communication and privacy in an implicit contract of the use of personal data. Power is exercised through the accumulation of information, including the quality of insatiability of social media consumer-workers to constantly upload information and the social media capitalist-industrialist reaping profits from selling it.

Social media thereby reveals to hold a sticky memory that allows storage of information in the international arena eternally. Privacy and information share regulations depend on national governments. For instance, in the commodification of privacy, the EU is much more beneficial to consumers than that of the US. Data protection and commercial privacy are considered as fundamental human rights to be safeguarded in Europe. In contrast, the US approach towards commercial privacy focuses on only protection the economic interests of consumers. Current privacy regulations are considered as not sufficient in targeting actions that cause non-economic and other kinds of harm to consumers.

Privacy and information sharing guidelines appear to be culturally-dependent phenomena. Information about privacy boundary conditions can be obtained from the transatlantic dialog between the US and Europe on privacy protection. While in Europe health care data is public, in Canada, there is a public interest to make the data more public. The EU's privacy approach is based on Article 7 and 8 of the Charter of the Fundamental Rights of the EU, which grants individuals rights to protection, access and request of data concerning him or herself. European privacy is oriented around consumer consent. The 2016 EU General Data Protection Regulation (GDPR) ruled the right to be forgotten under certain circumstances. Consumer consent and dealing with incomplete, outdated and irrelevant information is legally regulated. GDPR establishes regulatory fines for non-complying companies applicable to foreign companies whose data processing actions are related to 'good and services' that they provide to data subjects in the EU, so also including US companies operating in the virtual space accessible by European citizens. The EU privacy approach offers member states flexibility in data management for national security and other exceptional circumstances but also protects civilians from common potential circumstances for data abuse; while there are standardized data management policy procedures regardless of a companies' country-of-origin or operational locations. The EU's privacy approach has higher regulatory costs, is not specified by sectors and the right to be forgotten still needs enforcement validity.

The US approach to privacy is sector specific. Commercial privacy is pitted against economic interests and neither seen as civil liberty nor as constitutional right. US privacy is regulated by the Federal Communications Commission (FCC) and the Federal Trade Commission (FTC). Overall in the US, the general definitions of unfair and deceptive give the FTC a wider scope for monitoring and restricting corporate privacy infringements. The FTC has a wide variety of tools for data protection, yet the responsibility is split between the FTC and the FCC, which increases bureaucratic and regulatory costs and limits industry oversight.

So while the EU framework treats commercial privacy as a basic human right leading to a more extensive protection of individual's privacy including data collection, use and share, the EU framework is also non-sectoral and allows sovereign nation states to overrule common data management policies for the sake of national security and protection. The US framework lacks a centralized privacy regulation approach, yet is sector but split regarding oversight in the domains of the FCC and FTC.

People's right to prevent misuse of information they share

By US standards, social media is required by the FTC to ask users for permission if it wants to alter its privacy practices. Under Section 5 of the FTC Act that states that (1) unfair practices are causes or is likely to cause substantial injury to consumers or cannot reasonably be avoided by consumers; and (2) deceptive practices are practices that likely are misleading or actually misleading the consumer.

In August 2016 decision of WhatsApp to sharing more user data, especially user phone numbers – with Facebook in order to track customer-workers' use metrics and targeted user advertising. This decision faced a huge backlash in the EU, where data sharing was ordered to be halted and Germany deemed its practices as illegal. In the US the Federal Trade Commission

(FTC) began reviewing joint complaints from consumer privacy groups. The recent WhatsApp data sharing is a possible violation of this requirement since it only allowed consumers to opt out of most of the data sharing while lacking clarity and specificity. WhatsApp's restrictive opt out option and incomplete data sharing restrictions were argued to be perceived as unfair and deceptive (Tse, in speech, March 25).

People's right to access to accurate information

In the nudgital society, profits appear in the circuit of information and take on different forms in the new media age. The possibility of trading information and reaping benefits from information sharing of others determines the unequal position of people in society. The possession of knowledge stems from the surplus derived from the activity of production, hence the information share of social media consumer-producers. This confrontation of labor and consumption is not apparent in the modern marketplace. The class division remains quite invisible in the implicit workings of the system.

The nudgitalist act becomes problematic when being coupled with infiltration with fake news and alternative facts that curb democratic acts, e.g. manipulating voting behavior. Ethical questions arise if it there is a transparency about the capitalist's share of information and a fair social value benefits distribution among the capitalist and the worker. In addition, under the cloak of security and protection, privacy infringements by sharing information with the nudgitalist is questionable. By outlining these market procedures, fairness in the distribution of gains should be accomplished and privacy infringing information sharing limited or at least guided by the legal oversight. Access to information about the storage, preservation, packaging and transportation of data is non-existent, demanding for more information about behind-the-scenes' social media conduct. Transforming private information from use value to exchange value is an undisclosed and therefore potentially problem-fraught process that holds implicit inequality within itself. From a societal standpoint, also the missing wealth production in the social media economy appears striking. Thereby the dangers of information release and transfer and the hidden exchange value accrued on the side of the media innovator is left unspoken. The importance of shedding light on such, though, is blatant as for stripping the populace from inalienable rights of privacy while reaping benefits at the expense of their susceptibility. Nudges in combination with misinformation and power abuse in the shadow of subliminal manipulation can strip the populace from democratic rights to choose and voluntary fail.

People's right to choose and fail

In the personal information sharing age and nudgital society, attention must be given to privacy and human dignity. The nudgital society opens a gate to gain information about consumer choices and voting preferences. The uneven distribution of key information about people's choices opens a gate to tricking people into choices. The so-called nudging attempt though raises ethical questions about human dignity and the audacity of some to know better what is better for society as a whole. Because governance is a historical process, no one person can control or direct it, thereby creating a global complex of governance connections that precedes the individual administration. Structural contradictions describe the class struggle between the nudged in opposition to the nudgers in the nudgital society. Since societal actors who involuntarily are nudged are separated from an active reflection process when being nudged, the moral weight is placed on the nudger. Though democratically elected and put into charge, the nudgers checks-and-balances of power seem concentrated and under disguise through the middle man of social media capitalist-industrialists who collect information.

Rather focusing on how to trick people into involuntary choices, the revelations should guide us to demand to educate people on a broad scale about their fallibility in choice behavior.

In a self-enlightened society, people have a right to voluntary fail. Nudging implies a loss of degrees of freedom and disrespect of human dignity, hence the nudgital society will lead to structural contradictions. Their rational thinking and voluntary engagement in governmentally-enforced action becomes divorced from rational reflection. No one entity should decide to control or direct other's choices, thereby creating a global complex of social connections among the governed for the sake of efficiency for the common good. The economic formation of human decision making in society should never precede the human voluntary decision.

There is an inherent inequality of social positions, manifested primarily in the respective capacities of reaping benefit from amalgamated information, which leads to a disparity of social position. The distribution of power leads to a natural order of human activity, in which the nudgers are in charge of nudging the populace. Moral value is separated from economic value and hence placing the fate of the populace into the arms of the behavioral economists raises problems of lack of oversight and concentration of objective economic value rule in the nudgital society.

Overall, with the communication on the nudgital society just having started, it remains on us to redesign the apparatus of production in ways that make impossible the infringement on private information through the natural tendency to share information, care about others and express oneself. Governance crises are rooted in the contradictory character of the value creation through big data. The formation of value is a complex determination and we still need more research to understand the deep structures of market behavior in the digital age.

DISCUSSION AND FUTURE PROSPECTS

The article presented a novel idea in connecting behavioral economics with political economy. Behavioral insights are critiqued insofar as the contemporary behavioral economics approach and extension of behavioral economics application to public sector problems are shown to hold an implicit underlying social stratification. Democratically empowered nudgers decide without democratic consent whom to nudge, how to nudge and what for to nudge. The potential impact of the paper for public concerns is to raise a democratic feasibility check of nudging being in line with constitutional values and informed consent demands. In this challenge of the mainstream behavioral economics also lies a direct contribution to scientific knowledge spearheading social dominance theory. The marketability of results demands for oversight of the nudgers and well-informed decision making in an inclusive society. Future research directions and policy recommendations are given that aim at informing scientific audience, helping public policy specialists and empowering the general populace about behavioral economics and their right to choose and fail. Challenging concerns about libertarian paternalism lead to the quest for people having the right to fail. In sum, the current article serves as preliminary first introduction of a behavioral economics critique and application of political economy and social dominance theory in the behavioral insights domain for the sake of protection of people's right to fail. The aim is to provide insightful information on how society can make rational decisions in order to maximize welfare without losses of privacy and unjust reaping of undisclosed workers.

In the digital age, capitalism has been built into free-social-media cyber culture. The forces of production on social media create a sociotechnical apparatus open to change under the dynamics of capitalism. Yet with economics being primarily focused on prices in markets, the social process of exchange of information has been left with little attention as being perceived as a naturally given fact.

Future studies should draw attention to these implicit dependency commercial relations and how they shape the sphere of personal time use and consumption as well as societal standing. The laws of motion of information are believed to differ from the laws of requirements of capital accumulation, yet have to be studied further to fully explain. To date, no economic model exists that captures the implicit utility of voluntary information share for the sake of engaging on social media. The use value in such differs from the standard neoclassical notion of utility as not subjectively determined by the buyer of a good. In addition, the consumer of social media is not aware of having become a worker in an implicit contract of joy derived from the interaction on the social media tool and sacrificing his or her productive labor time on the social media virtual market space. The changed social media hierarchy demands for a resolution in studying these entirely new modes of production. Social media identities differing from our real identities or anonymous social media use are proposed alternatives. In this novel insight we need to start estimating the value utility function of the nudged to release information to nudgers and relate it to the economic surplus the nudgers can reap from putting information together and market it to governance professionals.

In the next step, the quantitative relationship between labor hours worked and the real prices charged for information should be expressed in probabilistic terms. In order to transform the value of information sharing into a price of a commodity, research needs to unravel the process whereby people give up some of their privacy for the sake of information sharing and how the products move into markets and are shared with nudgitalists. All these insights will aid to measure a hypothetical price according to pre-existing product-values, which are socially established prior to exchange. The transformation of commodity values into prices of production within nudgitalism and the creation of the surplus value or gross profit component of information are future research areas. Currently we lack understanding how an output is produced, what utility is derived from social media that leads consumer-workers to give up privacy and how exactly value is realized upon data amalgamation and sale in markets to nudgitalists. Social media advancement may be strongly affected by the sales income that social media producers get from selling data.

In the next research steps, a stringent hypotheses testing of the presented problem is recommended. A multi-faceted research plan to study the presented social deficiencies in a well-informed behavioral as well as heterodox way is advised. In such an approach, the article provides the first heterodox analysis of behavioral economics in the public sector. Future research therefore aims at gaining an understanding of behavioral approaches to decision making and develop critical analytical insights to spearhead behavioral economics applied in the public sector domain. An introduction to the classic but also heterodox behavioral economics literature will aid gaining a basic understanding but also critical reflection of contemporary behavioral insights attempts to tackle the most pressing societal concerns.

Future research projects featuring a multi-methodological approach will help gain invaluable information about the interaction of economic market with the real-world economy with direct implications for policy makers alongside advancing an upcoming scientific field. Following empirical investigations should employ a critical survey of the intersection of analytic and behavioral perspectives to decision making in the public sector. Literature discussion featuring a critical analysis how to improve the behavioral economics approach to tackle critical public sector challenges should be coupled with research training and enhancement of scientific skills. Research should be directed towards a critical analysis of the application of behavioral economics on public concerns. In the behavioral economics domain, both approaches, studying the negative implications of imperfect behavior on judgment and decision making of public servants but also finding ways how to train public servants making wiser decisions in leading citizens making pro-social decisions should be explored. Interdisciplinary viewpoints and multi-method research approaches should be covered in the heterodox economics readings but also in a variety of independent individual research projects. Research support and guidance should be targeted at nurturing interdisciplinary research interests in the fields of behavioral economics and public affairs.

More concretely, future studies should define the value that data has to individuals and data sovereignty in the international context. When people share information, they should be informed to consider what the benefit and value from sharing is for them and what the benefit for social media industrialists-capitalists is. The sovereignty of data and the human dignity of privacy should become debated as virtual virtue in the 21st century. Individuals should be informed that sharing data is a personal security risk, if considered to be asked for social media information upon entry of a country.

Future studies should describe what companies and institutions constitute the complex system help establishing the nudgital society and the influence that social media has. Politicians may use various channels and instruments to manipulate the populace with targeted communication. The implicit underlying social structure of the nudgital society based on a complicated information gathering machinery should become subject to scrutiny and how, in particular, the nudgital class division is supported by a comprehensive social network data processing method. How social media advertising space can be used to specialize on targeted propaganda and misleading information to nudge the populace in an unfavorable way should be unraveled.

In the recent US election the profit and value of detailed market information has been found to have gained unprecedented impetus. Future research should also draw a line between the results of the 2016 US presidential election, and the study of heuristics to elucidate that heuristics played a key role in Trump's election as they made people less likely to vote logically. This would be key as it would help explain how people chose to vote, and why they do not always make the most logical choice when voting. This line of research could help to more accurately promote future elections' candidates, how to better predict election outcomes and how to improve democracy (Channel, 2017).

In addition, nudging through means of visual merchandising, marketing and advertising should be captured in order to uphold ethical standards in social media. Nudging's role in selling products, maximizing profits but also creating political trends should be uncovered. While there is knowledge on the visual merchandising in stores and window displays, little appears to be known how online appearances can nudge people into making certain choices. In particular, the familiarity heuristic, anchoring and the availability heuristic may play a role in implicitly guide people's choices and discreetly persuade consumers and the populace. Not to mention advancements of online shopping integrity and e-commerce ethics, the prospective insights gained will aid uphold moral standards in economic market places and hopefully improve democratic outcomes of voting choices.

Future research should also investigate how search engines can be manipulated to make favorable sources more relevant and how artificial intelligence and social networks can become dangerous data manipulation means. The role of data processing companies may be studied in relation to the idea of data monopoly advantages – hence situations in which data processing companies may utilize data flows for their own purposes to support sponsored causes or their own ideals. Due to the specific time period of the digital age not extrapolations to past time periods is possible but the results appear useful in determining future behaviors.

The current research in this area lacks empirical evidence, demanding for further investigations on how nudges can directly impact individual's choices and new media can become a governance manipulation tool. What social instruments are employed on social media and what prospects data processing has in the light of privacy infringement lawsuits should be uncovered. How social media is utilized to create more favorable social personas for political candidates should be explored. How internet online presences allow to gain as much attraction as possible for the presence of political candidates is another question of concern. All these endeavors will help outlining the existence of social media's influence in governance and data processing to aid political campaigning in order to derive inferences about democracy and political ethicality in the digital age. Another area of concern is how selective representations influence the voting population and what institutions and online providers are enabling repetitiveness and selectivity. How gathered individual information is used to parse data to manipulate social internet behavior and subsequent action is another topic to be investigated. Future research goals will include determining what this means for the future political landscape and how internet users should react to political appearances online. Consumer education should target at educating social media users about their rights and responsibilities on how to guard their own and other's privacy.

The department of Social Psychology at Tilburg University is recruiting two PhD students for two projects on the Social Psychology of Big Data. Candidates are welcome to apply for both projects.

Moral Psychology of Big Data
The first is interested in the moral psychology of big data. The last decade has seen a swift rise in the availability of data about our everyday habits, choices, and preferences. This quick rise has outpaced understanding of what uses people find more or less appropriate for the data. Books have been published on the ethics of big data and potential pitfalls (e.g., O'Neil, 2016), but ironically this question hasn't been tackled with data. The goal of this PhD project is to use theories and tools of moral psychology to understand how people think about the moral trade-offs involved in big data, morally motivated reasoning about the uses of big data, and people's responses when big data goes wrong. The results will give insight into moral reasoning about a typically amoral topic (i.e., data) and provide both users and creators of big data methods the information necessary to deploy big data in way that does not violate the ethical sensibilities of the public. This project will be supervised by Dr. Mark Brandt, Dr. Christoph Kogler, and Professor Ilja van Beest. A more detailed project description is available upon request from Dr. Mark Brandt (m.j.brandt@tilburguniversity.edu).

Social Consequences of Big Data Analytics
The second is interested in how people think about predictive models based on big data analytics. Models based on big data analytics have had far-reaching effects on public policy. Governments use predictive models to allocate scarce resources and inform policy decisions (Hemerly, 2013), and organizations use them in employment and promotion decisions. Big data models make good predictions, on average, but they may also systematically disadvantage specific subpopulations (O'Neil, 2016). These concerns raise questions about how organizations and policy-makers will implement big data analytics, and how the public will

react to decisions based on these models. The proposed project will investigate the role of human psychology in big data analytics: First, we will investigate when policy makers prefer to rely on big data analytics (versus human judgments). Second, we will consider how people react to negative outcomes based on these data-driven models. Finally, we will ask how policy makers can use nudges to facilitate trust in the use of data-driven models. This project will be supervised by Dr. Tony Evans and Professor Marcel Zeelenberg. A more detailed project description is available upon request from Dr. Tony Evans (a.m.evans@tilburguniversity.edu).

How social media tools nudge people to not give everything at once but put it together in a novel way that it creates surplus, should be analyzed. In small bits and pieces individuals give up their privacy tranche be tranche. Small amounts of time are spent time for time. People, especially young people, may have a miscalibration about the value of information released about them. Based on hyperbolic discounting myopia, they may underestimate the total future consequences of their share of privacy.

Future studies should also look into the relationship between individual's political ideologies and how they use and interact on social media, especially with a focus on the concept of fake news and alternative facts. Where do these trends come from and who is more susceptible to these negative impacts of the digital society? Has social media become a tool to further polarize political camps, is needed to be asked. In addition, innovative means should be found to restore trust in media information and overcome obstacles such as the availability heuristic leading to disproportionate competitive advantages of media controlling parties. Information should be gathered how we choose what media to watch and if political views play a role in media selection and retention. Does distrust in the media further political polarization and partisanship, needs to be clarified.

The preliminary results may be generalized for other user-generated web contents such as blogs, wikis, discussion forums, posts, chats, tweets, podcastings, pins, digital images, videos, audio files, advertisements but also search engine data gathered or electronic devices (e.g., wearable technologies, mobile devices, Internet of Things). Certain features of the nudgital society may also hold for tracking data, including GPS, geolocation data, traffic and other transport sensor data and CCTV images or even satellite and aerial imagery. All preliminary results should be taken into consideration for future studies in different countries to examine other cultural influences and their effects on social class and heuristics.

Promoting governance through algorism offers novel contributions to the broader data science and policy discussion (Roberts, 2010). Future studies should also be concerned with data governance and collection as well as data storage and curation in the access and distribution of online databases and data streams of instant communication. The human decision making and behavior of data sharing in regards to ownership should become subject to scrutiny in psychology. Ownership in the wake of voluntary personal information sharing and data provenance and expiration in the private and public sectors has to be legally justified (Donahue & Zeckhauser, 2011). In the future, institutional forms and regulatory tools for data governance should be legally clarified. Open, commercial, personal and proprietary sources of information that gets amalgamated for administrative purposes should be studied and their role in shaping the democracy. In the future we also need a clearer understanding of the human interaction with data and their social networks and clustering for communication results. The guarantee of safety of the information and the guarantee of the replacement or service, should a social media fail its function to uphold privacy law as intended, is another area of blatant future research demand. Novel qualitative and quantitative mixed methods featuring secondary data analysis, web mining and predictive models should be tested for holding for the outlined features of the new economy alongside advancing randomized controlled trials, sentiment analysis and smart contract technologies. Ethical considerations of machine learning and biologically inspired models should be considered in theory and practice. Mobile applications of user communities should be scrutinized.

As for consumer-worker conditions, unionization of the social media workers could help uphold legal rights and ethical imperatives of privacy, security and personal data protection. Data and algorithms should be studied by legal experts on licensing and ownership in the use of personal and proprietary data. Transparency, accountability and participation in data processing should also become freed from social discrimination. Fairness-awareness programs in data mining and machine learning coupled with privacy-enhancing technologies should be introduced in security studies of the public sector. Public rights of free speech online in the dialogue based on trust should be emphasized in future educational programs. Policy implications of the presented ideas range from security to human rights and law to civic empowerment. Citizen empowerment should feature community efforts to protect data and information sharing to be free of ethical downfalls. Social media use education should be ingrained in standard curricula and children should be raised with an honest awareness of their act of engagement on social media in the nudgital society of the digital century

References

Akerlof, G. A. (2009). Animal spirits: How human psychology drives the economy, and why it matters for global capitalism. Princeton, NJ: Princeton University Press.

Bazerman, M. H. & Tenbrunsel, A. E. (2011). Blind spots: Why we fail to do what's right and what to do about it. Princeton: Princeton University Press.

Bowles, S., Edwards, R. & Roosevelt, F. (2005). Understanding capitalism: Competition, command, and change. Oxford: Oxford University Press.

Camerer, C. & Loewenstein, G. (2004). Advances in behavioral economics. New York: Russell Sage.

Camerer, C., Issacharoff, S., Loewenstein, G., O'Donoghue, T. & Rabin, M. (2003). Regulation for conservatives: Behavioral economics and the case for „Asymmetric Paternalism". University of Pennsylvania Law Review, 151, 3, 1211-1254.

Cartwright, E. (2011). Behavioral economics. London: Routledge.

Centeno, M. A., Nag, M., Patterson, T. S., Shaver, A. & Windawi, J. A. (2015). The emergence of global systemic risk. Annual Review of Sociology, 41, 1-21.

Channel, J. (2017). The Trump effect: Heuristics and electability. Unpublished working paper. The New School: Eugene Lang College and Department of Economics.

deRooij, E. A., Green, D. P. & Gerber, A. S. (2009). Field experiments on political behavior and collective action. Annual Review of Political Science, 12, 389-395.

Donahue, J. D. & Zeckhauser, R. J. (2011). Collaborative governance: Private roles for public goals in turbulent times. Princeton: Princeton University Press.Camerer, C. & Loewenstein, G. (2004). Advances in behavioral economics. New York: Russell Sage.

Evans, A. M. & Krueger, J. I. (2009). The psychology and economics of trust. Social and Personality Psychology Compass, 3, 6, 1003-1017.

Gigerenzer, G. (2014). Risk savvy: How to make good decisions. Chapter 1: Are people stupid?. New York: Viking.

Gigerenzer, G. (2016). Towards a rational theory of heuristics. In R. Frantz & L. Marsh (Eds.), Minds, models and milieux: Commemorating the centennial of the birth of Herbert Simon. Basingstoke, UK: Palgrave Macmillan.

Heilbroner, R. (1988). Behind the veil of economics: Essays in the worldly philosophy. New York: Norton.

Heilbroner, R. (1999). The worldly philosopher. Chapter 8: The savage society of Thorstein Veblen. New York: Simon & Schuster.

Horberg, E. J., Oveis, C., & Keltner, D. (2011). Emotions as moral amplifiers: An appraisal tendency approach to the influences of distinct emotions upon moral judgments. Emotion Review, 3, 237-244.

Kahneman, D. (2003). Maps of bounded rationality: Psychology of behavioral economics. American Economic Review, 93, 5, 1449-1475.

Kahneman, D. (2011). Thinking, fast and slow. New York: Penguin Book.

Kahneman, D. & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. Econometrica, 47, 2, 263-291.

Kahneman, D. & Thaler, R. (1991). Economic analysis and the psychology of utility: Applications to compensation policy. American Economic Review, 81, 341-346.

Kahneman, D. & Tversky, A. (2000). Choices, values, and frames. Cambridge, MA: Cambridge University Press.

Kurz, H.D. (2016). Zur Politischen Ökonomie des homo mercans: Adam Smith über Märkte. In: Hans-Christoph Schmidt am Busch, Die Philosophie des Marktes: The Philosophy of the Market, pp. 23-48. Hamburg: Felix Meiner.

Lerner, J. S., Small, D. A. & Loewenstein, G. (2004). Heart strings and purse strings: Carryover effects of emotions on economic transactions. Psychological Science, 15, 5, 337-341.

Marglin, S. (1974). What do bosses do? The origins and functions of hierarchy in capitalist production. Review of Radical Political Economics, 6, 60-112.

Marx, K. (1867/1995). Capital: A critique of political economy. Moscow: Progress.

Minsky, H. P. (1977). Banking and a fragile financial environment. The Journal of Portfolio Management, 3, 4, 16-22.

Moscovici, S. (1988). Notes towards a description of social representations. Journal of European Social Psychology, 18, 3, 211-250.

Paluck, E. L. (2009). What's in a norm? Sources and processes of norm change. Journal of Personality and Social Psychology, 96, 594-600.

Puaschunder, J.M. (2010). On corporate and financial social responsibility. Unpublished Doctoral Thesis. University of Vienna, Faculty of Psychology.

Puaschunder, J. M. (2015). On the social representations of intergenerational equity. Oxford Journal of Finance and Risk Perspectives, 4, 4, 78-99.

Puaschunder, J. M. (2016a). Socially Responsible Investment as emergent risk prevention and means to imbue trust in the post-2008/2009 world financial crisis economy. In: O. Lehner (Ed.), Routledge Handbook of Social and Sustainable Finance, pp. 222-238, London: Taylor & Francis.

Puaschunder, J. M. (2016b). Trust and reciprocity drive social common goods allocation norms. Proceedings of the Cambridge Business and Economics Conference 2015; Academy of Management Annual Meeting Proceedings.

Roberts, A. S. (2010). The logic of discipline: Global capitalism and the architecture of government. New York: Oxford University Press.

Schumpeter, J. A. (1949). Economic theory and entrepreneurial history. Cambridge, MA: Harvard University Press.

Shaikh, A. (2016). Capitalism: Competition, conflict, crises. Oxford: Oxford University Press.

Sidanius, J. & Pratto, F. (1999). Social dominance: An intergroup theory of social hierarchy and oppression. New York: Cambridge University Press.

Sen, A. (1977). Rational fools: A critique of the behavioral foundations of economic theory. Philosophy and Public Affairs, 6, 4, 317-344.

Simon, H. A. & Bartel, R. D. (1986). The failure of armchair economics. Challenge, 29, 5, 18-25.

Tajfel, H. & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin & S. Worchel (Eds.), The Social Psychology of Intergroup Relations. Monterey, CA: Brooks-Cole.

Thaler, R. H. & Sunstein, C. R. (2008). Nudge. Improving decisions about health, wealth, and happiness. New Haven: Yale University Press.

Tversky, A. & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. Science, 185, 4157, 1124-1131.

Wagner W. & Hayes, N. (2005). Everyday discourse and common-sense: The theory of social representation. New

York: Palgrave Macmillan.

Wagner W., Lorenzi-Cioldi, F., Mankova, I. & Rose, D. (1999). Theory and method of social representations. Asian Journal of Social Psychology, 2, 1, 95-125.

World Development Report (2015). Mind, society and behavior. Chapter 1 Overview: Human decision making and development policy.

Archives of Business Research – Vol.5, No.9
Publication Date: Sep. 25, 2017
DOI: 10.14738/abr.59.3639.
Patrocínio, R. F., Figueiredo, R., & Souza, J. L. A. (2017). A Diletto and his Storytellig Strategy. *Archives of Business Research, 5(9),* 77-92.

SOCIETY FOR SCIENCE AND EDUCATION

A Diletto and his Storytellig Strategy

Rachel Farias do Patrocínio

Rafael Figueiredo

Juliana Lopes de Almeida Souza

ABSTRACT

The strategy of involving consumers and prospects through tales or stories in advertising, known as storytelling, has been widely used by organizations and well accepted by the general public. One of the companies that bet on this format was the brazillian ice cream and popsicle maker, the Diletto brand. However, the strategy of storytelling used by the organization had a negative repercussion, because the story told was not exactly the real story about the beginning of the company. Thus, this article intends to identify the true reasons that made Diletto's strategy detrimental to the brand. To that end, the paper tackled how a non-assertive storytelling strategy can compromise the organization's image. The research identified, through data collection research and the theoretical basis of authors who are specialists in the subject, the factors that led to the failure of the strategy and why the negative repercussion involving the brand, after the true story became public knowledge.

Keywords: Storytelling; Branding; Diletto.

INTRODUCTION

As we can see in media planning, advertising uses a variety of strategies to capture the public's attention and promote products and brands. One of the strategies used is storytelling, which consists of telling stories. Several brands have already used this feature in their way of communicating, but not all have obtained a satisfactory result. The present work uses as an object of study the brazillian brand of premium ice creams and popsicles Diletto, one of the companies that uses storytelling as a communication strategy in the world of advertising. The organization is of Brazilian origin and was founded in 2008, achieving a turnover of approximately 13 million dollars each year (LEAL, 2014).

The company was chosen to be the object of this study because of the history of the brand presented to the public, which was untrue, even though it was present on the company's website and packaging of the products until the year 2014. According to the narrative, the Diletto company began with Mr. Vittorio Scabin, an Italian who was dedicated to a craftwork production of popsicle, with mixture of fresh fruits and snow. With the arrival of the Second War, Mr. Vittorio took refuge in Brazil. Then, almost a century later, his grandchildren continued his work with the same passion, perfectionism and dedication of the grandfather. Thus, the ingredients are carefully chosen by them, such as the pistachio coming from Sicily and the raspberries harvested in Patagonia (Annex 1). However, as mentioned above, the story told by the company is not true. It was created as a marketing strategy to promote the brand and add value to its products. With this, some consumers, after reading a report of a prestigious business publication in Brazil, Exame magazine, written by Ana Luiza Leal in 2014, found that the story was not true, felt cheated and filed a complaint in CONAR (Brazilian legislation agency for the advertising business). For its part, the regulatory body recommended, in representation No. 263/14, that the mark altered the history present on the packaging and on the website, including the withdrawal of the citations from Mr. Vittorio and his relation with the manufacture of the Diletto ice cream. Thus, this paper aims to identify the points that led to the failure of the strategy and the negative impacts on the Diletto brand. To guide the study carried out in this article, it was firstly defined the theme of the work: communication strategies using the technique of storytelling and the impact on the credibility of the company.

The justification for choosing this theme is the fact that storytelling is constantly being used by advertising agencies and professionals as a means of capturing the public's attention and engendering more engagement with the brand. However, using this strategy inefficiently can be disastrous and have negative impact on organizations. Thus, the present work is a case study about the Diletto brand and the consequence of the strategy used to promote its products, and the main research problem is to identify why, among so many advertising messages that use stories, Diletto´s Was harmful to its brand? To answer the question, it was defined as the general goal of the work to address how the storytelling conducted by Diletto, in a non-assertive way, undermined the brand's brand equity. Also, two specific objectives were defined, the first one being to identify the main factors that led to the failure of Diletto's communication strategy using storytellig and the second to show how Diletto's storytelling strategy negatively impacted the brand.

Branding: the value for a brand

According to Pinho (1996), the American Marketing Association (AMA) definitions committee defines a brand as a name, term, sign, symbol or design, or a combination of these items, in order to identify goods or services of a seller or group and differentiate them from the competition. In this way, we perceive that a brand is defined by a set of visual aspects that label what we intend to deliver to the consumer. However, it is not just these elements that represent the true strength of a brand. It may be responsible for providing a host of consumer experiences by arousing good and bad feelings about it. With this, the public that relates to the brand starts to base its decision of consumption on these sensations. The consumer will then be willing to pay more for a particular product and defend the company in any situation, or will be disgusted with it, avoiding to acquire any product / service connected with it and inducing other people to have the same behavior. Thus, we see that there is a perception of the value of the brand by the consumer.

The brand represents a true value system, relatively simple in many cases and highly complex in others, capable of defining - and even magnifying considerably - the value limits of each product, service, company, institution or even, person. In conclusion, it can be said that the brand is the synthesis of the experience of value lived by the consumers in relation to each of the numerous products, services, companies, institutions or even people with whom they relate (Sampaio, 2002, p. 25).

We can see that consumers relate to brands through their experiences with them. But the stakeholders of a brand are not only composed of the public that purchases its products or services. There is also the relationship that a brand creates with other companies and institutions, competitors or not. This relationship is also driven by feelings and experiences, however, brands can also add financial value to organizations. The more a brand is viewed and perceived positively by the market, the greater the chances of being a reference in a certain subject, product or service and, with that, increase its billing. After all, "the brand is, for organizations, the synthesis of the market-value value of its products and services, as well as of the companies and institutions themselves, and even of people as products" (SAMPAIO, 2002, p.26). Thus, we can perceive the brand as one of the main assets of a company, being fundamental for the organization to watch over it and to use strategies so that it is increasingly perceived by the market. For, as defined by Aaker (1996), the value of a brand is the set of assets and liabilities linked to the brand name and symbol, which add or subtract value to a product or service of a company and / or its customers.

The consideration of brands as organizational assets, as explained by Sampaio (2002), it is necessary to watch over them and make them stronger in the market. In this way, it is necessary to think and define strategies that contribute to their positive perception by their target audience. It is important to know that they need to be managed by competent professionals who work with efficient and effective marketing strategies to ensure that the brand image is aligned with the organization's objectives.

Thus, we arrive at the simplified definition of branding as "the set of marketing tasks - including its communication tools - aimed at optimizing brand management" (SAMPAIO, 2002, p.27). We can also observe the more in-depth definition that Kotler (2000) brings us about the term:

> *Branding means endowing products and services with the power of a brand. It is all about creating differences. In order to put a mark on a product, it is necessary to teach consumers "who" is the product [...] as well as "what" it is intended and "why" the consumer should be interested in it. Brading is about creating mental structures and helping the consumer to organize their knowledge about products and services, so that their decision-making becomes more enlightened and, in this process, generates value to the company (KOTLER, 2000, p.269).*

Therefore, branding plays an important role in narrowing the public's relationship with the brand by creating strategies for them to provide positive experiences to consumers, since, according to Kotler and Armstrong (2007), brands represent the perceptions and feelings of Consumers in relation to a product and its performance, everything that the product or service means to consumers. In addition, we live in a market scenario with increasingly fierce competition. Therefore, as Kashani (1996) argues, consumers are more informed and more skeptical of false or non-coherent promotional appeal ads, and are even more eclectic due to the diversity of products offered in the market, especially with the ease of internet access nowadays.

It is through branding that the public will be captivated and will establish a perception of brand value. Consumers will be willing to acquire products of a particular brand more easily and even pay more for its product or service than those offered by the competition. This type of value can be called added-value.

Aggregate values are psychological; They exist in the minds of consumers. [...] These aggregate values originate from consumers' experiences regarding the brand, the types of people who use them, the buyer's confidence in brand effectiveness, and the brand's appearance (JONES, 2004, P. 385)

For Kotler (2010), building customer value is the best way to relate to it and achieve profitable results, not just financial but lasting relationships. In this regard, branding will help to make unique the experience in acquiring the product / service, meeting the expectations of the customer and their needs.

Brand Equity: the perception of value for consumers

The perception of brand value by customers can also be defined by another name: brand equity. While branding is defined by Sampaio (2002) as the set of marketing tasks aimed at optimizing brand management, brand equity is understood by Aaker (1998) as the set of assets and liabilities linked to a brand, its name, or Symbol, which add up to or subtract from the value provided by a product or service to a company or its consumers. Kotler and Armstrong (2007), on the other hand, use a more succinct definition that brand equity is the positive differentiating effect that brand awareness has on the customer's reaction to the product or service. In this way, we can observe that all branding strategies of a company aim to increase its brand equity. For, the greater the brand equity, the more the organization can stand out in the market and occupy the top of products that are reference in the market. Big companies, like Disney and Coca Cola, are examples of companies with high brand equity. They become true market icons and maintain the loyalty of their consumers for generations.

In order to measure brand equity, companies must pay attention to four items, as presented by Nunes and Haigh (2003): brand recognition, when the consumer is able to identify it; Fidelity, central point of value; Quality, which allows the consumer to realize the return on investment made; And association, which connects the consumer to the brand, being able to be through images, attributes, situations, symbols, etc. This measurement can be performed with marketing research aimed at identifying each item that makes up brand equity. It is important to realize that brand equity provides value not only to the consumer, but to the company. After all, Drucker (2000) states that it is the consumer who determines what a company is, because what he believes to be buying, what he considers "value" determines what a company is, what is produced, and what will prosper or not. For him, the customer is an ally and always comes first. So, we can affirm until now that every company needs a brand that differs from other competitors and needs marketing strategies, called branding, to make it increasingly perceived by the market and increase the value perceived by consumers, that is , The brand equity.

Storytelling: An Advertising Strategy

One of the strategies used by some brands to differentiate themselves from the competition and further captivate the audience is storytelling. But to understand more about this concept and how it has contributed to leverage the brand equity of some organizations, we need to delve a bit more into the subject. The act of telling a story, or telling a fact, has already existed since the beginning of time. According to Motta (2004), the narrative consists of a universal, transhistorical, pancultural practice and, according to the author, all peoples, cultures, nations and civilizations have been constructed narrating. Thus we perceive the importance of narrative for human beings, for this act is realized even before language.

This strategy has been constantly used by art, whether through literature or film productions. However, advertising has already realized the power that stories have in the consumer's mind, after all, stories are capable of holding the audience's attention. In this sense, according to Palacios and Terenzzo (2016), managing this attention will be a determining factor for many companies. Those who do not learn to attract the attention of their audience through stories may be out of the market. This is because the consumer is impacted by several advertising messages daily and still shares his attention with the posts of friends carried out on social networks. In this way, the term storytelling has been used when stories have an advertising appeal and are aimed at promoting brands.

Broadly speaking, all narratives are storytelling; So narrowly, would only storytelling the narratives constructed to be used with the blunt intention of formatting thoughts. In the media, they become products for sale, while in marketing they are used as a means of persuading and creating habits of action; In advertising, the history of an anthropomorphized product as a character capable of satisfying needs (DOMINGOS, 2008, p.01).

Thus, we note that, when impacted by a storytelling strategy, the consumer does not acquire the product or service solely because of its usefulness or brand, but because it relates emotionally to that story. Reinforcing this statement, we can also say that "people do not buy products, but the stories that these products represent" (RAMZY, 2002, apud: MATOS, 2010, p.13). The commotion of individuals by stories may be related to identification with life itself. All people have gone through moments that made them feel sad, joyful and other emotions. So when we are introduced to a story, we can imagine ourselves as the characters and put ourselves in their place, that is, we go through a process of projection, in which the choices and destinies of the characters of the story impact us strongly, Situations as if we were passing through them.

Storytelling is the simulation of a reality. By captivating attention, the narrative causes an immersion that reaches the sensory level. [...] The person who is attentive jumps into a character, sometimes cheering for him and sometimes putting himself or herself in his place. Whenever we are attentive to a story we share the look and feelings of the characters. For the good or for the bad. We vibrated together, but we also wept in tune. When something is very important to the protagonist, it becomes very important for those who are aware (PALACIOS and TERENZZO, 2016, pp. 103-104).

Generally, stories can be told in two ways: real facts or fictitious situations. Both forms can be used as marketing and advertising strategies. When storytelling strategies use real facts, they are constructed from an individual's access to memory, using it as a tool of "building the past, but based on emotions and experiences, it is flexible and events are reminded of the Light of subsequent experience and the needs of the present "(FERREIRA, 2002, p.321), that is, narratives are constructed from the experiences the individual has passed through or from reports he has heard from others who have passed through certain events. Generally, this way of applying storytelling is well used for organizational communication, where the stories of employees or the organization itself can be presented to the public. Thus, "the company itself is anthropomorphized as a character that also has a story to tell, as well as the products that it ends up generating and offering to the consumer public" (DOMINGOS, 2008, p.2).

Storytelling strategies that use fictitious situations are not retained to the memories to construct the narrative. In this case, the use of imagination is fundamental to reproduce the story that will be told, using even elements that flee from known reality, with the creation of something new, of a new reality. This, according to Llosa (2004), because the human being is not happy with his destiny and almost everyone would like to have a life different from the one that they live. Fiction has come to heal this desire.

Moreover, in the case of strategies favoring brand equity of brands, it is important to establish a reality whose events make sense to the public, but are extraordinary in their executions.

It is necessary to have conditions of verisimilitude and veracity that ensure communication with the reality lived, that the characters participate in some part of the daily humanity, but it is also necessary that the imaginary rises a few steps above the daily life, that the characters live with more intensity, more love, more affective richness than the common of mortals. It is also necessary that imaginary situations correspond to deep interests, that the problems dealt closely with the needs and aspirations of readers or spectators (Morin, 2009, p. 82-83).

However, depending on how the story is conveyed by the organization, the difference between reality and fiction may not be perceived by the audience, at the risk of making them feel cheated. Thus, we can interpret that, like any advertising message, storytelling also needs to be built within ethical standards.

Ethics in Advertising: values in a society

Understanding the fundamental values that must be worked out by advertising in communication actions, it is important to establish a concept we understand as ethics. Every group of individuals is governed by a set of norms that regulate their behavior so that they coexist well in a society. According to Ferreira (2005), these norms and principles of conviviality are what we call ethics. Because it is a set of social behaviors, we realize that it will always be collective, taking into account the group in which it is inserted. Reinforcing this principle, we can still say that "there is no individual ethics. Ethics is always a group, a collectivity "(CORTELLA, 2013, page 51). In this way, we realize that in order for there to be a good coexistence between the individuals of the same society, they must act in accordance with ethics. So, for an advertising message to be well accepted by the public, it also needs to obey these social rules. To ensure that this happens, there is CONAR (National Council for Self-Regulation Advertising), which acts in response to complaints from consumers, authorities and associates, so that Brazilian advertising is always within the standards considered ethical by the social system.

According to the CONAR website, the basic precepts that defend advertising ethics are: every advertisement must be honest and true and respect the laws of the country (Brazil in this case); Should be prepared with the proper sense of social responsibility, avoiding accentuating social differentiations; Must bear in mind the responsibility of the production chain with the consumer; Must respect the principle of fair competition; Should respect the advertising activity and not detract from the public's trust in the services that advertising provides. However, the responsibility of providing ethical advertising content to the public is not from CONAR, but from the organizations themselves. Particularly with regard to the relationship between brands and their consumers, since, as Murta (2007) affirms, advertising must be effective, persuasive and informative, and should always contribute to consumer confidence. The author further emphasizes that the public has much confidence in what is said by advertising, but that there is no need for the message to be totally explicit.

Throughout the communication process, the receivers assume that they will not be cheated, will not be offended or will not suffer loss of any kind derived from the messages. The veracity of the communication does not imply that the information has to be absolutely accurate. [...] On some occasions, a certain margin of maneuver can be admitted, a certain "publicity license" regarding the absolute truth, without abandoning the veracity of information (MURTA, 2007, 32).

In conclusion, it can be observed that, although advertising campaigns can modify reality a little, in making what is portraited more attractive, it is fundamental that the public be informed with the truth. The company, through advertising actions, must respect the trust that the consumer places in the transmitted messages.

Methodological procedures

According to Cervo, Bervian and Silva (2007), all research is a form of investigation of theoretical or practical problems, using scientific processes. According to these authors, any research aims to find an answer to a given problem. In this article, we sought to identify why the storytelling strategy used by the Diletto brand was detrimental to the brand, and other companies that adopted this strategy were successful. This work used research and data collection methods to be developed. As stated by Gil (2008), before starting a research it is necessary to define the objective and to categorize it as: exploratory, descriptive and explanatory.

According to Gil (2008), the exploratory research happens when one has to become more familiar with the subject, making it more evident or constructing hypotheses. It can be done with bibliographic consultation, interviews and, almost always, takes the form of a case study. Therefore, in this article, the exploratory research method was used because it aims to raise more information about the communicational technique of storytelling and to better understand why the strategy adopted by Diletto generated a negative repercussion for the brand. Thus, we move on to a second moment, in which Gil (2008) states that it is necessary to define the forms of data collection used to respond to the problem chosen to be object of the research.

One of the methods used was the bibliographic research. For Vergara (2000), this type of research is developed using already existing material, composed, for the most part, of books and scientific articles. Lakatos and Marconi (2001) also reinforce the contents that can be used for data collection, as well as their purpose.

[...] includes all bibliography already made public in relation to the subject studied, from single publications, newsletters, journals, magazines, books, researches, monographs, theses, cartographic materials, etc. [...] and its purpose is to put the researcher in direct contact with everything that has been written, said or filmed on a certain subject ... (LAKATOS and MARCONI, 2001, 183).

Thus, there were consultations to various scientific articles and books to compose the theoretical foundation of this article, as well as searches in these same materials and in news sites on the internet about the strategy of storytelling adopted by Diletto. Another form of data collection used was the survey survey. According to Gil (2008), this model has the main objective of directly interrogating a group of people about a certain subject, with the use of a questionnaire. In this way, it is possible to identify the behavior of the respondent group, because, through the information obtained, a quantitative analysis of the generated data is made and a pattern can be identified. Other authors conceptualize this form of collection only as quantitative research. One of them is Richardson (1999), who defines it by the characterization of the quantification, both when collecting information, and when it is time to analyse the data using statistical techniques.

Thus, to carry out this research, an online questionnaire was carried out through the Google Forms platform, applied via social network: Facebook. The survey was available from April 29, 2017 until May 12, 2017, obtaining 201 responses. The questionnaire sought to collect statistical data about the public perception of storytelling strategies used by companies and, especially, regarding the case involving Diletto. The questions asked are available in this paper (appendix 3). In addition, another form was also used for data collection, the case study, once the company Diletto was researched. This format is defined by Yin (2001) as follows:

> *A case study is an empirical investigation that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly defined [...] The case study research faces a situation technically The only one in which there will be many more variables of interest than data points, and as a result, is based on several sources of evidence [...]*

(YIN, 2001, p.

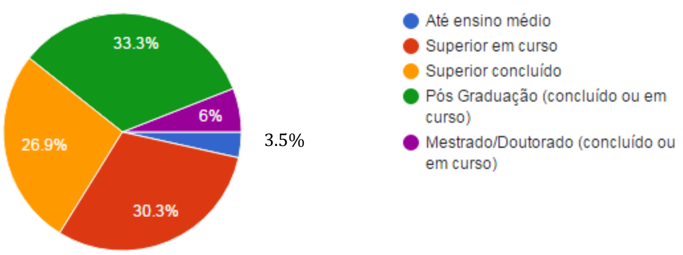
Thus, it is perceived that a deeper analysis of the object of study is necessary, since it was not clear why the Diletto brand had gained a negative image after the repercussion of the case involving the strategy of storytelling. So, with the objective of collecting the public's perceptions about the subject in question and obtaining qualitative data on the subject, a focal group involving 6 different people, with an average duration of 30 minutes, was held on May 10, 2017. The script that guided this process is available in appendix 1 of this article. In this technique, the group is led by a mediator to discuss the subject being addressed. Generally, this format allows more freedom of expression, which encourages the participation of the group members. Regarding the importance of this technique, Gatti (2005, p.9) says that "there is interest not only in what people think and express, but also in how they think and why they think".

Participants were able to tell about their relationship with the Diletto brand and express their views on the strategy used and the way in which they were impacted. The focus group was filmed and the link is available in the appendix to this paper (appendix 2).

DATA ANALYSIS

First, we analyzed the information collected through the survey, which provided quantitative data about the theme proposed in this study. However, first of all, it is necessary to identify the participants' profile regarding schooling, age and monthly income.

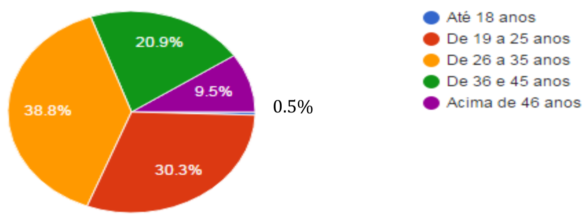
Figure 1 – Schooling



Source: Google Docs search result

Regarding schooling, we can see in the figure above (figure 1) that the vast majority of respondents have a degree in some academic area, which represents 66.2% of the participants. Among the others, we have more than 30% of respondents attending a higher education course. This shows that, in general, the participants have a good academic background.

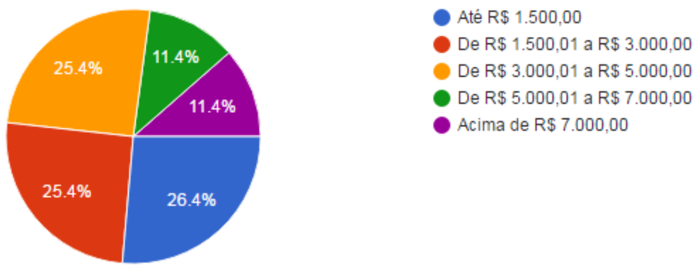
Figure 2 – Age



Source: Google Docs search result

Regarding the respondents' age (figure 2), we can observe that practically all respondents are over the age of 18, most of whom are between 26 and 25 years old. This shows that the majority of the audience is mature enough to understand the questions and the subject matter.

Figure 3 - Monthly income

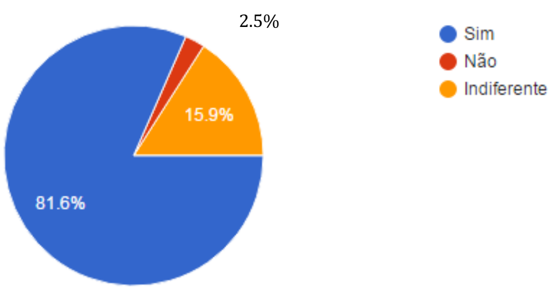


Source: Google Docs search result

Now, on the monthly income of the participants (figure 3), it is clear that there are very diversified purchasing power between them. Statistically, the majority (26.4%) earns up to 1,500 dollars. However, practically the same amount of people earn between 1,500 to 3,000 (25,4%) and between 3,000 to 5,000 (25,4%).

Then, the participants' answers about their perception of storytelling strategies in general, focusing on the Diletto brand case, are analyzed.

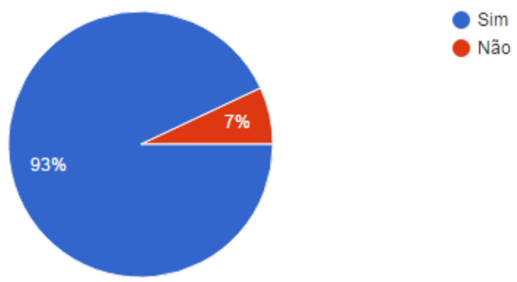
Figure 4 – Do you like when brands tell stories to promote your products?



Source: Google Docs search result

It was asked whether participants like when brands use stories to promote their products. As we can see in the graph (figure 4), most (81.6%) like this strategy, while 15.9% of the respondents are indifferent to this communication format. This data reinforces the power that storytelling strategies have for attracting audiences.

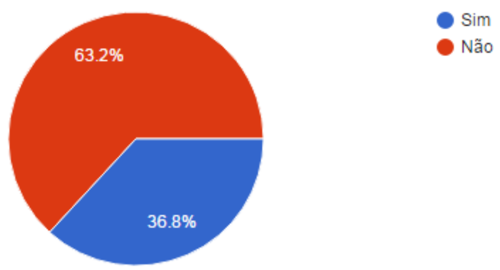
Figure 5 – Do You believe storytelling strategy can bring the brand closer to the consumer?



Source: Google Docs search result

When asked if the storytelling strategy, from the point of view of the participants, can bring the brand closer to the consumer, most (93%) said yes (figure 5). This strengthens the idea that stories can be used in branding strategies and contribute to brand equity.

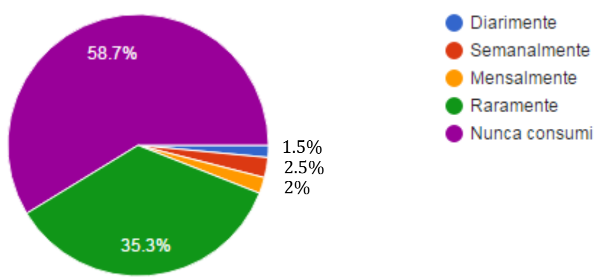
Figure 6 - Do you consume or have already consumed Diletto brand ice cream and popsicles?



Source: Google Docs search result

To identify whether the research participants were Diletto consumers, they were asked if they had already consumed any of the brand´s products. Among the responses (Figure 6), 63.2% said they had never consumed popsicles or ice creams. This shows that the product is not as popular among the attending audience.

Figure 7 - On average, how often do you consume this brand´s products?

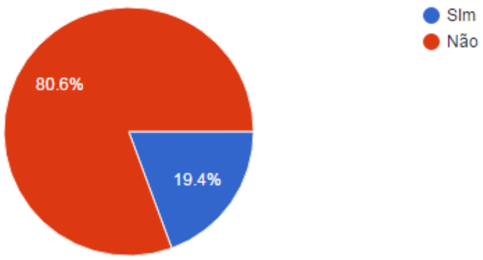


Source: Google Docs search result

In addition, it was asked about the periodicity of consumption and the majority of participants who had already consumed Diletto claims to consume rarely (35.3%), as shown in figure 7.

There were also participants who said they consumed the products more frequently, however, there were few, Totaling 6%. We perceive, then, that the brand is not consumed frequently by the respondents, possibly because it is a product that reaches a higher social class.

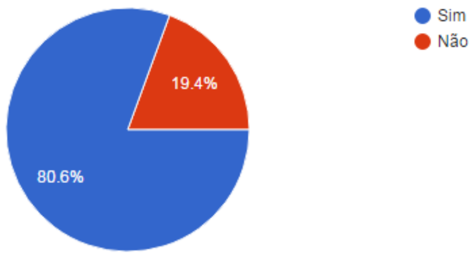
Figure 8 - Do you know the story Diletto told about the brand?



Source: Google Docs search result

Still on the Diletto brand, it was asked if the participants know the story that was told by the brand about its history. As shown in Figure 8, most did not know (80.6%), probably because they did not have a relationship so close to the brand. After this question, the story was presented to continue the questionnaire.

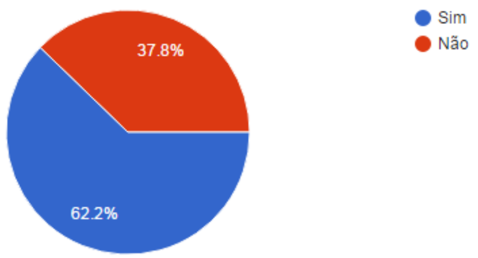
Figure 9 - You felt cheated to find out that the history of the brand was it not true?



Source: Google Docs search result

After learning the story, respondents were asked if they felt cheated when they discovered that the story told by the company was not true. The majority (80.6%) said yes, as Figure 9 shows. This data demonstrates that participants, even believing that stories approach consumer brands, condemn the use of Diletto's strategy. In addition, the data reinforces the importance of ethics in advertising, in agreement with Murta (2007), in that the author says that the consumer has much confidence in what is said by the publicity.

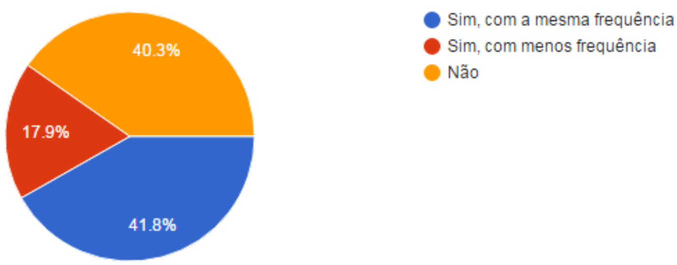
Figure 10 - The story told has influenced or will influence the way you do you consume the products or see the brand?



Source: Google Docs search result

It was also asked whether there will be a change in the way the brand is consumed after discovering the truth about Diletto's history. Most of the respondents (62.2%) said yes, as can be seen in figure 10. What once again points out that stories have the power to influence the brand equity of a brand.

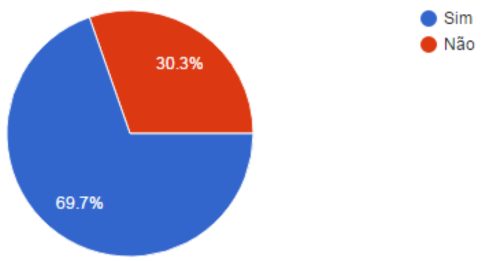
Figure 11 - Even though the story is not true, you continued or will you continue to buy branded products?



Source: Google Docs search result

It is interesting to observe in figure 11 that, although the participants stated that they felt they were mistaken for Diletto's history and that they would change their way of consumption, a large part of the respondents (41.8%) stated that they will continue to acquire the product with the same frequency. Since many respondents were not consumers of the brand, it can be considered that they will remain without interest in Diletto products. Another point that can be observed is the number of people who said they did not consume the products after knowing the truth (40,3%) or that they will consume less frequently (17,9%). This indicates that the brand history strategy had a strong impact on the public, to the point of making them choose to lose interest in the brand's products.

Figure 12 - In your perception, the brand lost credibility after telling this story?



Source: Google Docs search result

To close the questionnaire, it was asked whether the brand lost credibility after using an untrue story in its strategy. In the perception of the majority of participants (69.7%), as shown in figure 12, Diletto had its credibility shaken by its strategy. This information reinforces the idea that the use of storytelling by the company was not assertive, from the point of view of communication, besides negatively impacting the brand.

Focus group analysis

At this point, the information obtained through the focus group is analyzed. This method allowed to gather quantitative data on the object of study of this work and to identify the experiences and perceptions of the participants in relation to the strategies of storytelling and the case involving Diletto. During the process, participants stated that they are influenced by brand advertising that conveys credibility to the consumer. Often, according to them, the credibility is related to the indication of others who have already consumed the product or who believe in the values of the brand. In fact, we realize how much the advertisements influence the audience when one of the participants says that "if it is on television is good". In this way, we perceive the importance of working with branding strategies so that the brand is always perceived positively by the consumer. As participants begin to be encouraged to talk about their perception of storytelling strategies, one of them states that they are interested in knowing stories of brands, especially those of success, such as Coca Cola. However, it states that

Knowing the history of the brand is not a guarantee that it will consume the products of the company, but if the story has any relation to their people beliefs, it will be a factor that could stimulate consumption.

Most participants prefer when storytelling strategies of companies use fictitious narratives to encourage consumption, believing it to be more attractive. The Catuaba brand is mentioned as an example, for having created a totally fanciful story to announce a new flavor of its products and, according to the testimony of one of the members of the group that is a frequent consumer of the brand, the strategy was a success. This data reinforces the acceptance of storytelling by the public and shows how it can be a good brand equity strategy.

Regarding the veracity of the stories told by the brands, the group agrees that the general public would not fail to consume a certain brand if it discovered that some brands may not be true, but affirm that the company responsible would lose credibility. Once again, Coca Cola was cited as an example and the fictitious hypothesis of its history not being true was raised. One participant says that "if she lies about the story, imagine what she has in that bottle." In addition, another participant claims that he would stop consuming the product if he discovered that a story told is not real. When we started talking about the object of study, Diletto, most of the participants knew the brand, but were not frequent consumers. In order for everyone to be aware of the case, the whole history of the brand was presented by the company and, after that, the true story was revealed. One of the participants stated that they would no longer consume branded products after discovering the truth and others would continue to buy as long as there was no change in product composition regardless of whether the story was true or not.

The group concluded that Diletto used a number of elements that addressed consumers' emotional issues, such as reporting that the owner's grandfather took refuge in Brazil during World War II. According to them, there was no need to tell a false story to sell the product, as this would not stimulate the purchase. One of them said that he started to consume the product only by the design of the packaging and the format of the point of sale.

In addition, one of the participants who felt cheated to discover the truth about Diletto's story said that the brand "used a strategy of lying to strengthen itself, for the product sold to be more expensive. In my opinion, this is cheating the consumer. I do not think that's cool. [...] A marketing strategy cannot be based on a lie. "This report shows how Diletto's strategy was perceived as unethical.

Because, as we already talked about what is said by Murta (2007), the public believes in advertising and will not be deceived by it.

To finalize the focus group, participants agreed that if Diletto had chosen to work on the storytelling strategy using a fictional story, which was absurdly fantastic, it would be much more assertive. After all, according to them, people would know that this was not a real story. With this, we can observe that, in order to be used, storytelling needs to make clear to the public what is real and what is fiction, thus respecting the consumer.

Final considerations

It seems that the human being is really involved in narratives and gives more attention to the advertising that uses storytelling as a marketing and communication strategy. After the data collection carried out by the surveys, it was noticed that the strategy of storytelling conducted by Diletto, in a non-assertive way, undermined the brand's brand equity. After all, it was possible to obtain quantitative and qualitative data that proved the admiration of the public in relation to storytelling, but criticize the way in which the company used this strategy, considering it unethical. Therefore, it is noteworthy that in order to use this strategy it is fundamental that it be well defined for the public if the narrative is a fiction or a real fact. We also identified the main factors that led to the failure of Diletto's communication strategy using storytelling. The first one was to "sell" a fiction as if it were reality. As has been said, the stories need to be clear to the audience whether they are real or imagined. The untrue history of Diletto was told on its website and on the packaging of products as if it were the history of the company, which conveyed the idea of truthfulness to the public.

We can see this dissatisfaction with the analysis of quantitative research, in which it was presented that over 80% of the participants felt cheated to discover that the story was not true. In addition, during the focus group, one participant reportedly lost interest in consuming the company's products (unknown until then) after discovering that the story was untrue. This further reinforces that the way Diletto has led this strategy has undermined the brand's brand equity. The other factors that resulted in strategy failure were the elements used in the story. The company introduced a fictional character, a refugee from the Second War, as if it were a real person. In addition, he said that the fruits used to make ice cream were imported from different parts of the world. These elements influence the consumer emotionally, especially when talking about shelter.

Public dissatisfaction is perceptible, taking into account the people assessed in the focus group, when one of them says that talking about war is a "heavy" subject. Still, another participant claims to be afraid of knowing what is in the composition of the product. After all, people in the focus group agreed that if Diletto had chosen to work a fictional story, going to the fantasy side, it would be a more assertive strategy. The data presented so far will help show how Diletto's storytelling strategy has negatively impacted the brand and caused the company to lose credibility with consumers. A clear example of this is the testimony of one of the focus group participants revealing that she was a consumer and that, after discovering that the story was not true, she never again purchased the products from the ice cream maker. With this, we realize, once again, how the strategy undermined Diletto's brand equity. Finally, it is expected that the present work will contribute as a research source for students and professionals in the field of communication, who are interested in using storytelling in their branding strategies, guiding them to avoid the mistakes made by Diletto. Still, it is believed that it can serve as the basis for the creation of new stories capable of being social influencers, always structured in ethics, valuing the advertising companies and respecting their consumers.

ANEXOS

Anexo 1 – História da Diletto

Figura disponibilizada no site da Diletto até 2014, antes da repercursão do caso envolvendo o storytelling.

Fonte: http://g1.globo.com/economia/midia-e-marketing/noticia/2014/11/historias-contadas-pelas-marcas-diletto-e-do-bem-vao-parar-no-conar.html

APPENDICES

Appendix 1 - Roadmap for the implementation of the focus group

- Does the way a brand and its products appear in the media influence your purchasing decision?
- What is your opinion when a brand tells stories to present itself or bring its products

closer to consumers?

- Considering two identical products (X and Y), of the same price, where X knows the brand and Y you know the brand and they told you that it was manufactured by a gentleman who sought the raw material in a lady's yard Eventually became his wife. Which of the two would you choose? Because?
- And if I said that this story is not real, how would you feel?
- Would you continue to consume branded products after that?
- What if, instead of your future wife's yard, he found the raw material inside an asteroid that fell from the sky?
- Why do you accept this story more than the other?
- Consume how often?
- Can you tell me the brand story?
- Do you know that history is a lie?

[Tell the story to those who do not know]

- How did you feel when you learned the truth?
- Will you continue to buy branded products as often as you know about the lie?
- What could have been done by the brand to show that the story was a lie?

Appendix 2 - Link to the focus group shoot: https://youtu.be/aIyeksGu8x0

Appendix 3 - Quantitative Research Questionnaire

- Do you like when brands tell stories to promote their products?
- Do you believe that storytelling strategy can bring the consumer brand closer?
- Do you consume or have ever consumed Diletto brand ice cream and popsicles?
- On average, how often do you consume branded products?
- Do you know the story that Diletto told you about your brand?
- To continue the survey, please read below and learn about Diletto's history.

Diletto started with Mr. Vittorio Scabin, an Italian who was dedicated to producing a homemade popsicle with a mixture of fresh fruit and snow. With the arrival of the Second War, Mr. Vittorio took refuge in Brazil.

Almost a century later, his grandchildren continued their work with the same passion, perfectionism, and dedication. Thus, the ingredients are carefully chosen, for example the pistachio that comes from Sicily and the raspberries that are harvested in Patagonia.

However, the above story is not true. It was created as a marketing strategy to promote the brand and add value to its products.

- Did you feel cheated to find out that the brand story was not true?
- Has story counted influenced or influenced the way you consume the products or see the brand?
- Even if you know the story is not true, have you continued or will you continue to buy branded products?
- In your perception, has the brand lost credibility after telling this story?
- Socioeconomic Questionnaire: schooling, age and monthly income

Archives of Business Research – Vol.5, No.9
Publication Date: Sep. 25, 2017
DOI: 10.14738/abr.59.3699.
Adusei, C., Dunyah, J. Y., & Seidu, A. K. (2017). Lean Operations Management in the Telecommunications Industry of Ghana: Triggers, Practices and Benefits. *Archives of Business Research, 5(9)*, 93-106.

Lean Operations Management in the Telecommunications Industry of Ghana: Triggers, Practices and Benefits

Charles Adusei
Department of Accounting, Finance and Banking,
Faculty of Business Studies, Garden City University College, Kumasi. Ghana

Jasper Yao Dunyah
Forest Services Division of Forestry Commission,
Atebubu, Brong-Ahafo Region. Ghana

Abdul Karim Seidu
Forest Services Division of Forestry Commission,
Atebubu, Brong-Ahafo Region. Ghana

ABSTRACT
The purpose of this study was lean operations management, what triggers it, its practices and benefits to an organisation. Data was collected through a structured questionnaire among the departments in Millicom Ghana Limited. The analysis used was descriptive statistics and relative importance index for ranking of indicators. The result indicates the use of lean tools and techniques being the most observed lean operation practice. It was identified that the need to satisfy customers and the need to make savings on operational and capital expense were some of the major triggers for lean operations management journey. It was evident that some of the benefits of lean operations were improvement in revenue, elimination of waste, and savings in operational (OPEX) and capital (CAPEX) expenses. The challenges identified were lack of management support for lean operations, lack of lean training and high employee turnover rate. The paper suggests undertaking of value stream mapping analysis on the entire organisation for the sustenance of lean operations.

Key words: lean operations, practices of lean, benefits of lean, telecommunication sector, Ghana

INTRODUCTION

Telecommunication companies are under constant pressure to optimize operational costs, gain agility and offer superior services to customers. The pressures are more intense now, with the telecommunications industry witnessing stiff competition than ever before. In such a demanding scenario, it is imperative that business operatives contain costs, streamline operations, retain and improve customer loyalty as well as maximize Average Revenue per User. Providers have been through different rounds of cost cutting over the past few years. As a result, managers in telecommunication companies are searching wide for cost savings in their operations, only few find much to save. A report by Boston Consulting Group dated 2010 on the analysis of the telecommunication sector made some key revelations about the industry. Firstly, it was discovered that the telecommunication sector is still one of the most inefficient industries with more than 40 percent of its cost basis consumed by waste. Also, the report revealed that America and Western European markets are experiencing several technological and innovative shifts across the world. With America and Western European markets almost saturated and prices are rapidly declining, with growth slowing in, hypermarkets such as India is evident. In order to overcome these challenges, some providers have begun to borrow from the tenets of Lean Manufacturing that were first pioneered by Toyota for automobile manufacturing.

Lean System is claimed to be as important to service as it has been to manufacturing; however, there is yet an empirical research to examine the implementation of lean system in service organisation and to determine the effect on its performance as stressed by Levinson (2013). Bhasin (2015), defined lean as a philosophy that uses tools and techniques to create a change of organisational culture in order to implement the good practice of process/operations improvement that allows the reduction of waste, improvement of flow, more focus on the needs of customers and which take a process view. Wilson (2010) explained lean as a comprehensive set of techniques that, when combined and matured, will allow companies to reduce and then eliminate the seven wastes. This system not only will make the company leaner, but subsequently more flexible and more responsive by reducing waste. The application of lean system in the service sector has not enjoyed the popularity as in the manufacturing sector. However, the escalating importance of service industries in matured economies coupled with the enormous benefits derived from lean systems in manufacturing has turned the key for several researchers to stress the need for researching the applicability of lean system to services and to determine its effect on performance (Piercy and Rich, 2009).

George (2010) stressed that to drive out costs and overhead from a business, companies must drive it out from the framework of processes that constitute the business. He went on to say that the difficulty for most employees and business leaders is that their day is filled by work that is not focused on improving processes. Lean is as much philosophy as it is approach. The basic idea is to increase or enhance customer value while reducing waste as indicated by Rothwell *et. al.,* (2012). They reiterated that when wastes are properly identified and measured as costs, the appropriate sequence of improvements becomes apparent. It is important to recognise waste in a company because it marks a steppingstone to tackle it which results in improving efficiency and overall performance, Simboli *et al* (2014). Mann (2005), says that company's inability to stay competitive and viable has been blamed on their difficulty to identify waste. Gitlow (2009), affirms that problems are often compounded because without lean, producers only concentrate on the symptoms of waste and hardly identify its root causes so quick fix strategies are used only for the problems to recur. Some companies are not even aware of the existence of the non-value adding processes in their systems. Feld (2001) confirms that "It turns out, that the most difficult part is not removing waste itself, but identifying and highlighting it, which should precede the process of elimination."

Lean thinking has provided techniques and tools to manage Waste. The two main ways to manage waste are to reduce it or eliminate it, as reported by Modi and Thakkar (2014). They explain that the tools to reduce or eliminate the seven wastes are purposefully classified. It is therefore inferred that each type of waste has its unique tool to reduce it or banish it. Modi and Thakkar (2014) listed twelve lean tools used to minimize or eliminate waste namely Kaizen, 5s, Just in Time, Visual Management, Value Stream Mapping, Andon, Gemba, Total Productive Maintenance, Takt Time, Single Minute Exchange of Die, Cellular layout and Supply Chain Management. In addition, Mann (2005), presented a tabulated list of the seven waste and their specific reduction tool. Since the seven wastes are different from each other different methods are applied to each of them. Womack and Jones (2003) outlines broader consequences of waste such as poor layout, long setup times, incapable processes, poor maintenance practices, poor work methods, lack of training, large batches, ineffective production planning/scheduling and lack of workplace organization. Contrarily, Plenert (2007) said that "adopting lean manufacturing system is more than a cost reduction program". Furthermore, Gitlow (2009) stressed that do not look solely at human activity that creates waste but add that the processes, tools, materials, personnel that do not add value are equally sources of waste. Plenert (2007) adds that anything that destroys resources and does not add value to the customer's requirement is known as waste.

Lean is sought by organizations due to specific reasons and a desire to achieve particular purposes. Subsequently, identification of reasons for which organizations seek lean implementation will be of particular importance as reported by Fullerton and Wempe (2009). Some of the reasons for lean implementation are elimination of waste, reduce costs, improve productivity, improve profitability, customer satisfaction and reduced staff turnover & absenteeism among others according to Hallgren and Olhager (2009). Nawanir *et. al.* (2013) enumerated some of the benefits of lean implementation are improve flexibility, reduce inventory, increase market share, improved value delivered, improve employees understanding of the process, identification and elimination of waste and increase market share among others.

Parker (2003) emphasize that the purported benefits of lean practices are not achieved without cost, implying the need to provide a proper foundation for the system. Therefore, recognizing the requirements necessary for a successful lean implementation is essential for organizations before setting out the journey of lean implementation. Staats *et. al.* (2011) affirmed that for effective lean implementation the following must be the requirement: management support, training, employee's involvement, performance measurement system, effective communication systems, leadership, focusing on the whole process and effective communication systems. It is imperative to know what barriers organizations may encounter while implementing lean system. Identifying those barriers can help organizations prepare to alleviate their effects so that the implementation process can run smoothly as advised by Del Val and Fuentes (2003). Holm and Alhstrom (2010) indicated some of the barriers to lean implementation as lack of training, resistance to change, lack of middle management support, human errors in the implementation process and traditional hierarchical management structures.

Operational cost is ever rising in the Telecommunication sector due to volatile power supply, high inflation rate, as a result operational cost is soaring affecting the price at which services are delivered to the general public. This phenomenon affects Quality of Service (QoS) negatively. Competition appears to be the biggest threat to the major players in the telecom industry. Today companies are faced with several new challenges such as globalization, increasing competitive pressure, shorter product life cycles, and shorter technology innovation cycles. Customers are demanding more variety and increased quality, delivered in shorter lead times and at a lower price. Never before had companies faced a greater need to become more agile and responsive. There is therefore the need for a study on lean operations management in the Telecommunications Sector of Ghana using Millicom Ghana Limited to delve into triggers, practices and benefits of lean operations.

STUDY SETTINGS AND METHODOLOGY

Study Settings

Accra was selected as the site for the study and for it being the largest city in Ghana. Accra doubles as the capital city for Greater Accra Region and Ghana as a whole. The city is considered one of the most populated and fastest growing metropolises in Africa. Accra is the headquarters for most businesses operating in Ghana. Accra is a major centre for manufacturing, marketing, finance, insurance, transportation, and tourism. The motivation for conducting the study in Accra was because the case study company (Millicom Ghana Limited) has its head office geographically located situated in Accra and a greater percentage of its workforce is also found in Accra. Secondly, the target population that has direct bearing on the objectives of this study can only be found in the company's head office.

METHODOLOGY

Design of the Study

Research design is an important component of any research study as it drives the subsequent stage of the study. The study design comprises of survey and case study. According to DeVaus (2001), he indicated that within the context of research design, two major fundamental questions must be asked such as: What is going on (descriptive research)? and Why is it going on (explanatory research)? When the unit of analysis is a quantitative data type, the research methods are usually experimental, survey, or case study as suggested by Strang (2015). McKinney and Abbott (2013) indicated that surveys collect information from people using interviews or questionnaires composed of written questions. Surveys are arguably the most used tool for social scientists, market researchers, and a variety of others looking for information regarding people's attitudes, behaviors, and experiences. Surveys are useful for studying the world as it is—not as we think it is, not as we think it should be, but how it actually is. The survey design will solicit information from the respondents to find out the adoption of lean operations by Millicom Ghana Limited, what triggers it, it benefits and challenges of lean operations.

Strang (2015) proposed a research design typology in a top-down approach as research ideology, research strategy, research methods and research techniques. This study adopted the Strang's research design typology where the research ideology is pragmatism where the interpretation of the researcher is key, the research strategy was quantitative approach, the research method is a cross-sectional survey which has an advantage of obtaining useful data in a relatively short period of time and a case study; and finally the research technique in terms of data collection is questionnaire, descriptive statistics made used of mean, standard deviation, frequencies and percentages were used for the statistical analysis. Case study research designs or approaches can be based on their function, characteristics, or disciplinary perspective. One's selection of a research design is determined by how well it allows full investigation of a particular research question as indicated by Hancock and Algozzine (2006). Case studies focus on one (or just a few) instances of a particular phenomenon with a view to providing an in-depth account of events, relationships, experiences or processes occurring in that particular instance as suggested by Denscombe (2007). This study adopted the case study method but used a single case study approach but its focus was discovery led where the study described and discusses the reasons, benefits and challenges of lean operations issues of Millicom Ghana Limited.

Population

The population of a study is important as it gives readers of every study the characteristics of the participants, subjects, cases and respondents as it may suit the study. Bethlehem, (2009) indicated that the population of a study is the premise upon which the investigation will be made or will serve as a reference point for the study. The population of the study is the staff of Millicom Ghana Limited who will take part of this study. The total target population for the study was one hundred and thirty respondents (130). The population comprises staff from factory organisation and non-factory organisation.

Sampling Procedure and Sample Size

Two-Stage sampling approach was employed for this study. The first of which was the purposive selection of Millicom Ghana Limited among several telecommunications companies registered with the Ghana Communications Authority as the main regulator for the sector. Secondly, the Greater Accra Regional Office of the company was chosen among several regional offices which happen to be the headquarters of the company. Millicom Company Limited is a market follower with a market share of 14.16% as at August 2016 behind the market challenger Vodafone Ghana Limited with a market share of 22.28% while the market leader which is MTN with a market share of 48.47% as reported by National Communications Authority (2016). Millicom Ghana was selected by the study because it was the first mobile telephony company to operate in the country and also has formally introduced some form of lean operation management into its business. This was recently demonstrated by the change of organisational structure from a pure functional structure to a weak matrix structure and other structural changes like regrouping and re-naming of the core business units into one big organisation now known as the "Factory Organisation" also was instrumental in the choice of Millicom Ghana as the case study company. The choice was made based on the availability and preparedness of the staff to cooperate with the study.

The sample representation is important determinant of a conclusion of a study. It a conversational knowledge that the larger the sample size is the better, this is a limit to that assertion as the objectives of the research study can influence the sample size. According to Bordens and Abbot (2008), explained a sample as a small subgroup chosen from a larger population. There was the need for selecting a sample from the population for this study as a subgroup input is as good as the total population input due to their relevancy and knowledge on the study. The total target population for the study was one hundred and thirty respondents (130). Out of which the Factory Organisation had 80 and Non Factory had 50. The factory organisation comprised of seven (7) departments namely CTIO Function, Supply chain, Project Management Office, Process Management, Service Delivery, Information and Security, and Strategic Quality Department. While the Non – Factory organisation comprised of Human Resource Department, Consumer, Customer Service, Administration and Legal, Sales & Marketing and Finance. The sample for this study is one hundred and fourteen (114) comprises of seventy (70) and forty-four (44) respectively from factory organisation and non-factory organisation. The composition of the respondents were members of the management team, head of departments, line managers, supervisors and team leaders. The selected respondent(s) were handpicked and were given the same questionnaire to answer.

Data collection and Reliability of scale

Questionnaires have been successfully used for a number of years in many studies and recent advances in knowledge about questionnaire methods and data entry technology have made them even more effective. Questionnaires can be administered in person, both individually or in groups, or mailed out. They are most often associated with survey research. The primary data was collected from the sampled population of Millicom Ghana Limited for the study through self-administered questionnaire. The questionnaire was self-administered as the respondents level of education and understanding of the issues were sufficient enough to fill it themselves, there was no need to guide them in administered the questionnaire. According to Bethlehem, (2009) a self-administered questionnaire can be used only when the phenomena of interest can be conceptually and operationally defined in a way that permits a written self-report to be given and the phenomena are in fact available to the respondent for self-report. The justification of using self-administered questionnaire was to protect the anonymity of the respondents especially those in institutional setting, it is also a less reactive method of collecting data than others, this approach reduces respondent's biases and also makes them to fill it at their convenient time without any pressure and be able to reach out to respondent(s) whose schedule keep them on and off the Headquarters.

The pre-testing was done to make additions and deduction from the questionnaire to suit the study, few respondents took part of the study at the pilot stage. It is a good practice when conducting a survey research that respondents are ethically treated in terms of anonymity of respondents and the confidentiality of their responses. This is one of the reasons why results of the study were reported aggregately. A structured questionnaire was employed as the data gathering technique. The questionnaire consisted of four parts. Part A contains the respondents demographic profile, Section B to Section D contained twenty-eight (28) items on sectional themes such as practices, triggers and benefits of adoption of lean operations. A five Likert Scale was used to measure these pertinent constructs of the questionnaire.

Reliability refers to the extent to which a scale produces consistent results if the measurements are repeated a number of times. Almost seventy percent of the questionnaire employed for the study was a 5-point Likert scale. Coefficient alpha scores obtained was 0.764 using 35 items in the questionnaire. Reliability analysis as indicated by Kimberlin and Winterstein (2008) is the determination of obtaining the proportion of systematic variation in a scale, which can be done by determining the association between the scores obtained from different administrations of the scale. Thus, if the association in the reliability analysis is high, the scale yields consistent results and is therefore reliable. The Cronbach Alpha value was 76.4% which is within the acceptable range and greater than the cut-off point of 0.70 suggested by many researchers. This shows the reliability of the scale for internal consistency of this study.

Statistical Analysis

Descriptive statistics was used to analyse the data with the aid of Statistical Package for the Services Solution (SPSS) version 14.0. Descriptive statistics such as frequency table, mean values and standard deviation were used to present the triggers, practices and benefits of lean operations. Relative Importance Index (RII) was used to ranked the thematic indicators.

RESULTS AND DISCUSSION

Explanation of the columns of Tables 1-3

There is the need to make these explanations to guide the readers to appreciate how it was done. Disagree shown in the tables is the combination of strongly disagree and disagree. Agree shown in the tables is the combination of strongly agree and agree. Neutral is the indifferent feedback from the respondents. SD is the standard deviation which measures the degree of deviation to the theme/statement outline. Mean is the degree of consensus to the theme/statement outline. RII is the relative importance index, the figure in the parenthesis in the tables means the extent to which the factor contributes to the title of the table while the figure outside the parenthesis is whether the respondents agree with the assertion or not.

Demographic characteristics of the respondents

A total of 115 questionnaires were administered out of which 114 respondents were used for the analysis representing 99.13% of successful response rate. Out of the 114 respondents 70 were Factory workers and 44 were non-factory workers.

The age group 28 to 35 years represents 50.88 percent of the respondents, 20 to 27 years represent 32.46 percent, respondents in the age group 36 to 43 years represent 14.91 percent and respondents above age 44 recorded a very low percentage of 1.75 percent. This information implies that Millicom Ghana Limited has a young workforce where a large portion is younger than 35 years of age representing about 85 percent of the sample population. Millicom Ghana Limited is a male dominated area with 79.82 percent of the respondents being males and only 20.18 percent of the respondent being female as the minority. This information depicts that the dominance of men over women in both managerial and at the workforce level is still very strong. All the respondents have undergone certain level of tertiary education and their qualification paint a very impressive picture of Millicom Ghana Limited's ability to attract quality and qualify candidate for employment. 69.3 percent of the respondents have Bachelor's Degree with 25.44 percent with Master's degree in various disciplines. Only 4.39 percent and 0.88 percent of the respondents have Higher National Diploma and Other professional Certification respectively.

The target groups of the study are employees in the two main divisions of the company, it was right that the respondents within these divisions responded to the questionnaire. The respondents from Factory Division were found to be the dominate group with 61.4 percentage of the responses and the Non-Factory division constitute 38.6 percent of the responses percent. This information has shown that the study deliberately administered more questionnaires to the Factory organization compared to the Non-Factory Organisation. This was because the factory organization constitutes the value stream of Millicom Ghana Limited. Therefore the study believes that administering majority of the questionnaires in that division will bring to bear better insight in the study. Lean Operations Management is all about commitment from both employees and top management members, the study decided to sample respondents who have direct bearing on the area of study. As a result, 45.61 percent of the respondents sampled were team members, 23.68 percent were line managers, Supervisors and Team Leaders constitute 21.05 percent of the sample size. Head of department and Company Management Member constituted only 7.02 and 2.63 percent respectively. 44.74 percent of the respondents representing majority of the employees worked between 3 to 5 years, while 28.95 percent of the employees worked between 0 to 2 years. People employed between the ages of 6 to 8 years represented 21.93 percent of the respondents and only 4.39 percent of the respondents have worked above 9 years.

It is very important to make the following observations that Millicom Ghana Limited has a youthful workforce. Also from the data presented, a conclusion can be drawn that Millicom Ghana Limited have a very high worker turnover rate or the company's growth rate is very high. This is because over the past two years, the company has employed 28.95 percentage of the study sample size and can boast of only 4.39 percent of the sample size being employees who have worked above nine years in the organization.

Lean Operations Practices

Table 1 indicates that the use of tools and systems for monitoring is the most ranked lean operations management implementation indicator by the respondents in Millicom Ghana Limited with a relative importance index of 0.770 followed by employee contribution towards the improvement of work with a corresponding relative importance of index of 0.761.This implies that Millicom Ghana Limited has system/tools/monitors in place to notify major and minor issues that pop up from time to time. Employee as business owner ranked third with a relative importance index of 0.746, implying that Millicom Ghana limited entrust its core businesses in the hands of its employees. Formal training ranked fifth on the relative importance index with a value of 0.744 while process, policy and procedure review ranked fourth on the relative importance index of 0.725. However, preventive measures ranked lowest with RII of 0.623. With RII for all the variables as measures and tools in place to ensure successful lean operations implementation above average means that all the measures enumerated above are being practiced in Millicom Ghana Limited.

Table 1: Lean operation practices of Millicom Ghana Limited

Theme	Frequency			Description		Relative Importance Index
	Agree (%)	Neutral (%)	Disagree (%)	Mean	SD	
Use of tools and systems for Monitoring	82 (71.9)	25 (21.9)	7 (6.1)	3.850	0.895	0.770
Employee Contribution	82 (71.9)	23 (20.2)	9 (7.9)	3.810	0.840	0.761
Employees as business owner	74 (64.9)	29 (25.4)	11 (9.6)	3.730	0.953	0.746
Formal Training	81 (71.1)	15 (13.2)	18 (15.8)	3.720	1.035	0.744
Process, Policy and Procedure review	73 (64)	22 (19.3)	19 (16.7)	3.620	0.935	0.725
Performance Management System	66 (57.9)	29 (25.4)	19 (16.7)	3.550	1.065	0.711
Share Strategic direction with key suppliers	64 (56.1)	38 (33.3)	12 (10.6)	3.520	0.833	0.704
Employee Cross-training	62 (54.4)	26 (22.8)	26 (22.8)	3.400	1.070	0.681
Preventive Maintenance	49 (43)	36 (31.6)	29 (25.5)	3.110	1.011	0.623

Source: Field Data, 2015.

From table 1, 82 respondents representing 71.9% agreed that Millicom Ghana use tools and systems to monitor critical issues reflecting in a lower standard deviation of 0.895 which is quite a good measure of general consensus by the respondents. The result from Table 1 illustrated that the use of tools, systems and monitors in Millicom Ghana Limited to notify system owners of critical/major/minor alarms or problems that pop-up during the cause of their work has been ranked as the most used lean tools in the company. The contribution of employee towards the improvement of their work in the organisation is the next most ranked lean implementation technique with 71.9% of the respondents acknowledging that Millicom Ghana Limited present opportunity to its employees to add their voice to the success or the otherwise of the company.

The information under table 1 shows that the concept of making employees business owner(s), providing formal training for both old and new employee alike, the review of policies, processes and procedures are all indicators that lean operation management has come to stay with Millicom Ghana Limited. It can be deduced from the information that Millicom Ghana Limited has invested in its human resource, thus trust them with their systems and also take seriously feedbacks received from its employees. In essence Millicom Ghana periodically review it policies, processes and procedures in line with feedbacks received from her employees. The Relative Importance Index of 0.71 indicates that Millicom Ghana Limited has a strong Performance Management System in place that helps the employees to know their performance level on the job. This observation implies that the company has made conscious effort to develop the capacity of her human resources to meet and exceed expectation and also to achieve their full potential to the benefit of both employee and management.

The result from table 1 aligned with Wilson (2010) where he indicated that lean must be comprehensive enough to achieved the intended result. Use of tools and systems for monitoring, process, policy and procedure review; and preventive maintenance are indications that Millicom Ghana Limited has intentionally taken the path to eliminate or reduce waste. This result stressed the confirmation made by Simboli *.et. al.,* (2014) affirmed the importance of company's ability to recognise waste as a stepping stone in dealing with waste. The result on share strategic direction with key suppliers, employee cross-training and performance management systems as part of lean operations practices is on the path for being competitive, this result is an indication that Millicom Ghana Limited do not want to fall prey to Mann (2005) assertion that most companies inability to stay competitive can be blamed on their difficulty to identify waste. The overall assessment of lean operations practices as shown in table 1 is in agreement with Rothwell *et. al*. (2012) where they reiterated that when wastes are properly identified and measured as cost the appropriate sequence of improvements becomes apparent. There have been positives of Millicom Ghana Limited conscious efforts and commitment to go lean but must up their game in the areas of employee cross-training and preventive maintenance as it were ranked the least two indicators. More need to be done if the vision is to use lean operations management to drive their competitive advantage.

Factors Influencing lean implementation

There are various factors that inform an organisation to consider the implementation of lean operations. This section seeks to identify the reasons that affect a successful implementation of leans operations in Millicom Ghana Limited.

The desire of Millicom Ghana Limited to find better ways to satisfy its value customers has carefully place customer satisfaction agenda at the forefront of its strategy, which was ranked first by the respondents with a relative importance index of 0.847 and with 101 of the respondents agreeing to the question. This response rate represents 88.6% of the respondents who answered the questionnaire. Embedding quality in the product from source was ranked second with a mean of 4.040 and relative importance index of 0.809. This result implies that Millicom Ghana Limited has identified the need to embed quality in the product and services they offer to Ghanaians, thus the company has realise that it is better to build quality into the product rather than inspecting quality after the product is produced. This finding agrees with George (2010) who identified the need to ensure that quality is built in the product right from product development and also authority given to employees to be able fix quality issues as and when they occur.

Effort to reduce operational and capital expenditure was ranked third with a standard deviation and relative importance index of 0.974 and 0.751 respectively, indicating that Millicom Ghana Limited has seen the need to reduce capital and operational cost as a result of the fierce competition and changing economic conditions in the country. This finding agrees with Modi and Thakkar (2014) where they asserted that the key tenet of lean is to develop a system capable of achieving cost reduction not only by the improvement of productivity through the increase of quantities but by human effort and motivation even in the era of severely low growth rate.

Elimination of waste ranked fourth with a mean of 3.650 and a standard deviation of 0.941. This result indicates that Millicom Ghana Limited has a strong urge to cut down on waste in the day to day activities of the company. The result agrees with Womack and Jones (2003) where they indicated the essence of waste identification and its elimination as a foundation of lean and if done well will give any company a competitive edge over its competitors. Conducive working environment and Reduction of lead and cycle time were also ranked with relative importance index of 0.684 and 0.670 respectively which can be termed as medium importance. These two results also had 54.4% and 48.3% of the respondents agreeing with the questions, presupposing that Millicom Ghana Limited has identified the need to provide clean, structured and organised working environment for its employees as well as find better ways to be consistent and timely in the delivery of products and services to their valued customers (As shown in Table 2).

This is not enough Millicom Ghana Limited has to work on it with all seriousness as a conducive environment can create a positive atmosphere which can enhance productivity and avoid unnecessary mistakes to reduce rework and customer complains. The findings are insightful and give credence to Gitlow (2009) where they stressed that companies should not look solely at human activity that creates waste but add that the processes, tools, materials, personnel that do not add value are equally sources of waste. Furthermore, Plenert (2007) adds that anything that destroys resources and does not add value to the customer's requirement is known as waste. This is to say that lean adoption must be holistic and convergent to achieve its intended purpose.

Table 2: Factors influencing lean implementation in Millicom Ghana Limited

Theme	Frequency			Description		Relative Importance Index
	Agree (%)	Neutral (%)	Disagree (%)	Mean	SD	
Customer Satisfaction	101 (88.6)	12 (10.5)	1 (0.9)	4.240	0.669	0.847
Quality embedded in product from source	92 (80.7)	16 (14)	6 (5.3)	4.040	0.835	0.809
Efforts to reduce OPEX and CAPEX	76 (66.6)	26 (22.2)	12 (10.5)	3.750	0.974	0.751
Elimination of Waste	72 (63.2)	29 (25.4)	13(11.4)	3.650	0.941	0.730
Conducive working environment	62 (54.4)	33 (28.9)	19 (16.7)	3.420	0.968	0.684
Reduction in Lead and Cycle time	55 (48.3)	38 (33.3)	21 (18.4)	3.350	0.931	0.670
Difficulty in policy implementation by Management	35 (30.7)	31 (27.2)	48 (42.1)	2.890	1.222	0.621
Lack of Management Support for lean implementation	36 (31.6)	47 (41.2)	31 (27.2)	3.040	1.120	0.593
Lean concept not explained to employees	52 (45.6)	37 (32.5)	25 (21.9)	3.300	1.120	0.540
There are no Formal Lean Training on Lean Operations	54 (47.4)	34 (29.8)	26 (22.8)	3.350	1.175	0.530
Efforts to reduce staff turnover	21(18.4)	33(28.9)	60 (52.6)	2.490	1.107	0.498
Unionisation of Employees	12 (10.5)	29 (25.4)	73 (64)	2.060	1.139	0.412

Source: Field Data, 2015.

It is further observed from the findings that the Management of Millicom Ghana Limited has not provided enough support to the employees towards the implementation of lean operations in the company. There is very little support for lean operations implementation in terms of providing formal training on lean to the workforce. Also, Senior Management, Head of departments and Line managers are not doing enough to continually mentor or coach their subordinates to understand the positive impact of lean on the organisation. The result align with Holm and Alhstrom (2010) where they indicated some of the barriers to lean implementation as lack of training and lack of middle management support where they might feel that the new system might affect their power and control hence may favour traditional hierarchical management structures.

Employees are likely to quit when they feel the company cares about their personal needs. As indicated in table 2, 52.6% representing 60 of the respondents have disagree with the assertion that Millicom Ghana Limited has put in enough measures to reduce staff turnover rate. This finding can further be confirmed by comparing the mean of 2.490 with its standard deviation of 1.107. An indication that the respondents have either strongly disagrees with the assertion or has remained neutral and with a wide dispersion of their responses. It is important to state that some employee turnover can be desirable since those who leave can often be replaced by individuals with more up-to-date knowledge and skills. The question here is how can Millicom Ghana Limited reduced undesirable employee turnover? From an organisation's standpoint, the effect depends a great deal on whether the employee is a high or a low performer. This possibility can be infer to the human resource and management practices of Millicom Ghana Limited which can be an internal problem but externally, pull factors from competitors to offer better compensation package can be a motivating factor to especially high performing employees who are seeking for new opportunities elsewhere. This result contravenes with Fullerton and Wempe (2009) where they indicated that effective implementation of lean reduces employee's turnover. Retaining good employees must be the priority of Millicom Ghana Limited.

Traditionally, the fundamental purpose of trade unions is to promote and protect the interests of their members. It is there to redress the balance of power between employees and employers. Under table 2, it can be seen that Unionisation of employees ranked last with a relative importance index of 0.412 with a corresponding mean and standard deviation of 2.060 and 1.139 respectively. This finding categorically implies that Millicom Ghana Limited does not allow its employees to neither belong nor form workers union in the organisation. The culture of Millicom Ghana Limited might be a barrier for not allowing unionization.

Benefits of lean implementation

This section of the study seeks to understand the kind of benefits derived from lean implementation in Millicom Ghana Limited. Increased Market share ranked fourth with relative importance index of 0.696, indicating that the company has seen some amount of rise in subscriber base over the last one year. This can be confirmed with a report obtained from National Communication Authority website on the market share of Telecommunication Companies in Ghana. This report stated that as at August 2016, the Subscriber base of Millicom Ghana Limited has increased from 5,211,811 as at the end of July 2016 to 5,225, 021 as at the end of August 2016. This indicates a percentage increase of 0.25and still ranked as third to MTN and Vodafone respectively in terms of market share as indicated by the National Communications Authority, (2016).

Table 3: Benefits of lean implementation in Millicom Ghana

Theme	Frequency			Description		Relative Importance Index
	Agree (%)	Neutral (%)	Disagree (%)	Mean	SD	
Improved Revenue	94 (82.4)	19 (16.7)	1 (0.9)	4.080	0.680	0.816
Waste Elimination in the area of work	82 (72)	27 (23.7)	5 (4.4)	3.750	0.698	0.751
Reduction in Operational and Capital expenditure	74 (64.9)	31 (27.2)	9 (7.9)	3.700	0.861	0.746
Increase market share	73 (64)	43 (37.7)	11 (9.6)	3.480	0.875	0.696
Inventory level reduction	49 (43)	57 (50)	8 (7)	3.440	0.776	0.688
Customer satisfaction with products and services	55 (48.3)	44 (38.6)	15 (13.2)	3.400	0.784	0.681
Downtime Reduction	52 (45.7)	37 (32.5)	25 (21.9)	3.250	0.955	0.649
Job Satisfaction	50 (43.9)	37 (32.5)	27 (23.7)	3.190	1.072	0.639

Source: Field Data, 2015

On top of themes listed under table 3 is improvement in revenue as a result of measures put in place by management. Improvement in revenue was ranked with a relative importance index of 0.816 and a mean of 4.080, indicating that Millicom Ghana Limited has seen an increase in revenue over the last one year. And this has been attributed to the various interventions put in place by management. Next on the finding list is the identification and elimination of waste by employees in their area of work with a relative importance index of 0.751 with a mean of 3.75 and a standard deviation of 0.698. The finding reveals that the employees of Millicom Ghana Limited are able to manage waste and are able to identify and uproot their causes quite effectively. This finding supports the works of several authors such as Levinson (2013), Simboli *et.al.* (2014) and Feld (2001) assertion that majority of companies that implement lean principles focus mainly on elimination of waste because according to them, it is quite easy to identify and eliminate waste.

Reduction in Operational and Capital expenditure was ranked third with a relative importance index of 0.746 and a mean of 3.7. This shows that there is a strong correlation between the responses of the respondents on this question, which confirms the Millicom Ghana Limited has derived some amount of benefit from the lean operations evident in their mode of operation. This finding align with Parker (2003) who emphasized that lean implementation benefits comes with a cost whereas Staats *et. al.* (2011) affirmed that effective lean implementation must focus on the whole process as a unit.

On the other hand, downtime reduction and job satisfaction did not show strong positive correlation from the relative importance index point of view. This revelation means Millicom Ghana Limited has done very little to improve cell site and network outages. It therefore calls for more pragmatic approach to reduce downtime in the network. The result also indicated that employees are not happy with management when it comes to job satisfaction. They are literally saying that their condition of service is not the best.

CONCLUSION AND RECOMMENDATION

The purpose of embarking on this study is to first of all find out if the telecommunication companies in Ghana know well about lean operation management and then go on to find out the level of lean implementation in the industry. Millicom Ghana Limited was selected as the case study company and based on the analysis of the data gathered; the study has shown that Millicom Ghana Limited has adopted lean operations management to some extent. This study has indicated that the telecommunication industry in Ghana knows and understand lean concept to some extent. This deduction has been made as a result of the study conducted with Millicom Ghana Limited and the major findings pointed to the fact that Millicom Ghana Limited stand a chance of increasing its market shares through prudent utilization of its resources by offering competitive prices in the market and also providing exactly what the consumer need rather than pushing products and services the organization deemed fit for its consumers. It is therefore imperative that mobile telecommunication companies operating in Ghana adopt and implement these outlined recommendations in order to remain competitive and increase their market share, sales growth and profit growth.

The outcome of this study reveals interesting findings with regards to telecommunication industry adopting lean operations management in their day to day running of their businesses. It is now clear that the telecommunication industry has adopted the use of lean and quality tools and systems to monitor and control their operations. However, the limitation of the study must be addressed. Firstly, the findings of this study are generalized based on the survey conducted with Millicom Ghana Limited. It is probable that if this study is extended to all the telecommunication industry players in Ghana, the result of the study may reveal different results and pattern. Therefore further study is needed in this regards to investigate whether or not the concept of lean is widely adopted by the major key players in the Ghanaian telecommunication industry.

Furthermore, the study dwells on managerial perception as a means of measuring the level of lean implementation in the Ghanaian telecommunication industry. This measurement approach is very subjective even though some researchers of lean operations management had resorted to this perceptual measurement approach. It is worth noting that, the use of objective measurement method, such as conducting value stream mapping (VSM), return on equity, and return on assets may reveal different results. So, it would be worthwhile for future studies to employ objective measurements to better understand lean implementation levels of the telecommunication companies.

The study recommends the undertaking of a value stream mapping analysis for Millicom Ghana Limited to clearly distinguish its core values adding activities from non-value adding activities and then go ahead to undertake a future state analysis of the operations. In order to maximize employee output, employees must be cross-trained in various disciplines related to their area of work. This will enable them better understand the strategic direction of their respective sections and therefore contribute positively to its success. In order to fully realize the benefits that lean operation offers, there is the need for top management to show commitment in leadership, change management, providing lean training and effectively communicating the vision of lean concept at every organizational level.

References

Bethlehem, J. (2009), Applied Survey Methods: A Statistical Perspective. John Wiley & Sons, Inc. New York.

Bhasin, S. (2015). Lean Management Beyond Manufacturing: A Holistic Approach. Springer International Publishing, Switzerland.

Bordens, K.S. and Abbott, B.B. (2008). Research Design and Methods. A Process Approach. 8th Edition. McGraw-Hill Companies Inc. New York.

Denscombe, M. (2007). The Good Research Guide for small-scale social research projects. 3rd Edition. Open University Press. Maidenhead.

Del Val, M.P. and Fuentes, C.M. (2003). Resistance to change: a literature review and empirical study. Management Decision, 41(2), pp. 148-155.

De Vaus, D.A. (2002). Surveys in Social Research. 5th Edition. Allen & Unwin. Crows Nest.

Feld, W.M. (2001). Lean Manufacturing: Tools, Techniques and How to Use Them. St. Lucie Press. New York.

Fullerton, R. R. and Wempe, W. F. (2009). Lean manufacturing, non-financial performance measures, and financial performance. International Journal of Operations & Production Management, 29(3), pp. 214-240.

George, M.O. (2010). The Lean Six Sigma: Guide to Doing More with Less. John Wiley & Sons Inc. Hoboken.

Gitlow, H.S. (2009). A Guide to Lean Six Sigma Management Skills. CRC Press. New York.

Hancock, D.R. and Algozzine, B. (2006). Doing Case Study Research. Teachers College Press. New York.

Hallgren, M., and Olhager, J. (2009). Lean and agile manufacturing: external and internal drivers and performance outcomes. International Journal of Operations & Production Management, 29(10), pp. 976-999.

Holm, M. and Ahlstrom, P. (2010). Lean Service - a literature review. In: Proceedings of the 17th International Annual EurOMA Conference, Portugal, June, 2010, pp. 1-10.

Kimberlin, C. l. and Winsterstein, A.G., 2008. Validity and Reliability of Measurement Instruments used in research. American Journal of Health-System Pharmacy, 65(23), 2276-2284.

Levinson, W.A. (2012), Lean Management System LMS: 2012 A Framework for Continual Lean Improvement. CRC Press. New York.

Mann, D. (2005). Creating a Lean Culture: Tools to Sustain Lean Conversions. Productivity Press. New York.

McKinney, J. and Abbott, M.L. (2013). Understanding and Applying Research Design. John Wiley & Sons Inc. Hoboken.

Modi, D. B. and Thakkar, H. (2014). Lean thinking: reduction of waste, lead time, cost through lean manufacturing tools and techniques. International Journal of Emerging Technology and Advanced Engineering, 4(3), pp. 339-344.

National Communications Authority. (2016). Industry Information – Telecom Subscriptions for August 2016. National Communications Authority. Accra.

Nawanir, G., Lim, K. T., and Othman, S. N. (2013). Impact of lean practices on operations performance and business performance: some evidence from Indonesian manufacturing companies. Journal of Manufacturing Technology Management, 24(7), 1019-1050.

Parker, S.K. (2003). Longitudinal Effects of Lean Production on Employee Outcomes and the Mediating Role of Work Characteristics. Journal of Applied Psychology, 88 (4), pp. 620-634.

Piercy, N. and Rich, N. (2009). High quality and low cost: the lean service center. European Journal of Marketing, 43 (11), pp. 1477-1497.

Plenert, G. (2007). Reinventing Lean. Butterworth-Heinemann. Oxford.

Rothwell, W.J., Graber, J. and McCormack, N. (2012). Lean But Agile: Rethink Workforce Planning and Gain a True Competitive Edge. AMACOM. New York.

Ruffa, S.A. (2008). Going Lean. AMACOM. New York.

Simboli, A., Taddeo, R. and Morgante, A. (2014). Value and Waste in Manufacturing. An Overview and a New Perspective Based on Eco-Efficiency. Admnistrative Sciences, 4(3), 173-191.

Staats, B.R. Brunner, D.J. and Upton, D.M. (2011). Lean principles, learning, and knowledge work: Evidence from software services provider. Journal of Operations Management, 29 (5), pp. 376-390.

Strang, K.D. (2015). The Palgrave Handbook of Research Design in Business and Management. Palgrave Macmillan. New York.

Wilson, L. (2010). How to Implement Lean Manufacturing. McGraw-Hill Companies. New York.

Womack, J.P. and Jones, D.T. (2003). Lean Thinking: Banish Waste and Create Wealth in Your Corporation. 2nd Edition. Simon & Schuster. New York.

Archives of Business Research – Vol.5, No.9
Publication Date: Sep. 25, 2017
DOI: 10.14738/abr.59.3638.
Adeyemi, I. I., Isaac, O. A., & Olufemi, A. S. (2017). Strategic Management: A Policy To Enhance Sustainable Business Development In Small And Medium Scale Enterprises In Nigeria. *Archives of Business Research*, 5(9), 108-118.

SOCIETY FOR SCIENCE AND EDUCATION

Strategic Management: A Policy To Enhance Sustainable Business Development In Small And Medium Scale Enterprises In Nigeria

irefin Isaac Adeyemi
African Institute for Science Policy and Innovation
ObafemiAwolowo University, Ile-Ife, Nigeria.

Oyebola Abiodun Isaac
African Institute for Science Policy and Innovation
ObafemiAwolowo University, Ile-Ife, Nigeria.

Akintelu Sunday Olufemi
Department of Business Administration
Samuel Adegboyega University, Ogwa, Nigeria

ABSTRACT

The paper examined the impact of Strategic Management on the performance of Small and Medium Scale Enterprises (SMEs) via competitive advantage, sales and profit. This was with the view of assessing the impact of Strategic Management on sustainable growth in Nigerian SMEs. A descriptive survey research design was employed for the paper using structured questionnaire and oral interview for data collection. The questionnaire was administered on thirty SMEs owners in four states of Southwest Nigeria comprising Lagos, Ogun, Osun and Oyo State. Thus, a total of 120 respondents were purposively sampled for the study. Data collected were analyzed using frequency tables, simple percentages and chi-square test. The results showed that Strategic Management practices significantly assist SMEs to gain competitive advantage ($X^2 = 23.04; p < 0.05$). The results further showed that Strategic Management significantly increased their sales ($X^2 = 19.7; p < 0.05$) and improved their profits levels($X^2 = 42.8$; $p < 0.05$). The paper concluded that, Strategic Management has contributed immensely to the sustainable growth of Small and Medium scale Enterprises in South-West Nigeria and recommended that Strategic Management practice should be adopted by all small and medium business firms in Nigeria.

Keywords: Strategic Management, Competitive Advantage, Small and Medium Scale Enterprises (SMEs), Growth and Development

INTRODUCTION

The key issue that unites all discussions of strategy is a clear sense of an organization's objectives and a sense of how it will achieve these objectives. It is also important that the organization has a clear sense of its distinctiveness. [1]stated that strategy is about achieving competitive advantage through being different – delivering a unique value added to the customer, having a clear view of how to position yourself uniquely in your industry. Strategic management is an ongoing process that evaluates and controls the business and the industries in which the company is involved; assesses its competitors and sets goals and strategies to meet all existing and potential competitors; and then reassesses each strategy annual or quarterly [i.e. regularly] to determine how it has been implemented and whether it has succeeded or needs replacement by a new strategy to meet changed circumstances, new technology, new competitors, a new economic environment, or a new social, financial, or political environment [2].

[3] argues that strategy is no longer about planning or 'visioning' because we are deluded if we think we can predict or control the future – it is about using careful analysis to understand and influence a company's position in the market place. Also, [4] argues that the best strategy is geared towards radical change and creating a new vision of the future in which you are a leader rather than a follower of trends set by others. According to Hamel, winning strategy is a function of foresight and vision. Therefore, an effective strategic management requires that managers in small scale enterprises should address important issues continuously and simultaneously. This could only be achieved by constantly seeking answers to a number of problems that may likely affect the business operation and ensuring that every unit in the organization plays a significant role in making the organization strategic.

However, small scale industries have been recognized globally by government and development experts as a potential engine of economic growth and a major factor in promoting private development and partnership. Of the 30.23 million businesses in the United States, approximately 30.14 million, or 99.7 percent, are considered "small". Although there is no universal definition of a small business, a common delineation of a small business is one that employs fewer than 100 people. Thus, the role of small scale industry in economic growth brought about the need to understand the role of strategic management in small scale industries in Nigeria. In today's fast growing global economy in which the quest for innovation has taken the centre stage of all human drive for progress and well being, the implementation of strategic management must constitute prime elements in the growth strategy of small and medium scale enterprises in Nigeria. Each small and medium scale enterprises needs to develop a competitive advantage to enable it compete effectively.

Most owners and managers of small and medium scale enterprises (SMEs) in Nigeria are inadequately aware of the contribution of strategic management practice to the success of their organization and the way in which it can be undertaken. Many organizations make use of short term method and outdated evaluation techniques. Managers become easily wedded to a financially oriented formula for measuring the performance of their organization yearly while the time required for a strategy or group of strategies to become fully functional is often much greater than the measurement used. These factors put a severe problem on the role of strategic management in small scale industries. If there is a significant awareness of the role of strategic management, an organization can develop future oriented thinking, which is more valuable than merely focusing on short term success[5]. Governments in the past have ignored serious policy support needed to galvanize this sub-sector of the economy. On the other hand, resistance to change by players or operators has hampered full utilization of the little support so far given by governments. While there were many researchers into the determinants of growth in Small and Medium Scale enterprises, there has been little attention in the area of the application of strategic management in the growth and development of small and medium scale enterprises in Nigeria, hence this study.

The objective of this study is to assess the impact of strategic management practices to sustainable growth of Small and Medium Scale Enterprises (SMEs) in South-Western Nigeria. Specially, the study assesses the extent of the use of strategic management plans in SMEs; examine the factors affecting implementation of strategic policies in SMEs operations; and evaluate the importance of strategic management practices to SMEs development in Nigeria. These were done to determine if the practice of strategic management can be a major solution to the problems that may likely affect the operations and growth of SMEs in South-West Nigeria. Three hypotheses were tested in this study. They are:

i. Strategic planning does not significantly assist in gaining competitive advantage
ii. Strategic Management planning does not significantly increase sales volume

iii. Strategic Management practice does not significantly increase profits of Small and Medium Scale enterprises.

LITERATURE REVIEW

Small and Medium Scale Enterprises: A Strategic Importance

The planners of developing nation attach significant importance to the economic ills of their nation. Thus, the role of small industries in the development process has been the subject of a large number of studies over the past four decades. [6] Small and medium scale would be referred to as cottage industry or small business enterprises. Industry is used here to include mining, lumbering, agricultural, manufacturing, and commercial and other service industries. The small and medium scale enterprises could be best defined based on some of its characteristics [7]. Typically they are characterized by the following features in varying degrees:
They are typically small, often rural-based and family owned. They have simple management structure which generally combines ownership and management in one person; they revolve around the owner/manager rather than separating ownership from control/management. They are flexible in decision making and there exists informal employer-employees relationship. They are widely dispersed in any economy, rely on low cost raw materials low energy cost and low division of labour. They are large labour intensive with low-level of technology. They are catalyst and engine of growth in most economies [7].

Strategic management is a process that has various activities and this must be performed in systematic manner. It is dynamic rather than static in which events and relationships are seen as dynamic, continuous, flexible and as such must be considered as a whole; a dynamic by many variables [8]. [9]defined strategic management as the set of decision and actions in formulation and implementation of strategies designed to achieve the objectives of an organizations. [10]with a similar pattern review that strategic management is primarily concerned with relating the organization to the environment, formulating strategies to adapt to that environment and assuring that implementation of strategies take place. [11] has taken a limited view of strategic management as that set of decisions and actions which lead to the development of an effective strategy or strategies to help achieve corporate objectives. However, an appraisal of various definitions of strategic management suggest that it deals with the following aspects: continuously relating the organization to its environment; formulating suitable strategies to maintain this relationship; implementing strategies and ensuring through evaluation and control that strategies are implemented properly and produce intended results [8]. The inference drawn here is that strategic management deals with the future implication of present decision. According to[12], strategic management process consists of four major steps: analysis, formulation, implementation and adjustment evaluation.

Strategic management comprises five key facets: goal-setting, analysis, strategy formation, strategy implementation, and strategy monitoring. These are the integral elements that, when applied together, distinguish strategic management from less comprehensive approaches, such as operational management or long-term planning. Strategic management is an iterative, continuous process that involves important interactions and feedback among the five key facets.

Approaches to Strategic Management

There are different approaches to strategic management in decision making because an organization may differ in terms of: (i) degree of formulation in decision making process from highly formalized and structured to informal and unstructured process. (ii) managerial power relationship from the dominant role of the strategist to compromise of different interest groups and (iii) nature of environment from highly complex to simple and stable. These differences determine the kind of approach individual organization would adopt in their decision making process, including strategic decision making. However, various approaches that are available for adoption in strategic decision have been described by [13]. He classified these approaches in three forms, namely: entrepreneurial, planning and adoptive while [10] has a five-fold classification, they are formal structured, intuitive anticipatory, entrepreneurial-opportunistic, incremental and adaptive approaches have common factor than differences and therefore can be grouped together. Entrepreneurial approach is basically based on intuition and anticipation as these elements require a high level of vision in strategists to anticipate opportunities and threats posed by the relevant environment.

Strategic Management Practice in Small and Medium Scale Enterprises

Strategic management researchers have largely ignored the small and medium scale enterprises sector preferring to concentrate in large organization with recognizable "personnel" structures [14]. However, the strategic management is an important aspect of any country's economy already employing large numbers of people and embodying future growth potential.

Given the importance of small business enterprise to the economy, it is disheartening to note that scant attention in the small business enterprise research literature is given to the study; strategic management practices in Nigeria. Research team over the years found access difficult because small business owners are busy and perhaps regard academics with some suspicion. So, defining the role of strategic management in some organizations is problematic because of limited reseawrch findings available. [15] reasonably asked how useful or valid strategic management theory can be if it is based almost entirely on research conducted on large organizations. It is relevant to the needs of practitioners or general managers in small or medium sized enterprises; and the bulk of business fall into the small business category.

METHODOLOGY

The study covered small and medium scale business established with a number of staff between ten and three hundred and with a minimum capital of 200,000 naira and maximum capital base of 20 million naira in four states: Lagos, Ogun, Oyo and Osun States. A descriptive survey research design was adopted for the study. It involved the researcher collecting information directly from participants by posing questions relevant to the study to them. The questions were presented orally, through an interview and designed questionnaire. The sample population for the study was 120, which comprised small and medium scale business owners and managers across four states; Lagos, Ogun, Oyo and Osun states in Southwestern Nigeria.

From the population, thirty (30) respondents (SMEs owners) were selected from each state making a total of one hundred and twenty (120) respondents using purposive sampling technique. A questionnaire titled "Strategic Management and Sustainable Development in SMEs Questionnaire (S.M.S.D.Q) was used to collect data for the study. The questionnaire was divided into three sections: The first section was on personal information about the respondent's sex, age, marital status, educational level and working experience. The second section contained questions that determined, examined and accessed strategic management practice in Small and Medium Scale Enterprises (SMEs). The third section contained open ended questions that recommended or proffered solutions and provided information that are relevant to the study. Out of the 120 respondents selected for the study, only eight four (84) respondents completed their questionnaires very well and used for the analysis. Data collected were analyzed using relevant descriptive and inferential statistical techniques.

RESULTS AND DISCUSSION

Socio-Demographic Characteristics of Respondents

Table 1 revealed that male respondents were more than female respondents; 56 (66.7%) and 28 (33.3%) respectively. This was an indication that majority of the SMEs are owned by men. Also, 2 respondents, representing 2.4% of the respondents fall in 13-20 years bracket, 4 representing 4.8% of the respondents fall in 21-30 years bracket, with the highest frequency 51 (60.7%) of the respondents in 31-40 years bracket, 12 respondents representing 14.3% of the total respondents fall into the 41-50 years bracket, while 51 and above age bracket has 15 respondents (17.9%). Furthermore, on academic background, 6 respondents have only primary education representing 7.1% of the total population, 13 (15.5%) respondents and secondary education and 65 respondents, representing 77.4% of the respondents have tertiary education. In terms of working experience, table 4.1 shows that 15 representing (17.65) respondents' falls between 1-5years, 22 respondents fall between 6-10 years category, representing 26.2% of the total population, 30 respondents falls between 11-15 years category representing 35.7% of the total population and 17 respondents falls between 16years and above, representing (20.2% of the total population. In terms of years of establishment, table 4.1 shows that 15 representing (17.65) respondents' falls between 1-5years, 24 respondents fall between 6-10 years category, representing 28.6% of the total population, 33 respondents falls between 11-15 years category representing 39.3% of the total population and 12 respondents falls between 16years and above, representing 14.3% of the total population. Furthermore, the table shows that majority of the business owners (45.2%) were into productive activities (such as pure water business, metal fabricators, bakery and arts and designs). This is followed by those who venture into service business like distribution of goods, tailoring, restaurant and laundry businesses (29.8%) and then by those involved in extractive business like farming and those selling chemicals (25.0%).

Table 4.1: Socio-Demographic Distribution of Respondents

Variable		Frequency		Percent (%)	
Gender	Male	56		66.7	
	Female	28		33.3	
	Total	**84**		**100.00**	
Age:	13-20yrs	2		2.4	
	21-30yrs	4		4.8	
	31-40yrs	51		64.3	
	41-50yrs	12		14.3	
	51 & above	15		17.3	
	Total	**84**		**100.0**	
Educational Level:	None	-		-	
	Primary	6		7.1	
	Secondary	13		15.5	
	Tertiary	65		77.4	
	Total	**84**		**100.0**	
Working Experience:	1-5 yrs	15		17.6	
	6-10 yrs	22		28.6	
	11-15 yrs	30		39.3	
	16 & above	17		14.3	
	Total	**84**		**100.0**	
Year of Establishment:	1-5 yrs	15		17.6	
	6-10 yrs	24		28.6	
	11-15 yrs	33		39.3	
	Above 15 yrs	12		14.3	
	Total	**84**		**100.0**	
Nature of Business:	Service Business	25		29.8	
	Extractive Business	21		25.0	
	Productive Business	38		45.2	
	Total	**84**		**100.0**	
Annual Turnover in a fiscal year		**Before**	**(%)**	**Now**	**(%)**
	N50,000 – N99,000	6	7.1	1	1.2
	N100,000-N149,000	10	11.9	6	7.1
	N150,000-N199,000	10	11.9	8	9.5
	N200,000-N249,000	19	22.6	13	15.5
	N250,000-N299,000	15	17.9	13	15.5
	N300,000-N349,000	8	9.5	14	16.6
	N350,000-N399,000	6	7.1	14	16.6
	N400,000-N449,000	6	7.1	8	9.5
	N450,000-N500,000	4	4.8	7	8.3
	Total	**84**	**100.0**	**84**	**100.0**

Source: Filed survey, 2017

Extent of the use of Strategic Management Plans in SMEs

From table 2, majority of the respondents (61.9%) indicated that they often applied strategic plans to their business. 14.2% seldom applied it, 4.8% rarely applied it, while 19.1% did not apply it at all. Also, from table 4.3, majority of the respondents (56.0%) often reviewed their strategic plans to meet the current situation in the market. This is followed by those who applied it seldomly (17.9.0%), 7.1% of the respondents rarely reviewed their strategic plans, while 19.1% did not review or adjust their strategic plans. However, more than 41.0% of the respondents indicated that they really encountered problems in formulating and implementing strategic plans in their business, while more than 28.0% indicated that they do not encountered any problem in formulating and implementing their strategic plans. It was only few; 9.5% and 14.3% that often and seldom encountered problems in formulating and implementing strategic plans to their businesses. This indicated that majority of the small and medium business owners in the four selected states adopted and implemented strategic policies in their day-to-day business activities. The implication is that small and medium business owners believed in the use of strategic plans to sustain and develop their businesses.

Table 4.2: Extent of the Use of Strategic Management Plans in SMEs

Items	**Often (%)**	**Seldom (%)**	**Rarely (%)**	**Not at all (%)**
How often do you apply strategic plans to your business?	52 (61. 9)	12 (14.3)	4 (4.8)	16 (19.1)
How often do you review or adjust your strategic plans?	47 (56.0)	15 (17.9)	6 (7.1)	16 (19.1)
How often do you encounter problems in formulating strategic plans?	12 (14.3)	16 (19.1)	35 (41.7)	21 (25.0)
How often do you encounter problems in implementing strategic plans?	8 (9.5)	12 (14.3)	40 (47.6)	24 (28.6)

Source: Filed survey, 2017

Factors Affecting Implementation of Strategic Policies in SMEs Operations

Table 3 shows that majority of the SMEs owners (70.2%) indicated that it was lack of innovation; that is, inability to adjust to the changing business environment that is affecting formulation and implementation of strategic management practices to the operations of small and medium scale enterprises in South Western Nigeria. This is followed by problem of finance (27.4%). That is, some SMEs find it difficult to finance the strategic plans laid down to achieve certain business success. Furthermore, few of the respondents (2.4%) have no reason for the problem encountered in formulating and implementing strategic plans for their business. Moreover, majority of the business owners (41.7%) indicated that access to customers is the bane of business success where they are operating. Poor infrastructures such as good roads and telecommunication systems were also considered as factors affecting their business success (33.3%), while rivalry/ competition from firms in the same business unit (25.0%) is affecting the progress of their business. However, those that adopted strategic business plans are enjoying sustainable development in their business in terms of competitive advantage, increased sales and sizeable profits. Although a sizeable number operates in an environment with different types of business (41.7%) yet, majority are operating in an environment with similar business (48.8%). This implies that the importance of strategic management practices to sustainable SMEs development cannot be over emphasized.

Table 3: Factors Affecting the Implementation of Strategic Policies in SMEs Operations

S/n	Items	Frequncy	Percent
1.	Factor responsible for problems encountered in formulating and implementing strategic plans		
	• Finance	23	27.4
	• Lack of Innovation	59	70.2
	• No Reason	2	2.4
	Total	**84**	**100.0**
2.	Factors Affecting business success in your environment		
	• Competitors	21	25.0
	• Access to Customers	35	41.7
	• Poor infrastructure	28	33.3
	Total	**84**	**100.00**
3	Type of business environment you operate in		
	• Isolated Environment	8	9.5
	• Environment with similar business	41	48.8
	• Environment with different types of business	35	41.7
	Total	**84**	**100.0**

Source: Filed survey, 2017

Importance of Strategic Management Practices to SMEs Development in South-West, Nigeria.

From table 4, majority of the respondents (76.2%) agreed that strategic management practices were relevant in small and medium scale business operations, while few respondents (23.8%) disagreed. Also, majority of the SMEs owners (77.4%) agreed that strategic management practices should be employed by all to achieve business success. This was corroborated with agreement from majority of the respondents (67.9%) and (76.2%) to the fact that strategic management influences business positively and assisting in gaining competitive advantage over others in the same business line respectively. Also, (67.9%) of the respondent indicated that strategic management practices increase sales growth as well as contributing significantly to increase in the profit level of those who applied it. This is further buttressed by the data on Table 4.1 where the annual turnover of those who applied strategic plans moved from between N150, 000 – N199, 000 per annum to between N350, 000 – N399, 000 per year. This result indicated that application of strategic management policies has improved the level of competitive advantage, sales and profits of the majority of small and medium scale enterprises owners in the selected four States in South-Western Nigeria.

Table 4: Importance of Strategic Management Practices to SMEs Development

Items	Agreed (%)	Undecided (%)	Disagree (%)
Strategic management practices is relevant in small and medium scale business operations	64(76.2)	-	20(23.8)
Strategic management practices aid in both short time and longtime planning to achieve business success	65(77.4)	1(1.2)	18(21.4)
Strategic management influences your business positively	57(67.9)	-	27(32.1)
Strategic Planning assists in gaining competitive advantage over others in the same business	64(76.2)	2(2.4)	18(21.4)
Strategic planning affects sales growth and contribute significantly to increase in profits of your business	57(67.9)	3(3.5)	24(28.6)

Source: Filed survey, 2017

HYPOTHESES TESTING

Hypothesis One

H_o: Strategic planning does not significantly assist in gaining competitive advantage

To test this hypothesis, the respondents' responses to the section that seek to test this aspect were obtained and subjected to chi-square test.

The hypothesis tested shows that the value of chi-square (χ^2) calculated is greater than chi-square (χ^2) tabulated. Hence the null hypothesis is rejected in favour of the alternative hypothesis. This means that strategic management assists in gaining competitive advantage.A summary of the result is presented in table 5.

$X^2 = \frac{\Sigma(O-E)^2}{E} = 23.04.$

Level of significance = 0.05

X^2 tabulated = 3.84

Table 5: Influence of Strategic Management Plans on Gaining Competitive Advantage

Strategic Management	O	E	O-E	$(O-E)^2$	$(O-E)^2/E$
Assist	64	42	22	484	11.52
Does not assist	20	42	22	484	11.52
Total	82			X^2	23.04*

Source: Filed survey, 2017

Expected Frequency, E = 84/2 = 42 **means significant at 5%*

Hypothesis Two

H_O: Strategic Management planning does not significantly increase sales volume

To test this hypothesis, the respondents' responses to the section that seek to test this aspect were obtained and subjected to chi-square test. A summary of the result is presented in table 6.

Table 6: Influence of Strategic Management Plans on Sales Volume

Strategic Management	O	E	O-E	$(O-E)^2$	$(O-E)^2/E$
Increased Sales	56	42	14	196	4.67
Does no Increased Sales	28	42	14	196	4.67
Total	82			X^2	9.34*

Source: Filed survey, 2017

Expected Frequency, E = 84/2 = 42 **means significant at 5%*

$X^2 = \frac{\sum(O-E)^2}{E} = 23.04.$

Level of significance = 0.05

X^2 tabulated = 3.84

The result of the hypothesis above shows that χ^2 calculated. Hence, null hypothesis was rejected, which indicates that strategic management planning has significant increase on the sales volume of SMEs owners.

Hypothesis Three

H_0: Strategic Management practice does not significantly increase profits of Small and Medium Scale enterprises.

To test this hypothesis, the respondents' responses to the section that seek to test this aspect were obtained and subjected to chi-square test. A summary of the result is presented in table 7.

Table 7: Influence of Strategic Management Practices on Profits of SMEs

Strategic Management	O	E	O-E	$(O-E)^2$	$(O-E)^2/E$
Improved profits	72	42	30	900	21.4
Does no improved Profits	12	42	30	900	21.4
Total	84			X^2	42.8*

Source: Filed survey, 2017

Expected Frequency, E = 84/2 = 42 **means significant at 5%*

$X^2 = \frac{\sum(O-E)^2}{E} = 42.8..$

Level of significance = 0.05

X^2 tabulated = 3.84

Based on the above result, $\chi 2$ calculated is greater than χ^2 tabulated. Hence, Ho is rejected while alternative hypothesis is accepted. This indicates that Strategic Management practices significantly increase profits of Small and Medium Scale enterprises.

CONCLUSION AND RECOMMENDATIONS

This research work shows that strategic management can go a long way to influence the small and medium scale enterprises in Southwestern Nigeria. However, it was discovered from the findings that strategic management as adopted by SMEs consisted of managerial decisions that are related to the organization and its environment. Hence, it was discovered that there was a significant link between strategic management and organizational effectiveness because most businesses' strategic management adopts the holistic systems approach to the issues of management. It was a management process designed to achieve the firm's vision and mission. Generally, it was discovered that many small businesses never become large and many were unsuccessful, but with the adoption of strategic management practices, small businesses can grow and even become large. Conclusively, this study has been able to acquaint individuals that may wish to start a new business to exercise or imbibe strategic management as a process to achieve the firm's vision and mission with analysis of firms' internal and external opportunities and threats.

The underlying concept of effective strategic management practices for small and medium firms was borne out of constant failure of small and medium scale businesses in Nigeria, which is why the researcher makes the following recommendations.

- There should be a general overview of the organization's goals and objectives. This to a large extent will support the strategic plan that will guide the enterprise in its sufficiency.
- Small business owners should inculcate the habit of adopting a particular strategic policy to help manage the process of achieving the desired target and growth of their businesses.
- The strategic policy adopted should be flexible to give room for variations that may occur due to economic and social changes that may likely occur, thus small and medium scale business owners in Nigeria should take note of the adverse effect of threats that may be posted by the business environment before embarking on a particular strategic policy.

References

Porter, M. E., What is a strategy? Harvard Business Review (November-December):1996. 61-78.

Lamb, R. B., Competitive strategic management, Englewood Cliffs, NJ: Prentice-Hall, 1984

Kay, J., Strategy and Control' in Financial Times Handbook of Management 2 ndedn, 2000

Gary H.,*Leading the Revolution* (Harvard Business School Press, 2000) ISBN 978-0-452-28324-4

Senge, G.I., *Business Policy: Strategic Management.* New Delhi: Sultan Chand and Sons. 1991.

Achumba, I. C.,*Strategic Marketing Management in the 21st century,* McWilliams and capital publisher Inc. U.S.A. 2000

Ogundele, J.K.,*Management and Organization, Theory and Behaviour.* Mologin Nominee Publications 2005.

Prasad, L.M.,*Business Policy: Strategic Management.* New Delhi, Sultan Chand and sons.2002.

Pearse A. and Robinson, R. B.,*Strategic Management,* Delhi: ALTRI. 1999.

Steiner C.A., Miner J. B. and Gray,*Management Policy and Strategy: Text and cases,* New York: Macmillan. 1982

Glueck, W. Business policy, strategy formation, and management action, 2ed. New York: McGraw-Hill, 1976.

Robert, A.P.,*Strategic Management: Building and Sustaining Competitive Advantage* Australia: South Western Village Publishing. 2000.

Minzberg, H., Strategic Doctrine under Five. *Financial times,* 15 October, Prentice Hall. 1982.

Hendy, C.,*Human Resources Management: A Strategic Approach to Employment,* Henemen, Butterworth Henemen. 1995.

Henemen, R. L. Tensky S. W. Camp S.M., Human resources management practices in small and medium – sized enterprises. *Entrepreneurship theory and practice.* 2000.

Archives of Business Research – Vol.5, No.9
Publication Date: Sep. 25, 2017
DOI: 10.14738/abr.59.2885.
Dada, R. A., Adebayo, I. A., & Adeduro, O. A. (2017). An Assessment of Revenue Mobilization in Nigeria Local Government: Problems and Prospects. *Archives of Business Research,* 5*(9),* 119-127.

An Assessment of Revenue Mobilization in Nigeria Local Government: Problems and Prospects.

Raphael Adekola Dada
Department of Accounting
Ekiti State University. Ado-Ekiti, Nigeria

Isaac Adesodun Adebayo
Department of Accounting
Ekiti State University. Ado-Ekiti, Nigeria

Ogunmakin Adesola Adeduro
Department of Accounting
Ekiti State University. Ado-Ekiti, Nigeria

ABSTRACT

This study assessed the prospects and problems of revenue mobilization in Nigerian Local Governments. It specifically determined the significant impact of development on internally generated revenue of local government in Nigeria; assessed the impact of financial misappropriations on internally generated revenue in the local government in Nigeria. The study employed the use of closed ended and likert scale ranked, well-structured questionnaire as the source of data collection. The responses of the questionnaire were coded and later analyzed with the use of inferential (multiple regression) statistics. The study revealed that development has significant impact of 21.9% (t= 3.575 and p< 0.05) on internally generated revenue of local government in Nigeria, while financial misappropriation has significant impact of 26.5% (t= 4.668 and p<0.05) on internally generated revenue of local government in Nigeria. The study concluded that the level of development (human and infrastructural) and the rate of financial misappropriation are determinants to the revenue base of Nigerian local governments. It is recommended that Nigerian local government authorities should ensure both human and infrastructural development in their respective constituencies as this is influential on the level of revenue derivation. In addition, local government authorities should ensure a carrot and stick approach whereby members of staff are rewarded on performance and strictly punished for perpetrating financial misappropriations in other to curb the menace of the anathema on the fabric of the society.

Key words: local government, revenues mobilization, revenue allocation, sources of revenue

INTRODUCTION

The need to catalyze balance development, maximize citizens' participation and arouse government responsive necessitates the creation of local government. The local government serves as a form of political and administrative structure facilitating decentralization, national integration, efficiency in governance, and a sense of belonging at the grassroots (Adedokun, 2012). The local government is a unit of administration all over the world and a critical tier of government because of its closeness to the people (Gboyega, 1987; Agagu, 2004). Local government also appears to both the people and government as intermediary institution that relays the opinions and demands of the grassroots to a higher government (Lawal and Abegunde, 2010).

Local governments in Nigeria are potentially very important for social and economy roles that the constitution bestows on them as they play a significant role in generating revenue and encouraging civil involvement, as well as creating a visible link between taxes and service delivery. According to Uhunmwuangho & Epelle (2008), every local jurisdiction has its unique economic, social and physical characteristics and its historical tradition which are better understood by its people. Thus, the Local Government Areas are created to provide the services which the Federal and State Governments cannot easily undertake due to their remoteness from the local communities. Fosu (2012), outlines the importance of local revenue to Local Governments as follows: Financing administration costs; Financing maintenance costs and thus promoting ownership of projects; Permits collection of localized and low yielding revenues; Guarantees sustainability of service delivery and autonomy of local governments; Regulates businesses and provides important infrastructure and services such as markets and public conveniences at a charge; Reduces pressure on central governments and reliance on donors.

But various studies as Olusola, (2011); Akindele and Obiyan,(2002) and Ekpo and Ndebbio (1998), have shown that local governments in Nigeria depend solely on statutory allocations from the federal government. In recent times, Nigerians has been experiencing a dwindling pattern in the federal allocation because most of the federal government revenue is from petroleum proceeds. There is less demand for petroleum in the world market as others developed nations of the world are shifting away from petroleum as major sources of energy. Then, the obligation lies on the local government to work on their internal revenue efforts to be able to accomplish its goals in the local community. Local governments now face more challenges in terms of struggling to be less dependent on the Federal and the state governments for financial resources. Though, there various allocation system mandates that a certain fraction of the Federation Account be allocated to local governments, these funds are not enough to meet expenditure requirements, since it's from oil proceed that has witness dwindling over a year ago which the Nigeria Government still find it difficult to meet her obligations(Olusola, 2011),. The problem of lack of fiscal transparency as a result of mismanagement of funds, corruption, poor internal control, lackadaisical attitude to government work and property still abounds. The question that comes to mind is that if the statutory allocation is not forthcoming, if oil is de-emphasized in the economy what would be the lot of local governments? How are they to survive if this should occur? Hence, this study examines the areas and ways of boosting internally generated revenue of local governments in Nigeria and assess the impact of internal generated revenue on the local government revenues (Lawa, 2010; Agbu, 2004).

The 1979 constitution empowered the national Assembly to determine what proportion of the federation account and revenue from a state to be allocated to the local government. In 1981, the National Assembly fixed these proportions at 10percent of the federation account and 10 percent of the total revenue of the state. In 1985, the state's proportion still remains at 10 percent of the internally-generated revenue; local governments' allocation from the federation account was later adjusted to 20 percent.

It was further increased to 25 per cent with the arguments that local governments are expected to take on larger developmental responsibilities. The revenue allocation has continued to vary in proportion over the years. At present, local government receive 20 per cent share of the federation account. In addition, proceed from the value added tax (VAT) are also allocated to them.

Ekpo and Ndebbio (1998) stated that in 1976, local government reforms states that the internal revenue sources of local governments includes: Rates, which include property rates, education rates and street lighting; Taxes such as community, flat rates and poll tax; Fines and fees, which include court fines and fees, motor park fees, forest fees, public advertisement fees, market fees, regulated premises fees, registration of births and deaths and licensing fees; and Miscellaneous sources such as rents on council estates, royalties, interest on investment and proceeds from commercial activities.

OBJECTIVES OF THE STUDY

The broad objective of the study is to assess the prospect and problems of revenue mobilization in Nigeria local governments. However, the specific objectives were:

i. determine the significant impact of development on internally generated revenue of local government in Nigeria;
ii. assess the impact of financial misappropriations on internally generated revenue in the local government in Nigeria.

RESEARCH QUESTIONS

The following research questions were raised to pilot the research work.

a) Does development have significant impact on local government internally generated revenue in Nigeria?
b) What effect do financial misappropriations have on the effective realization of internally generated revenue?

Conceptual Clarifications

The term revenue generation in Nigeria local governments is basically derived from tax and non-tax sources. Agya, Ibrahim and Emmanuel, (2015); Abubakar (1999) stated that revenue is a general term for all monetary receipts accruing from both tax and non tax sources as well as fees, grants and contributions constitute the live wire of the local government. Olaoye (2008) viewed tax as a system of imposing compulsory levy on all income, goods, services and properties of individuals, partnership, trustees, executors and companies by the government. Tax itself is an amount of money that you must pay to the government according to your income, property, goods that is used to pay for public services and perform other social responsibilities (Olatunji, Olaleye, and Adesina 2001). While non-tax is the revenue accruing to the government other than tax and which is supported by law of the Federation. The history of man has shown that man has to pay tax in one form or the other that is either in cash or in kind, initially to his chieftain and later on a form of organized government (Ojo, 2003). Based on the above clarification, no system or rules can be effective whether foreign or native unless it enjoys some measures of financial independence.

Purpose of Local Government

Yahaya (1999) gave an abridgment of the responsibilities charged on local government to include: Bringing people closer to the government by setting up local administration to perform local functions, representing local interest to State and Federal Governments. Also there is need for local government to mobilize resources in order to take care of the responsibilities to the people and based on the constitution the sources of Nigeria local government are group into (Agya, et al, 2015): external sources which includes; Statutory allocation from the Federation Account in accordance with section 160 (2) of the constitution of the Federal Republic of Nigeria (Promulgation) Decree 1989, Statutory allocation from each state government to the local governments in its areas of jurisdiction, Federal Grants-in-aid, State-Grants-in-aid, Borrowing from state government and other financial institutions. According to Atakpa, Ocheni and Nwankwo (2012), Statutory allocations from the Federation

Account plays a highly increasing roles in the proportion to the revenue generated by local governments in Nigeria. However, even the oil boom and revenue accruing to the Federations' Account started declining since 1983. With this dwindling of revenue sources to the local governments in Nigeria, it implies that local governments in the country should seek for more green pastures in their respective locality to increase their internal revenue generation, if they are to execute their numerous responsibilities and programs to their people. Internal sources which are the internally generated revenue that formed a greater bulk of the total revenues accruing to the local governments before 1976. With the 1976 Local Government Reforms, revenue sources were further widened to enable the local governments to internally generate enough funds/revenues to discharge their development and civil responsibilities. Consequently, the constitution of the Federal Republic of Nigeria 1999 CAP C23 L.F.N. 2004 specifically states the types of internally generated revenue that are exclusive to the local government councils. Prominent among these revenues are: Community Tax/Community Rates, Property (Tenement) Rates, General/Development/Capitation Rates, Licenses, Fees and Charges (Advertisement fees, Baker houses licenses, Beggar minstrel fees, Bicycle licenses/hire permits, Births and deaths registration fees, Brick making and block industry licenses, Cigarette sales licenses, Burial fees and charges on local government burial grounds, Cart/truck licenses, Cattle dealers/Butchers licenses, Contractors registration fees), Dog licenses, Fishing/hunting fees, Forestry and fuel/fire wood exploitation fees, Goldsmith's licenses, Hawkers permits/licenses, Hunting licenses, Local liquor brewing/sales licenses, Marriage registration fees, Minor/small/cottage industries licenses, Control of noise licenses, Palm wine fees, Pit sawing licenses, Produce (palm oil/kernel) buying/sales licenses, Rents and plot fees (from Landlords), Retail trade licenses, Slaughter fees, Interest on Revenues (Interest on state deposits, Interests on investments, Profits from sale of investments/stocks, shares, etc.), Departmental Recurrent Revenues (Survey fees – from the Department of Works & Planning, Repayment of personal advances, Refund of salaries and/or allowances, Refund of subsistence of students in training, Re-imbursement of state witnesses expenses, Sales of library books and literature, Nursery school and day-care centers fees, Conservancy or compost charge, Sale of produce e.g. palm oil/kernel, Profit on local government farm accounts, Tractor/grader/caterpillar hire fees, Irrigation fees, Sale of firewood, Sale of timber, Sale of produce, Cattle/goat/sheep/poultry treatment charges, Fodder, Stray animal poundage fees, Workshop repairs receipts, Sale on stores. Based on those item mentioning above, it can be inferred that local government in Nigeria have various sources of revenues opened to them but many of these various sources are either untapped or under-tapped in most of our local government areas of Nigeria.

Problems of Internal Revenue Generation in Nigerian Local Governments

Bahl and Smoke (2003) state that one major administrative problem experienced today by several councils in Africa are their inability to collect fully the revenue due to them and in many Local Government/municipal, there are huge gaps between actual and projected revenues. Several reasons have been responsible for low and unsatisfactory internal revenue generation. The following are the major factors responsible for the low and poor mobilization of revenues in the Nigeria local governments as identified by Adedokun (2007); Atakpa, Ocheni; Nwankwo (2012) and Agya, et al. (2015):

Shortage of well trained and qualified personnel which supposed to serve as tool for collection of taxes and rates at the local level, even the few available are not properly groom/trained in efficient budgetary and financial management systems;

Lack of commitment on the part of revenues collector, this is based on the fact that most of the revenues collectors are totally dishonesty and this was affirmed during our survey that many of the revenues collectors have their own receipt booklet different from official one while they issue their own receipt for the huge amount and pay a token to the purse of local government and this really affects the internal generating revenue of the local government;

Defects in the revenues collecting machinery and some of the laws for revenues collection in Nigeria local government have not been updated by various state governments especially in areas of rating, tenement rates and the death registration fees which has remained untapped for long dues to the tradition and the culture of our land;

Familiarity between the revenue collectors and the people of the council areas: There is no doubt that the revenue collector and the resident of the council areas are related in one way or the other while some are even blood related as they will not like to tax's or collect money from their father, mother, in-laws, brothers, sisters and friends of theirs. This act has dwindled the amount of revenues that goes into the purse of the local government council;

Lack of proper record; there is no doubt that the local government administer taxes, determining taxable property values, calculating and distributing property tax bills and applying tax enforcement against non-payers, but failed in the responsibility for maintaining property and ownership records, managing receipt payment and keeping the valuable records;
Lack of realism on the part of State Government which could be observed that there exist variations in the pattern of state allocations to Local Governments (Fjeldstad and Heggestad 2012).

Also Egonmwan (1984), stated that the problem of local government revenue generation have been compounded by the fact that the state governments have acquired the more lucrative, elastic and collectable revenue sources (e.g. water rates, motor vehicle license fees, form building plans), leaving local government with taxation with low ceilings, revenue which are administratively and politically difficult to exploit in an environment where the vast majority of the people are poor, self-employed and dispersed in rural areas. Another constraint is imposed on local government revenue mobilization capacity through state control over local government budget, which is made to pass through many levels of approval in the hands of the state government. Even after approval, post-budget controls still impose further restrictions on what local governments can do (Roberts, 1998).The delay in the passage of annual budget for local governments poses a great problem in the sense that budget sometimes take 3 months before approval. Inadequate data on all economic activities in the district e.g. hairdressers, seamstresses, traders, barter, lotto kiosk; Misclassification of properties and Business and Inappropriate tax assessment basis; Lack of realistic means of accessing the revenue potentials due to lack of accurate data; Revenue collectors not paying to the council all monies collected and the absence of tracking mechanisms; Property owners avoiding the payment of property rates; Some individuals and small-scale enterprises engaged in economic activities avoid the payment of taxes to the council; Laborious and time consuming business licensing and permit acquisitions therefore deter small scale business operators (Collin and Ashiaghor, 2012).

Prospects of Local Governments Revenues Mobilization in Nigeria

The local government revenue in Nigeria can be increased if the existing legal sources of revenue are fully exploited and tapped, most local governments will need not to rely on or bother itself seeking additional sources since the present sources provided by the existing laws will be well adequate to meets the obligations (Agya, et al. 2015 & Atakpa, Ocheni & Nwankwo, 2012). Revenue generation can also be increase through the following: facilitating arrangement between the council official and the traditional ruler on how to collect community rates and involvement of traditional rulers through the head of the villages and their chiefs to assist in collection of the tax on behalf of the local governments due to their familiarity with and respect accorded to them by their subject (Olaoye, 2008); modification of existing laws on internal generating revenues to enhance their generation capacity; promulgating laws that will enhance zero tolerant for corruption, because irrespective of huge amount of revenues generated internally in our local governments, no valuable progress will be made or achieved if the incessant misappropriation, mismanagement, corruption and embezzlement of public funds is not seriously dealt with (Atakpa, el at. 2012); Investing of the surplus funds of local government in Nigeria in venture such as poultry/fish pound, building of hostels in our tertiary institutions, transportation that will yield them regular revenues, apart from investing on stock and share which can crash at any time like what we are experiencing now; staff motivation Olorungbemi (2015) opined that revenue collectors should be financially or otherwise motivated to discourage them from tampering with council money or colluding with the members of the public to defraud the council of it revenues, which can be done through training and retraining to enhance their knowledge and adequate remuneration and bonus based on revenue collected; Adequate Staffing of Local Government secretariat with qualified and well training hands devoid of questionable integrity to enhance internally generating revenues(Ifeayekwu, 2015); engagement of the use of prevention and detection methods/techniques such as stringent penalties that will forestall the forging of receipts and non-remittance of revenue collected connivance of the revenue collectors with the members of the revenue paying public which results to illegal exemption of some revenue payers by revenue collectors ,under-assessment of the revenue payers (Atakpa, el at. 2012).

METHODOLOGY

This study adopted the use of survey research design as its research strategy. The population of the study comprised all members of staff of treasury section, accounting section, internal audit section, rate section in the sixteen (16) Local Government Areas, Ekiti-State, Nigeria. They were selected due to the fact that they are sub-set of all the Local Government Areas in Nigeria and were relevant to provide answers to questions of the study, purposive sampling techniques was employed and sample size of three hundred (300) respondents were selected. Closed ended and likert scale ranked well-structured questionnaire titled an assessment of revenue mobilization in Nigeria Local Government was designed to capture the demographic details of respondents and their opinion with respect to the research questions, five variables of Strongly Agreed (SA), Agreed (A), Strongly Disagree (SD), Disagree (D) and Indifference (ID) were adopted with likert scale of 5,4,3,2 and 1 respectively for the variables. The responses were coded and later analyzed with the use of multiple regressions.

RESULTS AND INTERPRETATION

Table1: Model summary

Table 1: Combined Regression Analysis (Development and Financial Misappropriation) on Internally Generated Revenue

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.203[a]	.041	.038	1.04300
2	.327[b]	.107	.101	1.00842

a. Predictors: (Constant), Development

b. Predictors: (Constant), Development, Financial Misappropriations

Table 2: Combined Regression Analysis (Development and Financial Misappropriation) on Internally Generated Revenue

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13.900	1	13.900	12.778	.000[b]
	Residual	324.180	298	1.088		
	Total	338.080	299			
2	Regression	36.060	2	18.030	17.730	.000[c]
	Residual	302.020	297	1.017		
	Total	338.080	299			

a. Dependent Variable: Internally Generated Revenue

b. Predictors: (Constant), Development

c. Predictors: (Constant), Development, Financial Misappropriation

Table 3: Combined Regression Analysis (Development and Financial Misappropriation) on Internally Generated Revenue

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.184	.258		12.350	.000
	Development	.219	.061	.203	3.575	.000
2	(Constant)	3.053	.251		12.173	.000
	Development	.006	.075	.005	.076	.940
	Financial Misapproprition	.265	.057	.323	4.668	.000

a. Dependent Variable: Internally Generated Revenue

Based on the table2 above the equation for the regression model is expressed as:

$$Y = a + \beta 1X1 + \beta 2X2 + \varepsilon$$

$Y = 0.198 + 0.266X1 - 0.253X2 + \varepsilon$

Where

β is a correlation coefficient

Y= Internally Generated Revenue

X1= Development

X2= financial misappropriations

ε= Error Term

RESULTS AND DISCUSSION

Based on the result in table1 below, there is 20.3% level of relationship between the internally generated revenue and the level of development in the selected local government areas and the level of significance as depicted in the table 5, indicate that there is positive level of significant relationship between level of development in local government in Nigeria and the level of its internally generated revenue ($r= 0.203$, $p=0.000< 0.05$). Also in table1, the result showed that 32.7% relationships exist between Financial Misappropriations and internally generated revenue and based on the correlation result in table6, there is a positive significant relationship between Financial Misappropriations and internally generated revenue ($r=0.327$, $p=0.000<0.05$). Based on the table1, the development of local government determines 4% variation in internally generated revenue by the local government, while financial misappropriation determines 10.7% variation in internally generated revenue of local government. The Anova result which indicated the significance of the Development and Financial misappropriation in explaining the variation in explanatory variable (Internally generated revenue), shows that the Development and Financial misappropriation significantly explains Internally generated revenue of the selected local government (F-cal= 12.778 and 17.730 respectively, $p<0.05$). In the table 4.3 it could be inferred that the unstandardised and standardized beta coefficient of Development(excluding) are 0.219 and 0.203 as $t= 3.575$ and $p< 0.05$. This implies that the internally generated revenue of a local government will increase by 21.9% for every one unit increase in the level of its development and highly significant because its p value (0.000) is lesser that 5% level of significance. In relation to Financial Misappropriation, it indicated an unstandardised and standardized beta coefficients of 0.265and 0.057 respectively with $t= 4.668$ and $p<0.05$. This means that an increase in the level of financial misappropriation in revenue collection increase the level of internally generated revenue by 26.5%, which implies that revenue collectors in local government are motivated to collect revenue based on the amount they will siphon-off from the revenue collected for the government.

CONCLUSION AND RECOMMENDATIONS

The study concluded based on the findings that the level of development (human and infrastructural) and the rate of financial misappropriation are determinants to the revenue base of Nigerian local governments. It is recommended that Nigerian local government authorities should ensure both human and infrastructural development in their respective constituencies as this is influential on the level of revenue derivation. In addition, local government authorities should ensure a carrot and stick approach whereby members of staff are rewarded on performance and strictly punished for perpetrating financial misappropriations in other to curb the menace of the anathema on the fabric of the society.

References

Abubakar Halidu (1999) *National Orientation Workshops For Local Government* Councilors Training Manual P. 8

Adedokun, A. (2012) Local Government Tax Mobilization and Utilization in Nigeria:

Problem and Prospects: http:/www./visar.csustan.edu/aaba/Adedokun.pdf Retrieved on September 18, 2016

Agagu, A. (2004). Continuity and Change in Local Government Administration and the Politics of Underdevelopment. In: Agagu, A. & Ola, R. (eds). Development Agenda of Nigeria State. Ibadan: Fiag Publishers.

Agbu, Osita (2004) "Re-inventing Federalism in Post-Transition Nigeria: Problems and Prospects". *African Development*, XXIX(2), , pp.26-52.

Agya, A. A., Ibrahim, Y. M. and Emmanuel, E. (2015). Internal Revenue Generation in the Taraba State, Nigerial: Problems and Prospects. *International Journal of Economics, Commerce and Management. III(2).1-13*

Akindele, S.T, Olaopa, O.R & Obiyan, A.S. (2002). Fiscal Federalism and Local Government Finance in Nigeria" *International Review of Administrative Sciences.* 68(4): 557 – 577.

Atakpa M., Ocheni S. & Nwankwo C.B. (2012) "Analysis of options for Maximizing local government internally generated Revenue in Nigeria". International journal of learning & Development ISSN 2164-4063 2012, vol. 2, No. 5

Bahl, R. & Smoke, P. (2003) *Restructuring Local Government Finance in Developing Countries. Lessons from South Africa* (Cheltenham: Edward Elgar).

Collins Fosu and George Ashiagbor.(2012) "Application for local government revenue mobilization". Proceedings of Global Geospatial Conference

Egonmwan, J. A. (1984). *Principles and Practice of Local Government in Nigeria.*Benin City

Ekpo A. H. and J. Ndebbio (1998) "local government fiscal operation in Nigeria". AERC Research Paper

73, African Economic Research Consortium, Central Bank of Nigeria Statistical BulletinVol. 20 December 2005-2009 Nairobi

Federal Republic of Nigeria. 1999. The constitution of the federal republic of Nigeria. Lagos. Government printer.

Fjeldstad O. H. and Heggestad K. (2012) local Government Revenue Mobilisation in Anglophone Africa. Chr. Michelsen Institute working paper (WP 2012:6)

Fosu M. A. (2012) An Evaluation of Effectiveness of Revenue Mobilization Strategies of Metropolitan, Municipal and District Assemblies (MMDAS) in Ghana, a Case Study of Kumasi Metropolitan Assembly (KMA)

Gboyega A. (1987) "local government reform in Nigeria".In P. Mawhood ed., local Government in the third world. John Wileysons: London.

Ifeayekwu, F. C. (2015). The Problems and Prospects of Revenue Generation in Nigerian Local Government System: A Study of Njikoka Local Government Area, 1999-2012. A Thesis submitted to the Department of Political Science, University of Nigeria, Nsukka in Partial Fulfilment of the Requirements for the Award of Master of Science (M.Sc.) Public Administration

Lawal T. and Abegunde O. (2010) Local Government, Corruption and Democracy in Nigeria. Journal of Sustainable Development in Africa vol. 12, no 5.

Olatunji L. A., Olaleye M. O. and Adesina O. T. (2001) "principle of taxation in Nigeria", mighty babs productions, monatan, Ibadan

Olorungbemi S. T. (2015) Revenue Generation and Local Government Administration in Nigeria (1999-2007):The Case of Ijumu Local Government Area of Kogi State. *International Journal of Business and Social Science.* 6(10), 137-159

Olusola, O. O. (2011) Boosting Internally Generated Revenue of Local Government in Ogun State, Nigeria (A Study of Selected Local Government in Ogun State), *European Journal of Humanity and Social Sciences* 8(1), 336-348

Robert F.O.N (1998) Paper presented at a Two-days workshops on Effective Budgeting, Planning, Implementation and Evaluation for the Ten Local Council in Oke-Ogun Area of Oyo State, Iseyin.

Uhunmwuangho, S.O. & Epelle A. (2008). *Strategies for Managing Challenges and Ensuring Effective Governance in Local Governments in Nigeria*, *Nigerian* Benin, *Journal of Citizenship Education Vol.7 No.2.*

Yahaya A.M. (1999) *Lecture Notes On Public Finance* Kaduna Polytechnic P. 36.

Archives of Business Research – Vol.5, No.9
Publication Date: Sep. 25, 2017
DOI: 10.14738/abr.59.3703.
Aseoluwa, A. C. N., & Jelil, A. A. (2017). Ifrs Adoption and Performance of Quoted Consumer Goods Manufacturing Companies In Nigeria. *Archives of Business Research,* 5*(9),* 128-138.

IFRS Adoption And Performance Of Quoted Consumer Goods Manufacturing Companies In Nigeria

Alu Chituru Nkechinyere Aseoluwa
Department of Accounting
Babcock University

Akinwunmi Abiodun Jelil
Department of Accounting
Babcock University

ABSTRACT

Globalization has strengthened the need for the world-wide harmonization of accounting and financial reporting standards for the benefit of users and preparers of the financial reports. This study seeks to investigate the Adoption of International Financial Reporting Standards (IFRSs)by Nigerian Quoted Consumer goods Manufacturing Companies with the view of establishing empirically, the appropriateness or otherwise of the adoption in relation to the performance of the companies.. An ex-post-facto research design was adopted for the study. Secondary data were obtained from the audited annual financial reports of ten (10) of such manufacturing companies purposively selected from the population of manufacturing companies listed on the Nigerian stock exchange for a period of five (5) years (2010-2014). The data analysis was done using the pooled OLS estimator through the aid of Stata software version 11. The findings show that there is no significant relationship between the adoption of IFRS and performance of manufacturing firms listed on the Nigerian Stock Exchange. However, the findings of this study might have been affected by the choice of accounting policies of the companies under investigation and some environmental factors such as the economic, socio-cultural, political and legal factors. Hence, one can therefore assert that, although the adoption of IFRS is not significantly related to the performance of Nigerian Quoted Consumer goods Manufacturing Companies, extant literature established that adoption of IFRS is worthwhile in view of the fact that it enhances better accountability, comparability, transparency and as well, improves the quality of financial reporting, however, IFRS is not an end in itself but a means to an end.

Key words: Harmonization, Accounting Standards, IFRS, Tobin's q, ROA

INTRODUCTION

Globalization in the business world today, has strengthened the need for the world-wide harmonization of Accounting Standards on which financial reporting can be based for the benefit of users and preparers of the financial reports. Harmonization is a process of increasing the compatibility of accounting practices by setting limits on how much they can vary (Lakmal 2014). In the words of Financial Accounting Standards Board (FASB) (2010), *harmonization* means reducing differences among the accounting principles used in major capital markets around the world. Fritz and Lämmle (2003) affirmed that the international harmonization of Accounting Standards is a process, which brings international Accounting Standards into some sort of agreement, in order to achieve a common set of accounting principles. They documented that 7000 European companies as at the period of their study, have to use the International Accounting Standards (IAS) in the European Union (EU) from 2005. On this note, Lakmal (2014) opines that harmonized accounting standards are free of logical conflict, and as such, improves financial information comparability across nations. This is because, comparable, transparent and reliable financial information is fundamental for an efficient and integrated capital market, however, lack of comparability will discourage cross border investment as a result of uncertainty about the credibility of the financial statements (Fritz and Lämmle 2003).

According to Financial Accounting Standards Board (FASB) (2010), the notion of harmonization was replaced in the 1990s by the concept of *convergence*—the development of a unified set of high-quality, international accounting standards that would be used in at least all major capital markets. However, the concept of convergence first arose in the late 1950s in response to post World War II economic integration and related increases in cross-border capital flows. Obazee (2007) in Odia and Ogiedu (2013) contend that accounting convergence could occur in two ways viz: i) by adoption ii) by adaptation. Adoption simply refers to the replacement of national accounting standards with the International Accounting Standards Board's (IASB's) standards while adaptation could be referred to as a modification of the standards issued by International Accounting Standards Board (IASB) so as to suit the peculiarities of national markets and the economy at large, without any compromise to the IASB's accounting standards, disclosure requirements and basis of conclusions. In the words of Odia & Ogiedu (2013), convergence is meant to bring standards like the US Generally Accepted Accounting Principles (GAAP) and International Financial Reporting Standards (IFRSs) closer or harmonize them to produce identical standards.

Jeno (2010) asserts that financial accounting harmonization is a product of market (which the accounts serve) integration hence, global accounting standards would enable the world's stock markets to become more closely integrated into a single market and when such is the case, the transaction costs for investors and the cost of capital for firms in that market would be lower because, before the adoption of IFRS, differences in international reporting practice was a major barrier to efficient international investment, monitoring and contracting (Jeno 2010). In this vein, Shil, Das, & Pramanik (2009) argued that accounting standards harmonization will be of benefit to the world economy in the following ways: facilitation of international transactions and minimization of exchange costs by providing increasingly "perfect" information; standardization of information to the world-wide economic policy-makers; by improving information in the financial markets; and by improving government accountability.

The International Financial Reporting Standards (IFRSs) are a set of global accounting standards developed for the preparation and presentation of the financial statement of companies. Kool (2011) affirms that, the purpose of introducing a new accounting standard such as IFRS is to improve the transparency and comparability of firms and since the capital market is primarily defined by investors and creditors, this increasing transparency and comparability (as a result of change in accounting standards) will have a direct impact on the capital market reflected by a change in cost of capital and market liquidity. Based on the assertion of Jeno (2010), empirical research evidence which support the fact that uniform accounting standards increase market liquidity, decrease transaction costs for investors, lower costs of capital, and facilitate international capital formation & flow exists; and such reduced costs will in turn, lead to increased cross-listings and cross-border investments. Ocansey & Enahoro (2014) citing Irvine & Lucas, (2006) and Chai, Tang, Jiang, & Lin, (2010), reveal that several researches have confirmed that adoption of IFRS at the country level has increased direct foreign investment, high level of global market integration and improved quality accounting indicators.

The journey to IFRS adoption in Nigeria began sometime in July 2010, when the Road map for the adoption by the Federal Executive Council was approved. Upon this approval, the Financial

Reporting Council of Nigerian Act was enacted in 2011, resulting into the transformation of the Nigeria Accounting Standards Board to the Financial Reporting Council (FRC) which among other things, is charged with the responsibility of implanting the road map for the adoption of IFRS in Nigeria; therefore, Nigeria began the adoption of IFRS in 2012 and required all companies quoted on the Nigerian stock exchange and companies with significant public interest to comply in the first phase (Aganga 2013). Today, Aganga reiterated at the 10th annual Financial Reporting Council summit held in Lagos that "the adoption of International Financial Reporting Standards have enhanced the perception of Nigeria in the international community".

However, although there are arguments that IFRSs are not relevant to developing countries, as they adopt such just because, it is a product with "network effects", IFRS can be viewed as a high quality accounting standard when compared to most local standards, and that could assist in fostering increased comparability of financial statements by investors (Odia & Ogiedu 2013).

The recent expansion of international capital markets and availability of instantaneous global communication have placed on accounting the onus to provide useful and comparable information across international borders [Rivera, (1989) in Shil, Das & Pramanik (2009)]. However, many companies face increasing problems as a result of national differences in accounting measurements, auditing, and disclosures resulting from seeking capital outside of their home markets and investors attempting to diversify their investment internationally; in response thus, harmonization efforts increased during the 1990s which is now one of the most important issues facing accounting standard setters, stock exchanges, securities market regulators, and those who prepare or use the financial statements (Lakmal 2014). This is because it is generally believed that comparable, high quality, transparent and reliable financial information is essentially fundamental for any integrated and efficient capital market and harmonization of international accounting system according to Jeno (2010), minimizes the information asymmetry between managers and entity owners.

Thus, there may be distorted cross-border portfolio, direct investment, and obstruction in the monitoring of management by shareholders, without a common accounting system; the contracting might be inhibited as well and the cost of these activities may be needlessly high by complex translation (Meeks & Swann, 2009 in Jeno, 2010). However, it is believed that if convergence to consistent, quality global accounting standards were achieved, problems of interpretation, implementation, and regulation (enforcement) would still persist. Based on this fact, Jeno (2010) argues that accounting systems application by companies in different countries tends to be slightly or even bigger in differences due to the economic, political and cultural environment.

Based on the foregoing, Ball (1995) in Odia & Ogiedu (2013) specifically argues that "internationalization will reduce some or much of the diversity in accounting rules and practices across nations, it will not eliminate it nor should it". Ball (2006) cited by Odia & Ogiedu (2013) was of the opinion that this will have direct influence on the reporting and users' perception of IFRS quality, since the application of IFRS will not be uniform. The big question now is; what then is the justification for the harmonization of accounting standards (International Financial Reporting Standards) in Nigeria? Hence, since the adoption of International Financial Reporting Standards in Nigeria, there exists several studies on its implementation process, challenges of the adoption, effects on cost of capital, foreign direct investment, quality of financial statements, performance of companies et cetera and the findings have been inconclusive. To this end, this study seeks to investigate the International

Financial Reporting Standards' (IFRSs) adoption and the performance of Nigerian Quoted Consumer Goods' manufacturing Companies with the view of establishing empirically, the appropriateness or otherwise of the adoption. However, the study is specifically set out to:

1. Evaluate the relationship which exists between firm value (proxied by Tobin's q) and the adoption of IFRS by quoted consumer goods' manufacturing companies in Nigeria.
2. Examine the influence of the International Financial Reporting Standards (IFRS) adoption on the performance of quoted consumer goods' manufacturing firms in Nigeria (proxied by ROA).

Statement of Hypotheses

The hypotheses of this study are stated in null forms thus:

Ho_1: There is no significant relationship between firm value and the adoption of IFRS by quoted consumer goods manufacturing companies in Nigeria.

Ho_2: International Financial Reporting Standards Adoption does not influence the Return on Assets of quoted consumer goods manufacturing companies listed on the Nigerian Stock Exchange.

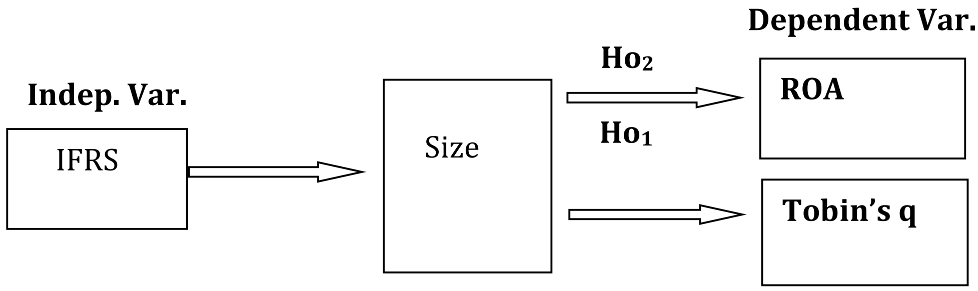
Research Questions

1. What is the relationship between firm value and the adoption of IFRS by quoted consumer goods manufacturing companies in Nigeria?
2. How does IFRS adoption influence the Return on Assets of consumer goods manufacturing firms listed on the Nigerian Stock Exchange?

The remainder of this paper is structured as follows: section 2 presents the literature review; section 3 discusses the methodology; section 4 shows the data analysis, test of hypotheses, findings and discussion; and section 5 concludes the study.

LITERATURE REVIEW

Conceptual Model



Researcher's Model (2017)

Theoretical Framework

This section reviews three major theories upon which this study is anchored on. They are: the signaling theory, the stakeholder theory and the stewardship theory.

Signaling Theory

According to Nwaobia (2015) in Nwachukwu, Ogundiwin & Nwaobia (eds), a major source of conflict in corporate finance and investment environment is lack of symmetric information among all investors because, it is commonly believed that those empowered with the governance of organizations have more information about the prospects and performance of the organization than other stakeholders. This theory (from financial reporting perspective) however, focused on the information disclosure behavior of managers in the presentation of their corporate reports. It is believed that managers of well performing firms tend to disclose the performance of the organization in their financial statements with greater transparency than managers of poorly performing firms (Nwaobia, 2015) in Nwachukwu, Ogundiwin & Nwaobia (eds) (2015). The level of disclosure in this case, sends a kind of signal of healthy and unhealthy firms to the stakeholders who view and use the financial statements.

Stakeholder Theory

The focus of his theory is articulated in two core questions of what is the purpose of a firm? And what responsibility do managers of firms have to stakeholders? The first question propels firms forward and allows them to generate outstanding performances (Freeman, Wicks & Parmer, 2004). The second question pushes the managers to articulate how they want to do business and specifically the kind of relationships they want to create with their stakeholders. This theory also expects managers to develop and run their firms in a way that is consistent with the demands of the theory that is, stakeholders' value maximization rather than shareholder's value maximisation.

Stewardship Theory

This theory rejects the agency theory on the relationship of agent and principal which assumes that managers do not act in the interest of shareholders but maintains that managers are not motivated by individual goals but rather, they are stewards whose motives are aligned with the objectives of their shareholders (Nwaobia, 2015) in Nwachukwu, Ogundiwin & Nwaobia (eds) (2015). The theorists believe that managers as stewards are well motivated when organizational goals are attained. This goes in line with the assertion that a steward protects and maximises shareholders' wealth through firm performance, because by so doing, the steward's utility functions are maximised (Davis, Schoorman & Donaldson, 1977:25 cited in Cullen, Kirwan & Brennan, 2006:13).

Empirical Review

Since the adoption of International Financial Reporting Standards in Nigeria, there exists several studies on its implementation process, challenges of the adoption, effects on cost of capital, foreign direct investment, quality of financial statements, performance of companies et ce tera and the findings have been inconclusive. Few of the studies have been reviewed below:

Bala (2013) attempted to study the effects of IFRS adoption on the financial reports of firms listed on the Nigerian Stock Exchange, using fourteen (14) Oil and Gas firms who have their financial reports prepared and presented in compliance with the provision of IFRS in 2012 as the sample size. Two sets of financial reports of these firms were to be used for the analysis: that is, reports prepared and presented from 2009 to 2011 under the NG-GAAP or SAS (Pre-adoption period) and that from 2012 to 2014 under the IFRS (Post-adoption period). The researcher aimed at adopting a case study method involving the use of qualitative and quantitative methods; the quantitative method intended to investigate the impact of IFRS adoption on the KPIs (key performance indicators/measures) such as the gearing, liquidity and profitability in order to determine the firms' financial strengths, weaknesses and ability to honor their obligation as they fall due while the qualitative approach involves the use of interviews and questionnaire to investigate the impact of the adoption in terms of exploration and evaluation (E&E) expenditures, decommissioning of oil and gas installations expenditures, financial information disclosures as well as the overall impact on the presentation and structure of the financial reports. Empirical analyses were to be carried out on the differences followed by tests equality of means, medians and variances between each series of ratios to ascertain if the distributions differ under NG-GAAP and IFRS, after which, the relationship between the IFRS and NG-GAAP ratios would be analyzed using Least-square regressions.

However, Bala's study is inconclusive as the empirical analysis was not carried out and the findings not reported.

Jeno (2011) examined the impact of the adoption of international accounting standards on the management performance of businesses listed on the Budapest Stock Exchange in Hungary using a qualitative comparative approach which enabled him to compare the results of companies that adopted international financial reporting standards mandatorily from 2007 and those that followed national accounting rules. The pre-adoption examination period is in year of 2006 and the post-adoption is in year of 2007. A total sample of 65 IFRS adopting and 260 local (Hungarian) accounting rules user firms were examined in the study based on the financial data from published accounting statements in Budapest Exchange Trade (BET) and Hungarian Business Information database. However, mathematic-statistic methods were introduced in the course of the research and, logistic regression models were employed capturing the profitability, liquidity, dividend, leverage, growth and asset ratios as well as the size of the firms. The findings show that the selected proxies in the statement of financial position (especially for solvency and prosperity) deteriorated after the adoption of IFRS and earnings management reduced as well after the period of post-adoption. To this end therefore, he concluded that as a result of the adoption, the policy and requirements became gradually more transparent and bright; and the application of the standards as well as the implementation process became more user friendly.

Nyor (2012) investigated the challenges of Converging to IFRS in Nigerian money deposit banks using interview and questionnaire as means of data collection instruments for the study. Nine (9) Money Deposit Banks out of the twenty four (24) which existed in the country as at the time of study were sampled for the study. Chi-square technique was utilized for the data analysis and the findings show that there are lots of difficulties involved in converging to IFRS amongst which include huge cost outlay, that is, the cost of training the personnel to understand new global standards, cost of acquiring new accounting packages needed for the implementation, and cost of discarding former accounting packages which are not compatible with IFRS. The study concludes that Nigerian companies should converge to IFRS because, such will enhance better accountability, transparency and improve the quality of financial reporting, despite its cumbersomeness and the initial anticipated problems. However, the study recommends that Nigeria should borrow the wisdom of the Germans and make IFRS mandatory for group account of companies listed on the stock exchange while the Nigerian GAAP will still be mandatory for individual company's accounts. Also, the adoption of IFRS should be optional for group accounts of companies not listed on the stock exchange but, prohibited for individual company's account. This is because, IFRSs (being principle based standards) allow companies to utilize the methods they wish, which could create the avenue for creative accounting, that is, allowing the financial statements to show only desired results arrived at by a means of revenue or profit manipulation and hiding of financial problems in the company.

Ezeani & Oladele (2012) examined the extent to which the international financial reporting standards (IFRS) adoption could enhance the Nigerian Universities' financial reporting system. One hundred and sixty (160) senior accountants and internal Auditors in Government Universities were sampled for the study using a survey research design. The data were analyzed using mean scores and z-test score/statistics and the findings indicate that transitioning from national financial reporting standards to IFRS has the potential of creating a need for clarification on the provision of certain IFRS in relation to certain country-special circumstances. Also, as there are lots of personnel to be involved in IFRS financial instruments, there is shortage of expertise in the field of IFRS as well, which can affect not only the institutions but also private sectors, regulators and other governmental agencies. As such, the study recommended among others that the curricula of our institutions should be reviewed to incorporate IFRS, so that accountants and auditors will be acquainted with IFRS guidelines and standards.

Odia & Ogiedu (2013) in their study of IFRS Adoption: Issues, Challenges and Lessons for Nigeria and other adopters, identified increased border-listing, globalization, attraction of foreign investment and aids, and other institutional factors as being responsible or the driving force for the adoption of IFRS. However, from the experience and lessons of firms who have already adopted IFRS, in order to prepare the stakeholders for the imminent transition and challenges and for effective adoption of IFRS, there must be an enabling institutional framework, accounting education and training, as well as efficient capacity building programme.

METHODOLOGY

An ex-post-facto research design was adopted for the study. This study utilized secondary data obtained from the audited annual financial reports of ten (10) consumer goods manufacturing companies (Cadbury, Dangote, Honeywell, Nestle, Unilever, Guinness, Pz cussons, Nigerian Breweries, GSK and Lafarge Cement PLC) purposively selected from the population of manufacturing companies listed on the Nigerian stock exchange for a period of five (5) years (2010-2014). The choice for those companies at the chosen time periods was informed by data availability. The analyses were done using the pooled OLS estimator through the aid of Stata software version 11.

Model specification/Measurement of Variables

The model adopted in this study is based on the functional relationship between the dependent and the independent variables thus: Y=f(X). The dependent variable here is the performance of quoted consumer goods manufacturing companies, measured by Tobin's q and return on asset (ROA) while the independent variable is IFRS adoption which takes the value of zero (0) in the period prior to the adoption and one (1) in the periods of adoption. However, the model is moderated by size of the firm, measured as the logarithm of total asset.

Tobin's q measures the performance of firms in the capital market and used in Nwaobia, Kwarbai and Ogundajo (2016) as

$$Q= \frac{MVE+PS+DEBT}{TA}$$

MVE: Market Value of Equity (number of ordinary shares outstanding × market price of shares)
PS: The Liquidating value of the firm's outstanding preferred stock
DEBT: The value of the firm's short –term liabilities net of its short – term asset, PLUS the book value of the firm's long term debt
TA: The Book value of total assets of the firm

However, considering the peculiar nature of the Nigerian business environment, we have adopted the market value of shares (number of ordinary shares outstanding × market price of shares) + book value of debt to book value of total assets as the measure of Tobin's q.

Return on Assets: Is a ratio that shows the relative profitability of the business. It measures the efficiency of the management in utilizing the assets of the firm. The higher the ratio, the more profitable a company becomes. It is derived as $\frac{PBIT}{TA} \times \frac{100}{1}$

PBIT: Is the profit of the firm before interest and tax
TA: Is as defined above

The choice of size included in the model was prompted by the assertion of Ali, Hamed & Henry (2004:208) who posit that larger organisations have a greater tendency to disclose more financial information in their annual reports than smaller ones. This simply implies that large organisations are more likely to adopt the IFRS which requires more information disclosure. The model therefore goes thus:

$$\text{Tobin's } q_{it} = \alpha_{it} + \beta_1 IFRS_{it} + \beta_2 size_{it} + \mu_{it}$$
$$ROA_{it} = \alpha_{it} + \beta_1 IFRS_{it} + \beta_2 size_{it} + \mu_{it}$$

Where:
Tobin's q_{it} = Tobin's q of company *i* at time *t*
ROA_{it} = Return on assets of company *i* at time *t*
$IFRS_{it}$ = IFRS adoption by company *i* at time *t*
$size_{it}$ = size of the company (measured as logarithm of total assets) of company *i* at time *t*.
α= Constant term
β = coefficients of the explanatory variables
μ= composite error term

A priori Expectation

It is expected that the adoption of IFRS (leading to mandatory information disclosure) will result to improved performance of firms listed on the Nigerian Stock Exchange. By implication, β>0

DATA PRESENTATION, ANALYSIS, TEST OF HYPOTHESES AND DISCUSSION OF FINDINGS

Data Presentation, Analysis and Test of Hypotheses

Based on the research hypotheses, the regression models of the Stata output for model one (1) are presented below:

Ho₁: There is no significant relationship between Tobin's q and the adoption of IFRS by quoted consumer goods manufacturing companies in Nigeria.

Ho₂: International Financial Reporting Standards Adoption does not influence the Return on Assets of quoted consumer goods manufacturing firms listed on the Nigerian Stock Exchange.

Table one - regression result for model one

	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
ifrs	.1318394	.7861383	0.17	0.868	Prob > F	= 0.4524
size	.297696	.2593339	1.15	0.257	R-squared	= 0.0332
_cons	-4.383755	6.415401	-0.68	0.498	Adj R-squared	= -0.0080

Source: Researcher's data output (2017)

Table two – regression result for model two

	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]
ifrs	-.0603204	.0490054	-1.23	0.224	Prob > F = 0.3113
size	-.0083521	.0161661	-0.52	0.608	R-squared = 0.0484
_cons	.3889747	.3999158	0.97	0.336	Adj R-squared = 0.0080

Source: Researcher's data output (2017)

From table one, considering the sign and magnitude of the coefficients; ifrs = 0.1318394 and size = 0.297696, it can be deduced that the value of the firms, measured by Tobin's q is positively influenced by the adoption of IFRS. That is, 0.1318394 (say 13%) increase in Tobin's q is directly attributable to the IFRS adoption. Put in another way, the adoption of IFRS will improve the value of firms and vise-versa. For the size of the firms, the coefficient is also positive indicating that the larger the size of the firm, the better the firm value. This is because, a unit increase in the size of firms will lead to a 0.297696 unit increase in Tobin's q and vise-versa.

The adjusted R-squared = -0.0080 shows the degree of the combined influence of IFRS adoption and size of the firm on the value of consumer goods manufacturing firms listed on the Nigerian Stock Exchange. By implication, 0.0080 (0.8%) of the variation in the firm value, measured by Tobin's q is induced by IFRS adoption and size of the firms, 99.2% being attributable to other variables not included in the model.

However, the p-value of the F-statistics = 0.4524, which is > 0.05 level of significance is not significant (at all levels) signifying the non-rejection of the null hypothesis that there is no significant relationship between firm value (Tobin's q) and the adoption of IFRS by quoted consumer goods manufacturing companies in Nigeria.

From table two, the findings of the coefficients; ifrs = -0.0603204 and size = -0.0083521, it can be deduced that the performance of the firms, measured by ROA is negatively influenced by the adoption of IFRS. That is, -0.0603204 (say 6%) decrease in ROA is directly attributable to the IFRS adoption. Put in another way, the adoption of IFRS will reduce the performance (ROA) of firms and vise-versa. For the size of the firms, the coefficient is also negative indicating that if the size of the firms reduces, their performance would be impaired/reduced. This is because, a unit decrease in the size of firms will lead to a -.0083521 unit reduction in ROA and vise-versa. The adjusted R-squared = 0.0080 shows the degree of the combined influence of IFRS adoption and size of the firm on the performance (ROA) of consumer goods manufacturing firms listed on the Nigerian Stock Exchange. By implication, 0.0080 (0.8%) of the variation in the performance of listed manufacturing firms, measured by ROA is induced by IFRS adoption and size of the firms, 99.2% being attributable to other variables not included in the model.

However, the p-value of the F-statistics = 0.3113, which is > 0.05 level of significance is not significant (at all levels) indicating the non-rejection of the null hypothesis that International Financial Reporting Standards Adoption does not influence the Return on Asset of consumer goods manufacturing firms listed on the Nigerian Stock Exchange. Based on the two hypotheses therefore, one can infer that there is no significant relationship between the adoption of IFRS and performance of consumer goods manufacturing firms listed on the Nigerian Stock Exchange. This simply implies that the performance of Nigerian Quoted consumer goods manufacturing companies is not significantly dependent on the International

Financial Reporting Standards' (IFRSs) adoption however, the adoption is worthwhile or appropriate because of the various benefits accruing to such.

At this point, it is noteworthy that the findings of this study might be affected by the choice of accounting policies of the companies under investigation and some environmental factors such as the, socio-cultural, political and legal factors as well as economic factors. Also, Bala's (2013) assertion that the numerator of ratio calculations, their denominator or both might be directly affected by the difference in recognition and measurement of accounting figures under IFRS and NG-GAAP. Hence, the adoption of IFRS is not an end in itself but a means to an end.

Discussion of Findings

The findings of this study are in line with the findings of Jeno (2011) who found that the selected proxies in the statement of financial position (especially for solvency and prosperity) deteriorated after the IFRS adoption and earnings management reduced as well after the post period of the adoption. He therefore concluded that as a result of the adoption, the policy and requirements became gradually more transparent and bright; and the application of the standards as well as the implementation process became more user friendly.

CONCLUSION

Although there are arguments that IFRSs are not relevant to developing countries, as they adopt such just because, it is a product with "network effects", IFRS can be viewed as a high quality accounting standard when compared to most local standards, and that could assist in fostering increased comparability of financial statements by investors. Considering the fact that certain environmental factors such as the economic, political and socio-cultural factors could affect the adoption of IFRS, this study concludes that the adoption of IFRS by Nigerian manufacturing companies is worthwhile as revealed in extant literature because, it enhances better accountability, comparability, transparency and as well, improves the quality of financial reporting, however, IFRS is not an end in itself but a means to an end. The contribution of this study to knowledge is that perhaps, it is an empirical study that investigates the International Financial Reporting Standards (IFRS) adoption and performance of Nigerian Quoted consumer goods manufacturing companies with the view of establishing, the appropriateness or otherwise of the adoption. Also, the study contributes in the area of the conceptual model fully reflected in the model specification as well as the analysis technique – the use of pooled OLS.

References

Aganga, O. (2013). IFRS adoption has enhanced perception of Nigeria —Vanguard newspaper, December 12, 2013. http://www.vanguardngr.com/2013/12/ifrs-adoption-enhanced-perception-nigeria-aganga. Retrieved (30th June 2016).

Ali, M. J., Ahmed, K., and Henry, D. (2004). Disclosure compliance with National Accounting Standards by listed companies in South Asia. *Accounting and Business Research,* 34(*3*)183-199

Bala, M. (2013). Effects of IFRS adoption on the Financial Reports of Nigerian listed entities: The case of Oil and Gas Companies. *The Macrotheme Review* 2(*7*), 9–26.

Cullen, M., Kirwan, C., and Brennan, N. (2006). Comparative analysis of Corporate Governance

Theory: The Agency-Stewardship Continuum, paper presented at the 20th annual *conference of the Irish Accounting & Finance Association*, Institute of Technology, Tralee, 10-11 May.

Ezeani, N. A., and Oladele, R. (2012). Adoption of International Financial Reporting

Standards (IFRS) to enhance financial reporting in Nigeria Universities. *Arabian Journal of Business and Management Review (OMAN Chapter)* 2*(3),* 70-85.

Financial Accounting Standard Board (n.d.). Comparability in International Accounting Standards— A Brief History. http://www.fasb.org/jsp/FASB/Page/SectionPage&cid=1176156304264

Freeman, R., Wicks, C., and Parmer, B. (2004). Stakeholder Theory and the Corporate Objective Revisited.

Organisation Science, *15(3),* 364-369

Fritz, S., and Lämmle, C. (2003). The international harmonization process of Accounting Standards. An unpublished MSc. Thesis, Linköpings Universitet**.** http://www.ep.liu.se/exjobb/eki/2003/fek/003/. Retrieved (30th June 2016).

Jeno, B. (2010). International Accounting Harmonization: Evidence from Europe. *International Business and Management* 1*(1)*, 48-61

Jeno, B. (2011). International Accounting Standardization effects on business management: Evidence from Hungary. *Global Journal of Management and Business Research,* 11*(6),* 13-17

Kool, M. (2011). Economic consequences: the economic consequences in the Netherlands of mandatory IFRS adoption. An unpublished master's thesis, Erasmus University Rotterdam, Erasmus School of Economics, Master Accounting, Auditing & Control.

Lakmal, D. (2014). Impact of International Accounting Harmonization. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2387327. Retrieved (30th June 2016).

Nwaobia, A. N. (2015). Theories in Accounting Research in *Anthology of theories and their applications in Social & Management Sciences edited by* Nwachukwu, J. N., Ogundiwin, A. O. and Nwaobia, A. N., Lagos: Jamiro Press Link.

Nwaobia, A. N., Kwarbai, J. D., and Ogundajo, G. O. (2016). Tax planning and firm value: Empirical evidence from Nigerian Consumer Goods Industrial Sector. *Research Journal of Finance and Accounting* 7(*12*), 172-182.

Ocansey, O. N. D., and Enahoro, J. A. (2014). Comparative study of the International Financial Reporting Standard Implementation in Ghana and Nigeria. *European Scientific Journal* 10*(13)*, 529-546.

Odia, J. O., and Ogiedu, K. O. (2013). IFRS Adoption: Issues, challenges and lessons for Nigeria and other adopters. *Mediterranean Journal of Social Sciences* 4(*3*), 389-399.

Shil, N. C., Das, B., and Pramanik, A. K. (2009). Harmonization of accounting standards through internationalization. *International Business Research* 2(*2*), 194-201.

Archives of Business Research – Vol.5, No.9
Publication Date: Sep. 25, 2017
DOI: 10.14738/abr.59.3549.
Olatunji, O. C., & Ayodele, K. B. (2017). Impact Of Information Technology On Tax Administration In Southwest, Nigeria. *Archives of Business Research, 5(9),* 139-150.

Impact Of Information Technology On Tax Administration In Southwest, Nigeria

Olaoye Clement Olatunji (Ph. D)
Department of Accounting, Faculty of Management Science
Ekiti State University, Ado Ekiti

Kehinde Busayo Ayodele
Department of Accounting, Faculty of Management Science
Ekiti State University, Ado Ekiti

ABSTRACT

This study examined the impact of information technology on tax administration in south west, Nigeria. It specifically investigated the effect of information technology on tax productivity and the relationship between information technology on tax implementation and tax planning. Descriptive research design was employed, of which questionnaire was used to gather data and analysed with multiple regression and pearson product moment correlation. The study revealed that information technology (Online Tax Filing-OTF, Online Tax Registration-OTR and Online Tax Remittance-OTRE) affect tax productivity with -1.9%, 7.3% and 31.5% (p=0.85, 0.526 and 0.00), there is relationship of -5.9% (p=0.520), 9.7% (p=0.290) and 0.344 (p=0.000) between OTF, OTR and OTRE on Tax Implementation-TAXIMP and -3.8% (p=0.684), 14% (p=0.140) and -0.190 (p=0.038<0.05) relationship between OTF, OTR and OTRE on Tax Planning-TAXPLNN. The study concluded that information technology enhance the level of tax productivity and administration. It is therefore recommended that the respective agencies (federal, state and local government) responsible for tax collection should carry out one on one awareness in the form of seminars and sensitization of the process and suitability of information technology on tax administration.

Keywords: Tax Administration, Tax Productivity, Information Technology, Online Tax Filling, Online Tax Remittance, Online Tax Registration

INTRODUCTION

The use of automated systems has been proven to be capable of introducing massive efficiencies to business processes at a minimal cost (Wasao, 2014), due to the bureaucratic structure of government which is costly to manage with little or no result, tax authorities as an agency of government are turning to e-government led solutions like electronic tax filing (e-filing) (Amabali, 2009), based on the arguments that it enhances the delivery of public services and fiscal profundity without incurring costly recurring overheads (Harrison & Nahashon, 2015). United Nations (2007) stated that e-taxation is a process where tax documents or tax returns are submitted through the internet, usually without the need to submit any paper return; it encompasses the use of internet technology, the World Wide Web and Software for a wide range of tax administration and compliance purposes.

Electronic tax filing was first coined in United States, where her Internal Revenue Services (IRS) began offering tax return e-filing for tax refunds only (Muita, 2011). This has now grown to the level that currently approximately one out of every five individual taxpayers is now filing electronically. This however, has been as a result of numerous enhancements and features being added to the program over the years. Today, electronic filing has been extended to other developed countries like Australia, Canada, Italy United Kingdom, Chile, Ireland, Germany, France, Netherlands, Finland, Sweden, Switzerland, Norway, Singapore, Brazil, Mexico, India, China, Thailand, Malaysia and Turkey (Ramayah, Ramoo & Amlus, 2006). Nigeria and other developing countries such as Uganda, Rwanda and Kenya have also embraced electronic filing of tax returns (Muita, 2011).

Dowe (2008) disclosed that tax authorities around the world are using electronic tax administration systems to interact with taxpaying public in tax collection, administration and compliance settings so as to improve effectiveness and efficiency in tax administration. Globally, previous studies on the suitability of information technology complied tax system have it that; a positive impact of automation system usage and the cost of tax administration, automation and effectiveness of revenue collection of Ghana Revenue Authority using a case study of customs division (Gidisu, 2012). Wasilewski cited in Muthama (2013) with focus on the economic development and taxation system by comparing the case of Brazil and Japan. Japan's experience demonstrated that a country does not need to postpone a real change in the tax structure until it achieves a high stage of development, while in Brazil; low-income taxpayers bear most of the tax burden.

Gasteiger (2011) indicated that automated system enhances administration with the provision of multiple scenarios that allow senior management in a multi-campus university system to generate multiple income scenarios, make well-informed decisions concerning the operation of their institution and timely calculation and allocation of resources to academic departments. In Kenya, Kioko (2012) indicated that the macro model performs better the variations in funds allocated to counties than the representative tax system, Kibe (2011) disclosed that planning for revenue collection can best be carried out by a system that combined spatial and attribute data management capabilities like geographical information systems, Harrison & Nahashon (2015) with focus on small tax payers revealed that online tax system does affect tax compliance level, while Otieno, Oginda, Obura, Aila, Ojera & Siringi (2013) stated that relationship existed between information systems and revenue collection efficiency and effectiveness and more so, there is a strong positive relationship between Internal Control Systems and revenue collection..

In Nigeria, Oseni (2015) concluded that there is no hiding place for tax evaders with the use of this modern technology since all potential taxpayers are captured by the system, but the use of ICT can be catastrophic if carelessly employed by both the tax payers and the tax administrators as scammers and hackers of the internet facilities can utilize the ignorance or the lax security of the system. Efunboade (2014) indicated that these emerging global infrastructures (Taxpayer Identification Number- TIN, Factual Accurate Complete Timely-Project FACT and Integrated System of Tax Administration- ITAS) could make it increasingly possible for eligible taxpayers to pay tax online anywhere and anytime.

In respect of the above, none of the studies had so far been carried out to investigate information technology, in terms of online tax filing, online tax registration and online tax remittance on the level of tax administration in terms of tax productivity, planning and implementation, which depicts existence of gap in literature. Although, Harrison & Nahashon (2015) studied the effects of online tax system in terms of Online Tax Filing, Online Tax Registration and Online Tax Remittance, but it was based on tax compliance. Therefore, this study examines the impact of information technology on tax administration with interest on Southwest, Nigeria.

LITERATURE REVIEW

Information Technology

Information technologies are tools, devices, and resources used to communicate, create, manage, and share information. They include hardware (computers, modems, and mobile phones), software (computer programs, mobile phone applications), networks (wireless communications, Internet) and basically concerned with the purpose of collecting, processing, storing and transmitting relevant information to support the management operations in any organizations (Adewoye & Olaoye, 2014). It is a system that provides historical information on current status and projected information, all appropriately summarized for those having an institutions or forms (Adigbole & Olaoye, 2013). Obi (2003) conceptualized that information technology is useful in the area of decision making as it can monitor by itself disturbances in a system, determine a course of action and take action to get the system in control. Adewoye & Olaoye (2009) stated that the future planning information technology is built using the following; people, data processing, data communication, information system and retrieval and system planning.

Tax Administration and Jurisdiction in Nigeria

One thing is to make policies, rule and regulations in an attempt to attain a desired goal or objective and it is another thing to implement these policies, rules and regulations. The organs in charge of tax policy implementation in Nigeria are referred to as the administrative organ. Efficiency and effectiveness should be the watch word in designing a tax administration structure that will give the desired result. Kiabel & Nwokah (2009) noted citing section 100 of the personal income tax decree, 1993 and amended by decree No 18 – finance (miscellaneous taxation provision decree 1998 that tax authority in the country are Federal Inland Revenue Service, State Board of Internal Revenue and Local Government Revenue Committee, together with the Joint Tax Board (JTB) and Joint State Revenue Committee.

The assignments of each are guided by constitutional provision. The federal constitution gave the federal government exclusive power to collect levies like personal income tax, companies income tax, petroleum profit tax, capital gains tax, excise duties, value added tax, custom duties (import duties and export duties), stamp duties, all with the exception of education tax are paid into the federation account for distribution among the three tiers of government in line with national constitution. States are given the power to collect personal income tax in respect to all taxable individuals except those of the armed forces personnel and individual personnel in the federal capital territory, right of occupancy fees on lands owned by the state government in the urban areas, market taxes and levies where state finance is involved, naming of street in the state capital, entertainment tax, survey fees, pools betting and other betting taxes among others, while the constitution gave the local government the function to collect license (trading) motor part dues, property tax, shops and kiosk rate, domestic animal license, tenement rates, on and off liquor license, slaughter slab fees, market tax, motor park levies, cattle tax, naming of street excluding those in the state capital, merriment and road closure levy, radio and television license fees, vehicle radio license fees, wrong parking charges, religious places establishment permit fees and signboard, advertisement permit fee and public convenience, sewage and disposal fees (Adeleke, 2011; Ojo, 2008).

Intents of Tax Administration

Ola (2001) conceptualized that taxation is a powerful and potential fiscal stabilizer employed by government of nations to plan development policies. The prime aim of tax administration in most nations of the world is essentially to generate revenue for government expenditure on social welfare such as provision of defense, law and order, health services and education. Revenue from taxation can also be spent on capital projects otherwise called consumer expenditure, creating social and economic infrastructure which will improve the social life of the people (Ariwodola, 2000).

Apart from this prime purpose of taxation, it can be used as a vital instrument in any nation's economy for promoting investment through the use of tax incentives and attractive tax exemptions which induce local and foreign investors in areas such as manufacturing of goods, export processing, and oil and gas, so also, taxation is usually used as an instrument for discouraging certain forms of antisocial behaviour in the society. Anti-social behaviour such as drinking of alcohol, smoking and pool betting can be controlled by the imposition of higher taxes on production of such goods (Ariwodola, 2000).

Elements of a Viable Tax Administration System

In respect to Olaoye (2008), a good tax system must be based on the following principles: efficacy: a viable tax system should advocates that ethics of professionalism transparency, accountability, probity and efficiency in tax collection; simplicity, the tax system and the tax law should be simple, flexible and adjustable, so as to compliance by tax payers and efficiency in operation by tax administrators; neutrality which implies that a good tax system should be free from any form of partiality; economy, tax system should make the economic situation better off and not worse off. It must not affect adversely the economic contribution of the tax payer. More so, the compliance costs to the tax payers and the administrative costs to the government must not negatively affect national output of taxes collected; equity, a viable tax system must not be arbitrary nor should the amount payable be influenced by prejudice or personal feelings; certainty, this stipulates that the time of payment, the manner of payment and the amount to be paid should be clear to the tax payer as well as the taxing authorities, convenience which relates to mode of payment and the timing. This principle stipulates that the time and manner of payments should not in convenience the tax payer; productivity which stipulates that a good tax system should be able to produce large amount of revenue.

Tax Laws and Policies in Nigeria

This refers to the embodiment of rules and regulations relating to tax revenue and the various kind of tax in Nigeria made by the legislative arms of government and constantly subjected to amendment. Ogbonna and Appah (2012); Kiabel & Nwokah (2009); Ayodele (2006) stated that the following are some of the prevailing tax laws in Nigeria: Personal Income Tax Act (PITA) CAP P8 LFN 2004, Company Income Tax Act (CITA) CAP 60. LFN 1990 & LFN 2004, Petroleum Profit Tax Act (PPTA) 2004 & 2007, Value Added Tax (VAT) Act No 102 LFN 1993 & 2004, Capital Gain Tax Act CAP 42 LFN 1990, Stamp Duties Act CAP 41 LFN 1990, Education Tax Act No 7 LFN 1993 & 2004, Federal Inland Revenue Service Act 2004, Customs, Excise Tariffs, etc (Consolidation) Act 2004, National Sugar Development Act 2004; and National Automotive Council Act 2004, Information Technology Development Act 2007. Based on the report of the Presidential Committee on National Tax Policy (2008) the National tax policy provides a set of rules, modus operandi and guidance to which all stakeholders in the tax system most subscribe. The formulation of tax administration policy in the country is based on the responsibility of the Federal Inland Revenue Service (FIRS), Customs, Nigerian National Petroleum Corporation (NNPC), National Population Commission (NPC), and other agencies but under the guidance of the National Assembly (Presidential committee on National tax policy, 2008). Recent reforms in tax laws in country resulted into the promulgation of Tertiary Education Trust Fund Act 2011, Personal Income Tax Act and Federal Capital Territory Act 2015.

Perquisites for Implementing Electronic Taxation System

Dowe (2008) argued that the basic prerequisites for implementing successful e-filing and e payment systems are: a reliable and accessible internet service; cooperative financial institutions; an IT oriented public; and adequate financing to set up the appropriate infrastructure in tax offices. Ideally, the setting of an e-filing and e-payment system should form part of a comprehensive IT design, development and implementation strategy, which correlates the view of Muita (2011) that for e-filing to effectively take off; skills, infrastructure and a conducive business environment are needed.

The implementation process for electronic tax systems begins with the development of a strategic business plan – documenting the ideas and actions, desired outcomes and the time frame for each component, taking into account the strengths and weaknesses of the tax administration and environmental opportunities and threats. The plan should also document the implementation strategy including the implementation approach. Many countries have taken a gradual approach by allowing voluntary e-filing and e-payment for select segments of the taxpayer base, e.g. individuals or companies only, in the initial stages to allow for live testing of the system. After testing is complete filing becomes mandatory for some taxpayers, e.g. companies (Dowe, 2008).

In addition to the above, an efficient e-taxations system needs constant electricity supply, organized seminars for tax payers and tax officers on the usage, secured, user friend and easy assessable website and law.

Benefits of Adopting Information Technology in Tax Administration

Dzidonu (2012) itemized the benefit of using information technology to manage the operations and delivery of public sector institutions to include: improvement in administrative efficiency, effectiveness and productivity, improvement in service delivery, reduction in administrative, operational and transactional costs of public and provision of access to information at a reduced cost. In relation to taxation, significance of the use of IT is infinite, some of which are; facilitates a reducing in the overhead cost of managing the agencies of government responsible for tax administration, instant computation of tax liability from the use of online tax calculator, reduced cost of registering tax payers and instant generation of tax identification number, reducing in staff-taxpayers collusion as regards tax liability, reduction in fraudulent activities of tax collectors in the aspect of non-remittance of tax received from tax payers and boost the revenue of government in terms of reduction in expenses (administrative, overhead and transactional) and corrupt practices.

Adewoye, Ademola, Afolabi & Oyeleye (2013) opines that the anticipated benefits of implementing an information technology system include improvements in productivity, better profit performance, and a higher degree of accuracy of information. Productivity typically improves in organizations which implement information technology, although there can be some loss of productivity during the "learning curve." (Adewoye & Olaoye, 2014).

Pitfalls of Adopting Information Technology in Tax Administration

Ideally, the adoption of IT-facilities in administering taxation can leads to indifference attitude on the payment of taxes, garbage-in-garbage-out, that is imputation of wrong figures that will lead to wrong calculation of tax liability by online tax calculator, poor internet facility, poor electricity to power host server, high cost of maintenance of ICT facilities, lack of technical Know-how by tax administering agencies, high level of illiteracy among lower income earners that characterized the population, incidence of internet hackers. So also, Oseni (2015) opined that the use of ICT can be catastrophic if carelessly employed by both the tax payers and the tax administrators as scammers and hackers of the internet facilities can utilize the ignorance or the lax security of the system.

Conceptual Framework

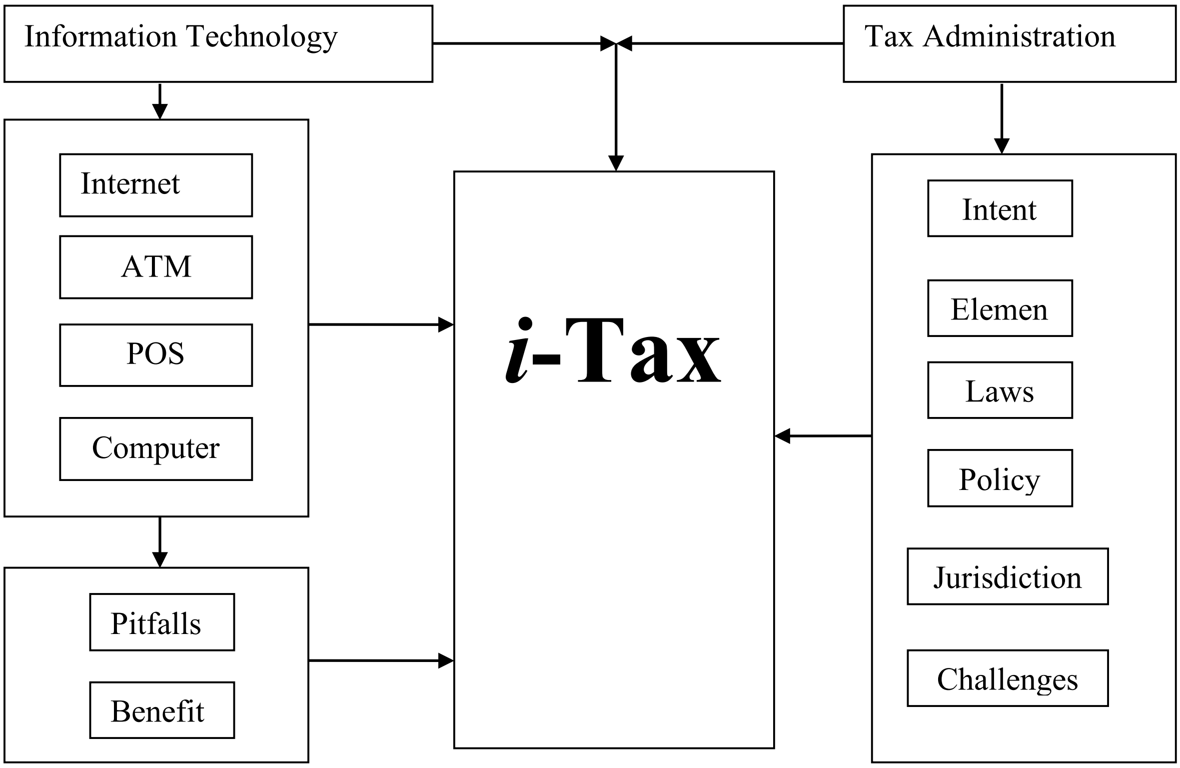


Fig1: i-Tax connectivity

METHOD

The study was carried out in Southwest, Nigeria which comprised of the following States Ekiti, Ondo, Oyo, Osun, Ogun and Lagos State. The study adopted descriptive survey design and population of the study which consisted of all members of staff in the agencies of government (federal and state) responsible for tax administration in Southwest, Nigeria, while sample which comprised of members of staff excluding unprofessional cadre (gatemen, clerical staffs, messengers) was purposively selected.

Questionnaire as research instrument, while face and content validity and test-retest technique was respectively used to measure its validity and reliability. It was later administered to a total of one hundred and twenty (120) members of staff of the stated agencies. In analyzing the data collected, inferential statistics in the form of multiple regression and pearson product moment correlation were used. So also, the following diagnostic test; variance inflation factor (VIF), White Heteroskedasticity test and Breush-Godfrey LM test were conducted in other to ensure reliability and validity of the results.

Model Specification

The model of the study stated below was based on the modification of model specified by Harrison & Nahashon (2015) on the effects of online tax system in terms of online tax filing, online tax registration and online tax remittance on tax compliance.

Tax Administration (TAXAD) is a function of Information Technology (IT)

Tax Administration (TAXAD) is measured with indicators and variables given as follows:
TAXAD= Tax Collectivity-TAXCOLAD, Tax Implementation-TAXIMP, Tax Planning- TAXPLNN

while, Information Technology (IT) is measured with indicators and variables given as follows is measured with:

IT= Online Tax Filing-OTF, Online Tax Registration-OTR, Online Tax Remittance-OTRE

Therefore:

$$TAXCOLAD+TAXIMP+TAXPLNN = \beta + a_1\ OTF + a_2\ OTR + a_3\ OTRE + \mu$$

The model is specified in a log-linear estimation form as;
$logTAXCOLAD + logTAXCOLAD + logTAXIMP + logTAXPLNN = \beta 0 + a_1 log\ OTF + a_2 log\ OTR + a_3 log\ OTRE + \mu t$ ...i

DATA ANALYSIS AND INTERPRETATIONS

Table I: Regression Analysis on Information Technology and Tax Collectivity

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	T	Sig.
1	(Constant)	7.933	1.252		6.336	.000
	OTF	-.019	.102	-.021	-.190	.850
	OTR	.073	.114	.064	.636	.526
	OTRE	.315	.055	.522	5.780	.000

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.525[a]	.275	.256	1.37185

Source: Authors computation (2017)

a. Predictors: (Constant), OTRE, OTR, OTF

a. Dependent Variable: TAXCOLAD

In the table I, it could be inferred that if the explanatory variables (OTRE, OTR, OTF) are held constant, the explained variable (TAXCOLAD) will be 7.933 unit better off, which implies that in a situation where there is no adoption of IT on the administration of tax, tendency for efficiency in tax administration in the country will be 7.938. The unstandardised beta coefficient of online tax filing-OTF is -.019 (S.E = .102, t= -.190 and $p>0.05$). This depicts that an increase in the use of OTF results to 1.9% insignificant inverse effect on tax collectivity in the country, this contradict the conclusion of Efunboade (2014) that emerging global infrastructures (Taxpayer Identification Number- TIN, Factual Accurate Complete Timely-Project FACT and Integrated System of Tax Administration- ITAS) could make it increasingly possible for eligible taxpayers to pay tax online anywhere and anytime. Online tax registration indicated 0.073($p>0.05$) insignificant impact on TAXCOLAD, which implies that a unit increase in the use of IT facilities for tax payers registration results to 7.3% insignificant impact on tax collection.

The above findings can be ascribed to the pitfalls associated with the adoption of IT-facilities in administering taxation which includes indifference attitude on the payment of taxes, garbage-in-garbagge-out, that is imputation of wrong figures that will lead to wrong calculation of tax liability by online tax calculator, poor internet facility, poor electricity to power host server, high cost of maintenance of ICT facilities, lack of technical Know-how by tax administering agencies, high level of illiteracy among lower income earners that characterized the population, incidence of internet hackers and view of Oseni (2015) that the use of ICT can be catastrophic if carelessly employed by both the tax payers and the tax administrators as scammers and hackers of the internet facilities can utilize the ignorance or the lax security of the system

Online tax remittance of tax liability by tax payers-OTRE, depict significant impact of 31.5% ($p<0.05$) on tax collectivity, which is in tandem with the findings of; Harrison & Nahashon (2015) that online tax system does affect tax compliance level among small taxpayers, Seelmann, Lerche, Kiefer & Lucante (2011) which concluded that computerization of tax and revenue authorities contribute to reaching the goal of good (financial) governance, by improving accountability and transparency of the revenue authorities. So also, Oseni (2015) which revealed that modern technology reduce tax evaders since all potential taxpayers are captured by the system and thus enhance the efficiency in collectivity of taxes. This correlates the view of Adewoye, Ademola, Afolabi & Oyeleye (2013) which disclosed that the anticipated benefits of implementing an information technology system include improvements in productivity, better profit performance, and a higher degree of accuracy of information. Productivity typically improves in organizations which implement information technology, although there can be some loss of productivity during the "learning curve." (Adewoye & Olaoye, 2014).

In addition, the model summary shows that there is 52.5% relationship (r) between information technology and tax collectivity- TAXCOLAD. The R^2 shows that the predictors of information technology (OTRE, OTR and OTF) explains 0.275 variations in tax collectivity. In respect of the adjusted R^2 which takes into the cognizance of the error term, signifies that adoption of information technology tools explains 25.6% variation in the TAXCOLAD while the remaining 68.1% are explained by others factors excluding information technology which are not captured in the study such as tax penalty, tax payers' knowledge on tax laws, tax audit, tax drive.

Table II: Relationship between Information Technology and Tax Implementation
Correlations

		TAXIMP	OTF	OTR	OTRE
TAXIMP	Pearson Correlation	1	-.059	.097	-.344**
	Sig. (2-tailed)		.520	.290	.000
	N	120	120	120	120
OTF	Pearson Correlation	-.059	1	.604**	.457**
	Sig. (2-tailed)	.520		.000	.000
	N	120	120	120	120
OTR	Pearson Correlation	.097	.604**	1	.149
	Sig. (2-tailed)	.290	.000		.105
	N	120	120	120	120
OTRE	Pearson Correlation	-.344**	.457**	.149	1
	Sig. (2-tailed)	.000	.000	.105	
	N	120	120	120	120

Authors computation 2017

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

The results as presented in table 2 revealed that there is -5.9% (p=0.520) insignificant correlation between online tax filing-OTF and tax implementation-TAXIMP which implies that a growth the use of online tax filing by tax payers will result to a reduction in tax implementation. Online tax registration by tax payers and tax implementation had a 9.7% (p=0.290) positive correlation, online tax remittance by tax payers of tax liability has significant inverse association of 0.344 (p=0.000) with tax implementation in the country. The above result is concurrence with the conclusion of Sagas, Nelimalyani and Kimaiyo (2015) in Gekonge & Wallace (2016) that electronic tax register machines have helped to curb cases of tax evasion ETRs have helped increase revenue collection due to their efficient nature.

Table III: Relationship between Information Technology and Tax Planning
Correlations

		TAXPLNN	OTF	OTR	OTRE
TAXPLNN	Pearson Correlation	1	-.038	.140	-.190*
	Sig. (2-tailed)		.684	.126	.038
	N	120	120	120	120
OTF	Pearson Correlation	-.038	1	.604**	.457**
	Sig. (2-tailed)	.684		.000	.000
	N	120	120	120	120
OTR	Pearson Correlation	.140	.604**	1	.149
	Sig. (2-tailed)	.126	.000		.105
	N	120	120	120	120
OTRE	Pearson Correlation	-.190*	.457**	.149	1
	Sig. (2-tailed)	.038	.000	.105	
	N	120	120	120	120

Source: Authors computation 2017

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

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

The results as presented in table 3 shows that there is 3.8% (p=0.684>0.05) insignificant inverse relationship between online filing of tax returns by tax payers (OTF) and tax planning

(TAXPLNN) which implies that a growth the use of online tax filing by tax payers will result to a reduction in tax planning. Online tax registration by tax payers and tax planning had a 14% (p=0.140>0.05) correlation, online tax remittance by tax payers of tax liability has significant inverse link of 0.190 (p=0.038<0.05) with tax planning.

Diagnostic Test

The following diagnostic test; variance inflation factor (VIF), White Heteroskedasticity test and Breush-Godfrey LM test were conducted in other to ensure reliability and validity of the above results. The results of the diagnostic test were thus presented below:

Table IV: Variance Inflation Factor Test

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
	OTF	.497	2.011
1	OTR	.614	1.628
	OTRE	.766	1.305

Source: Authors computation 2017

Based on the result in the table IV above which showed the result for the presence or otherwise of multicollinearity among the variables used in this study, the result indicated that all the variables used in the study are relevant to the study since the VIF factors of each (OTF, OTR, ORE) is below the benchmark of 10 and thus indicates the absence of multicollinearity in model.

Table V: Serial Correlation Test

Breusch-Godfrey Serial Correlation LM Test:	
F-statistic	15.095818
Unadjusted R-squared	0.116036
p-value = P(F(1,115) > 15.0958)	0.000171
P(Chi-square(1) > 13.9243)	0.00019

Authors computation 2017

Table V above shows that the F-statistic and Unadjusted R-squared values of 15.095818 and 0.116036 with p-values of 0.000171 and 0.00019 respectively indicates the presence of autocorrelation in model since the F-statistic and Unadjusted R-squared with p-values of 0.000171 and 0.00019 are lesser than the critical values at 5% level of significance. Thus, we can conclude that there is presence of autocorrelation in the model used for the study.

Table VI: Heteroskedasticity Test

Heteroskedasticity Test: White	
F-statistic	62.089868
Unadjusted R-squared	0.517416
P(Chi-square(9) > 62.089868)	0.00

Authors computation 2017

The table above shows that the F-statistic and Unadjusted R-squared values of 62.089868 and 0.517416 with p-value of 0.00 respectively indicates the presence of heteroskedasticity in model1 since the F-statistic and Unadjusted R-squared with p-values of 0.00 is lesser than the critical values at 5% level of significance. Thus, we can conclude that there is presence of heteroskedasiticity in the model

CONCLUSION AND RECOMMENDATIONS

Based on the findings of the study, It is mainly concluded that information technology enhance the level of productivity in tax collectivity and administration. Specifically; online filing and remittance of tax returns by tax payers' are inversely associated with tax planning and implementation by tax administrative agencies. The adoption of information technology in the registration of eligible and potential tax payers portrays efficiency in tax planning and implementation which in turn ensures ease collectivity of tax returns.

In respect of the research findings, the study recommends that: filing of tax online should be monitored and controlled because of its adverse effect on planning and implementation of tax collectivity; respective agencies (federal, state and local government) responsible for tax collection should sensitize eligible and potential tax payers on the process and suitability of online tax registration by tax payers in other to enhance its impact on tax administration in the country; online tax remittance should be encourage among tax payers because it enhance flexibility in tax collection, but it must be controlled with manual remittance due to its inverse impact on planning and implementation of tax administration; and a replica of the study should be carried out in other parts of the country in other to re-validate and test the applicability of the findings in them.

References

Ariwodola, J. T. (2000). Personal Taxation in Nigeria Including Capital Gains Tax and Capital Transfer Tax. Lagos. Jaja publishing Ltd, 12-17.

Adeleke, S. (2011). Taxation, Revenue allocation and fiscal Federalism in Nigeria: issues, challenges and policy options. Economic Annals, 6, 189.

Adewoye, J. O, Ademola, A. O, Afolabi O.D & Oyeleye, O. (2013). Performance impact of Information and Communication Technology (ICTs) on women entrepreneurs in South Western Nigeria. Available online at www.elixirpublishers.com (Elixir International Journal)

Adewoye, J. O. & Olaoye, C. O. (2009). Accounting Information Technology, Ijagbo/Offa, Kwara State.

Adewoye, J. O. & Olaoye, C. O. (2014). Usage of information technology to enhance professional Productivity among accountants in Ekiti State. International Journal of Accounting and Financial Management Research (IJAFMR)),4(2),7-18.

Adigbole, E.A & Olaoye, C.O. (2013). The application of Information Technology on Administrative Efficiency in Nigeria Universities. A case study of five selected Universities in Ekiti state, Reseach Journal of management, 1(1). Available on www.researchjournali.com

Amabali, A.R. (2009). E-Government Policy: Ground issues in e-filing system, European Journal of Social Sciences 21(13). 189-45.

Ayodele, O.(2006).Tax Policy Reform in Nigeria. World Institute for Developmental Econmic Research(WIDER).Research PAPER,3

Dzidonu, C.K. (2012). Using Information and Communication Technology (ICT) in Managing National Resources. Paper Presented at the 7th Internal AuditForum, Accra

Dowe, D.E., (2008). E-Filing and E-Payments – The Way Forward, Paper presented at Caribbean Organization of Tax Administration (COTA) General Assembly, Belize City,

Efunboade, A. O. (2014). Impact of ICT on Tax Administration in Nigeria. Computer Engineering and Intelligent Systems, 5(8), 26-29

Gasteiger, D. W. (2011). An automated enrolment projection system, (Unpublished degree of Doctor of Philosophy thesis, Ontario Institute for Studies in Education, University of Toronto)

Gekonge, J .M., & Wallace, A. (2016). Effects of Electronic- Tax System on the Revenue Collection Efficiency of Kenya Revenue Authority: A Case of Uasin Gishu County. Imperial Journal of Interdisciplinary Research (IJIR), 2(4), 815-827.

Gidisu, T. E. (2012). Automation System Procedure of the Ghana Revenue Authority on the Effectiveness of Revenue Collection: A Case Study of Customs Division, Unpublished MBA Thesis, Kwame Nkrumah University of Science and Technology

Harrison, M. M. & Nahashon, K. (2015). Effects of online tax system on tax compliance among small taxpayers in Meru County, Kenya. International Journal of Economics, Commerce and Management,3(12), 280

Kiabel, B. D. & Nwokah, N. G. (2009). Boosting Revenue Generation by State Government in Nigeria: The Tax Consultants Option revisited. European Journal of social sciences 8(4) 532-539.

Kibe, E. M. (2011). Use of geographical information systems to enhance revenue collection in Local Government. (Unpublished MBA Project, University of Nairobi).

Kioko, B. K. (2012). Comparison between representative tax system and macro basis for revenue equalization systems in Kenya. (Unpublished MBA Project, University of Nairobi).

Muita, E.W. (2011). Factors that Influence Adoption and Use of E-Filing System of Kenya Revenue Authority Among The Large Taxpayers, (Unpublished MBA Project submitted to the JKUAT Nairobi Central Business District Campus).

Muthama, J (2013). The effects of revenue system modernization on revenue collection at Kenya revenue. (M.Sc., Research Project, University of Nairobi).

Obi (2003). Educational Management: theory and practice, Enugu: JAMOE Nigeria enterprises.

Ogbonna, G.N. & Appah, E. (2012). Impact of Tax Reforms and Economic Growth of Nigeria: A Time Series Analysis. Current Research Journal of Social Sciences, 4(1), 62-68.

Ojo, S. (2008). Fundamental Principles of Nigerian Tax. Sagribra Tax Publication, Lagos.

Olaoye, C. O. (2008). Concepts of Taxation. Offa: Clemart Publishing.

Oseni, M. (2015). Sustenance of Tax Administration by Information and Communications Technology in Nigeria. Archieves of Business Research, 4(1), 47-54.

Otieno, O.C., Oginda, M., Obura, J. M., Aila, F. O., Ojera & Siringi, E. M. (2013). Effect of Information Systems on Revenue Collection by Local Authorities in Homa Bay County, Kenya. Universal Journal of Accounting and Finance, 1(1), 29-33.

Presidential Committee on National Tax Policy (2008). Draft Document on the National Tax Policy. Available from: http//www.scribd.com/doc/10063735/National-Tax-Policy-Draft-updated.

Seelmann, J., Lerche, D., Kiefer, A. & Lucante, P. (2011), Benefits of a computerized integrated system for taxation: iTax case study. A handbook for practitioners based on GIZ tax sector experience in Tanzania and the Philippines http://www.taxcompact.net/documents/ITC_iTax-case-study.pdf

UN, (2007), Benchmarking e-government: A Global Perspective, retrieved from http://www.unpal.un.org/intradoc/groups/public/documents/april 2013

Wasao, D. (2014), The effect of online tax system on tax compliance among small taxpayers. University of Nairobi.

Archives of Business Research – Vol.5, No.9
Publication Date: Sep. 25, 2017
DOI: 10.14738/abr.59.3718.
Ratnawati, H. T., Rohmasari, F., & Lokajaya, I. N. (2017). Financial Literacy And Financial Inclusion Strategy Model As Leverage Welfare Of Industrial Community Tourism Regency Of Gresik East Java. *Archives of Business Research,* 5(9), 151-163.

Financial Literacy And Financial Inclusion Strategy Model As Leverage Welfare Of Industrial Community Tourism Regency Of Gresik East Java

Prof. Dr. Hj. Tri Ratnawati, MS, Ak. C.A
University lecturer, August 17, 1945
Surabaya, Indonesia

Fatma Rohmasari, ST., MM
University doctoral student, August 17, 1945
Banyuwangi, Indonesia

I Nyoman Lokajaya, ST., MM
University doctoral student, August 17, 1945
Surabaya, Indonesia

ABSTRACT
Small industries over the past few years business conditions have not shown significant progress. Small industries have problems in the field of finance that is not able to separate between business finances with household finances, not having financial planning including business investment, not optimizing in utilizing banking facilities. The hypothesis of the research is H1: Financial literacy and financial inclusion have significant effect to society's welfare is, H2: Significant financial literacy indicator is old age, financial behavior and self control, H3: Significant financial inclusion indicator is banking facility, banking service and product banking H4: A significant indicator of society welfare is the economic and viable needs of the economy. The result of hypotheses shows that the relationship between Financial Literacy by using indicators of Old Age, Financial Behavior, Self Control on Society welfare is significant with T-statistics of 19.471 (> 1,966). Financial Inclusion using Banking Facility indicators, Banking Services and Banking Products is not significant with T-statistics 1,218 (1,966). Financial Literacy measured using the old age which has a value of 0.681> 0.50, Financial Literacy as measured by using Financial Behavior which has a value of 0.893> 0.50, Financial Literacy as measured by using Self Control has a value of 0.752> 0.50. Financial Inclusion as measured by using Banking Facility that has a value of 0.838> 0.50, Financial Inclusion as measured by Banking Services which has a value of 0.861> 0.50, and Financial Inclusion as measured by using Banking Products that have a value of 0.980> 0, 50. The society welfare variable measured by using life requirement has a value of 0.925> 0.50 and measured by using Mapan Ekonomi has a value of 0.932> 0.50.

Keywords: strategy model, financial literacy, financial inclusion, leverage of people's prosperity

INTRODUCTION

The prosperity of small industry community which is home industry especially in Giri area which is religious area in Gersik regency of East Java has big potential to be improved. Indications of the welfare of the small-scale industry can be detected from the fulfillment of the necessities of daily living of a quality and there is an established economic indication. It takes leverage or leverage of the small industrial society welfare gained from an understanding of finance called financial literacy as well as small industrial communities must have accessibility and have linked with the banking and use all facilities provided by the banking.

LITERATURE REVIEW

Financial Literacy

The term literacy of finance (financial literacy) proposed by financial experts and various literature none of the exactly the same. Financial literacy is used as a manifestation of a person's ability to make personal and family financial management decisions.

Orton (2007) made it clear that financial literacy is integral to one's life because financial literacy is an important tool for making informed financial decisions. But from experiences in various countries still shows relatively less high. Byrne (2007) also found that low financial knowledge will lead to faulty financial plans, and cause biases in the achievement of wellbeing at an unproductive age.

Krishna, Rofaida, and Sari (2010) find different findings that male students have a lower likelihood of financial literacy rates than women primarily concerned with knowledge of investment, credit, and insurance.

Remund (2010) explains that there are five domains of financial literacy: knowledge of financial concepts, the ability to communicate about financial concepts, the ability to manage personal finances, the ability to make financial decisions, and the confidence to make future financial planning.

Blueprint The Indonesian National Financial Literacy Strategy (SNLKI) launched by the Financial Services Authority (OJK) defines financial literacy as a series of processes or activities to increase the knowledge (knowledge), skills (skill), and confidence of consumers and the wider community so that they able to manage finances better.

Financial Literacy or knowledge of finance has become a knowledge that is closely related in everyday life. This is because in practice, everyone will tend to use that knowledge to be able to manage their finances, either for consumption or for business work. Therefore, this knowledge becomes absolutely necessary for everyone so that they can make wiser and more appropriate financial decisions.

Referring to The Presidents Advisory Council on Financial Literacy / PACFL in Hung (2009) research, financial literacy is defined as knowledge of basic economic and financial concepts and the ability to use other financial knowledge and skills in managing financial resources effectively for financial welfare lifetime.

According to Huston (2010: 307), the definition of financial literacy is a dimension that indicates that an individual must have the ability and confidence to use his financial knowledge in making various financial decisions.

Therefore, based on several definitions above, it can be concluded that financial literacy is a person's knowledge of basic financial concepts and the ability to manage financial resources effectively for financial welfare, as well as the ability to make financial decisions.

The definition of financial literacy varies, as some of them, Lusardi and Mitchell (2007) define financial literacy as financial knowledge and ability to apply it (knowledge and ability). Meanwhile, Danes and Hira (1987) and Chen and Volpe (1998) interpret financial literacy as knowledge to manage finances (financial literacy is money management knowledge). The Presidents Advisory Council on Financial Literacy (PACFL, 2008) in Hung (2009), defines the financial literacy: financial literacy as the ability to use knowledge as well as the expertise to manage financial resources to achieve prosperity). Financial literacy is a knowledge of finances and the ability to use that knowledge to prosper.

Lisa Xu and Bilal Zia (2012) say that the term financial literacy includes concepts that begin with awareness and understanding of financial products, financial institutions and concepts about financial skills such as the ability to calculate compound interest payments as well as more general financial capabilities such as management money and financial planning. According to Lisa Xu and Bilal Zia (2012), financial literacy has different implications depending on the level of income in the country. In high-income countries, financial literacy is considered a complement to consumer protection. One of the main objectives of financial education is to equip everyone with the ability to plan existing financial products such as retirement planning or Home Ownership Loans (KPR) as well as for sound financial decision making.

Inclusive Finance (Financial Inclusion)

The terms financial inclusion or inclusive finance became a post-crisis trend of 2008 primarily based on the impact of the crisis experienced by groups in the bottom of the pyramid (low income and irregularities, living in remote areas, disabled people, workers with no legal identity documents, and marginalized society) are generally unbanked which are listed very high outside the developed world.

There is no standard definition of inclusive finance. Various institutions try to define it, as follows:

"State in which all working adult age are effective access to credit, savings, payments, and insurance from formal service providers. Effective access involves convenient and responsible service delivery, at a cost affordable to the customer and sustainable for the provider, with the result that financially excluded customers using formal financial services rather than existing informal options "(CGAP-GPFI). "Financial inclusion involves providing access to an affordable, rural and undocumented persons, who have been underserved or excluded from the formal financial sector" (FATF).

"Process of ensuring access to the financial services and services of a group of people by regulated, mainstream institutional players "(RBI / Reserve Bank of India).

Various reasons that cause the community to be unbanked, both in terms of supply (service providers) and demand (community), namely:

1. price barrier (expensive)
2. information barrier (do not know)
3. design product barrier (product matching)
4. channel barrier (appropriate means)

The Committee on Financial Inclusion in the Khaki study (2012: 117) defines the concept of financial inclusion as a process to ensure access to timely and adequate financial and credit services, where required by vulnerable groups such as weaker groups and groups the lower income, at an affordable cost.

According to Kelkar (2010: 57), financial inclusion means we provide financial services, including banking and credit services, at an affordable cost to most of the disadvantaged and low-income groups that tend to be ruled out. Where such financial services include access to savings, loans, insurance, payments, and money transfer facilities offered by the formal financial system.

Meanwhile, according to Bhowmik (2013: 3), financial inclusion means making financial services accessible to the poor, giving them credit facilities that suit their needs and generating entrepreneurial opportunities for them.

Bhowmik (2013: 3) also adds that from various definitions different, it can be concluded matters about the concept of financial inclusion are:
It is difficult to be able to define and measure definite concepts.

a) People from all segments of society should have access to formal financial services.
b) There are no barriers to accessing credit.
c) Timeliness and adequate amount of credit must be provided.
d) Weak and low-income communities need to be targeted.
e) Financial services should be cheap and affordable.

Society welfare

Society welfare is the ultimate goal of development activities. Both within the scope of the country and the scope of the region. Development can not be said to be fully successful if not able to make people live more prosperous. For that it is necessary to understand the welfare itself so that steps can be taken to achieve it.

Neoclassical welfare theory is a theory of welfare popularizing the principle of Pareto Optimality. The Pareto Optimality principle states that the community becomes better off if one individual is better off and non worse off. The principle is a necessary condition for achieving the maximum social welfare state. Social consequences can be determined on the basis of the subjective choices individuals make. The larger the range of options available, the greater the level of welfare achieved, if other circumstances do not change (Coporaso and Levine, 2008: 194). In addition to the principle of pareto optimality, neoclassical welfare theory also explains that the function of welfare is a function of all individual satisfaction. Group welfare (community) can be improved through the well-being of individuals. If the individual succeeds in satisfying his needs then the welfare of the group (community) will be achieved.

The principle in the new contractarian approach is that a rational individual will agree with the maximum freedom of his life. The essence of this approach is that every individual has a clear concept of goods and services and the tasks of the existing social institutions. In this case the individual will maximize his freedom to pursue their concept of the goods without any interference.

The welfare theory according to economics can generally be classified into three types, namely classical utilitarian, neoclassical welfare theory, and new contractarian approach (Albert and Hahnel, in Darussalam 2005: 77). The classical utilitarian approach emphasizes that one's pleasure or satisfaction can be measured and increased. Different levels of pleasure perceived by the same individual can be compared quantitatively. The principle for the individual is to increase as much as possible the level of welfare, while for the community, the improvement of the welfare of his group is the principle held in his life.

Neoclassical welfare theory is a theory of welfare popularizing the principle of Pareto Optimality. The Pareto Optimality principle states that the community becomes better off if one individual is better off and non worse off. The principle is a necessary condition for the achievement of the maximum social welfare state. In addition to the principle of Pareto

Optimality, neoclassical welfare theory also explains that the function of welfare is a function of all individual satisfaction.

households, which still require subsidies from parents / families / relatives, use credit facilities, awareness to save and invest is still low, especially among private employees, so that the pattern of household consumption expenditure is still consumptive (Fatma & Tri Ratnawati, 2011).

There are 46.7% of the total respondents housewives in Surabaya who are not financially savvy in managing their household finances (Fitria & Tri Ratnawati, 2012).

The pattern of household family spending in East Java is still consumptive with the main dominance on the cost of purchasing clothing, cosmetics, and debt repayments. So included in the category of not financially savvy and has not achieved family welfare (Tri Ratnawati, Siti M, & Erwin, 2012)

Sidoarjo fish cultivation is more feasible to be invested because it has NPV, PI, Payback Period, & ARR is greater than shrimp and tilapia, thus potentially able to improve the financial intelligence of the farmers (Nur Sitti Khumairoh, 2013). Development of tourism village potency through its financial strategy as new tourism object of Bromo (Siti Mujanah & Tri Ratnawati, 2014-2015)

Model making and formulation and strategic plan involving the policy of stakeholders as the proper implementation of financial literacy and financial inclusion to accelerate the improvement of prosperity of tourism industry community in Gresik regency (Tri Ratnawati, Nyoman, & Fatma, 2017-2019)

RESEARCH METHOD

Draft Writing

First year research activity begins with data collection conducted through two techniques namely (a) Library study and (b) Field study consisting of observation, interview and questionnaire. Literature study is done by studying the books, literature, scientific writing, where researchers seek theoretical data as a comparison material by applying it to the problem under study. Field study aims to observe the object of research so as to understand the actual conditions. Interview is a technique of collecting data in the form of verbal communication with related parties.

Data are analyzed through the following stages: (a) data processing; (b) Evaluation and Analysis of Results; (c) conclusions; and (d) develop financial literacy and financial inclusion models and strategies in the first year of research.

Technique Analysis

Factor Analyst

Data processing technique used is using factor analysis used to determine the dominant factors in explaining a problem. This analysis can be viewed as an extension of major component analysis which is basically aimed at obtaining a small number of factors that have the following properties:

1. Be able to explain as much as possible the diversity of data
2. These factors are mutually free
3. Each factor can be interpreted

Factor analysis was processed by SPSS to get factor (dominant indicator) from each research variable that is finanasial literasi, financial of inclusion and prosperity of society.

Smart PLS (Partial Least Square)

The data processing using smart PLS in SEM aims to simultaneously test the unmeasured latent variables (unabserve variables) using measurable indicators and test the influence of the latent variables (inner weight) as well as to test the significance of the manifest variable (indicator) to the latent variables (outer weight).

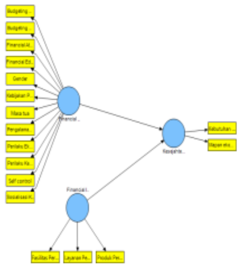


Figure 1
Conceptual Framework for Smart PLS Model Testing

RESULTS AND DISCUSSION

Financial Literacy in Improving the Welfare of Small Industry Community Tourism Area Gersik District East Java.

Based on the results of data processing with factor analysis and sorted by factor value of 12 indicators which is a factor of financial literacy seen in the following table:

Table 1.
The value of financial literacy indicator factor

No	Indicator	Factor Value
1	The Old Age	0.920
2	Financial Education	0.913
3	Financial Experience	0.905
4	Business Finance Budgeting	0.868
5	Economic Behavior	0.836
6	Financial Attitude	0.828
7	Gender	0.810
8	Financial Conduct	0.802
9	Self Control	0.788
10	Government Policy	0.784
11	Financial Socialization from Government	0.772
12	Family Finance Budgeting	0.747

Factor 1: Financial Experience

The industry community has a perception that Financial Literacy is important for financial preparation if they enter old age

Factor 2: Financial Education
Small Industry Management requires financial education in the sense that they need to be trained in literacy finance education so that small industry management is proficient

Factor 3: Financial Experience
Experience in finance is the 3rd highest factor after the old age & financial education means that experience in finance is an important factor for Financial Literacy

Factor 4: Budgeting Business Finances
Budgeting business finance business transactions is a factor that is also important for small industry management means that small industry management should budget their business finances for Financial Literacy

Factor 5: Economic Behavior
Economic behavior is business behavior in applying the economic principle that is the effort to bring the maximum benefit and cost as efficiently as possible in order to get the profit (profit) is optimum

Factor 6: Financial Attitude
Financial Attitude is a financial practice of small industry management who still think that business money and family money is not separated

Factor 7: Gender
Between men and women are different in terms of financial literacy and Gender is an important factor for the small industry community in terms of financial management. Women are more aware of the financial management of small industries.

Factor: 8 Financial Behavior
The small financial industry behavior that has not been able to separate between business finance and its household finance triggers the failure of a small industry in its financial literacy

Factor 9: Self Control
Control of the (self control) for small business actors is very important considering this business does not separate between business finances, family finances then self control is to be done so as not to be receptive

Factor 10: Government Policy
Government policy in terms of training
and assistance of small industries especially in Gersik regency tourism area

Factor 11: Financial and Government Socialization
Need to be socialized in terms of financial literacy especially from the government because to increase knowledge of small industries in terms of financial literasi while to improve understanding and motivation of financial literasi need to do workshop (training and mentoring

Factor 12: Budgeting Family Finance
Budgeting (Penganggu) family finances for small industries is important to be known in order to note the irregularities that occurred in the financial sector that the realization deviated from the budget

Financial Inclusion in Improving the Welfare of Small Industry Community Tourism Region of East Gersik Regency

Table 2
the value of financial inclusion indicator factor

No	Indicator	factor values
1.	Banking Services	0,857
2.	Banking Products	0,834
3.	Banking Facilities	0,827

Factor 1: Banking Services

The highest factor value for Financial Inclusion is banking service that small industry of Gersik Regency tourism area need to increase the capacity and quality of banking service which is very helpful for the smoothness of finance of small industry located in Gersik Regency tourism area.

Factor 2: Banking Products

Various types of banking products must be accessible by small industries which is also very useful to increase accessibility between small industries with suppliers and customers

Factor 3: Banking Facility

Banking facilities which include Automated Teller Machine (ATM), internet banking, mobile banking, SMS banking, and other facilities that are easily accessible by small industries are needed for smooth business

Welfare of Society in Improving Welfare of Small Industry Community Tourism Area of Gersik Regency of East Java

Factors that indicate that there are 2 indicators that are factors of the Welfare Society are:

Table 3.
the value of Society Welfare indicator factor

No	Indicator	Factor Value
1.	Life necessities	0,863
2.	Well-established Economy	0,863

Factor 1: Living Needs

The fulfillment of the needs of the families of small business entrepreneurs is a measure of the achievement of the welfare of the family. And thus created the prosperity of the small industry community.

Factor 2: Well-established Economy

Well-established economics indicates that the life of the small industrial community has reached a prosperous condition and fulfilled all the necessities of life.

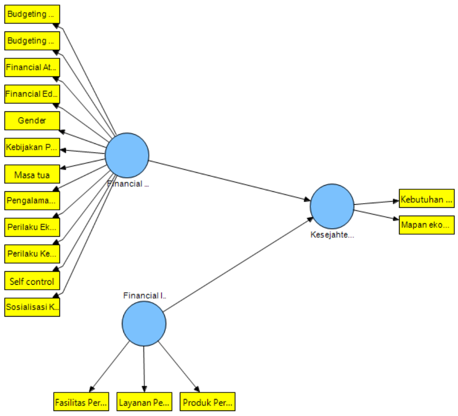


Figure 2
Conceptual Framework

The conceptual framework is structured on the basis of theoretical reviews, to then analyze and solve the problems proposed by the research. Based on the literature review, a conceptual framework can be constructed as shown in the figure. The PLS model simultaneously examines the influence of Financial Literacy and Financial Inclusion on the Welfare of the Small Industry Community of Giri Giri regency. Based on the conceptual framework images can be observed that the Society welfare (as a dependent variable) on the small tourism industry Giri Gersik area associated with financial factors Literasi and Financial Inclusion (as independent variables) .Financial Literasi has 12 indicators namely old age, Financial Education, Experience Finance, Budgeting Business Finance, Economic Behavior, Financial Attitude, Gender, Financial Behavior, Self Control, Government Policy, Financial and Government Socialization, Family Financial Budgeting, while Financial Inclusion has 3 indicators Banking Services, Banking Products and Banking and Welfare Facilities 2 indicators namely Life Needs and established economy, appear in the picture.

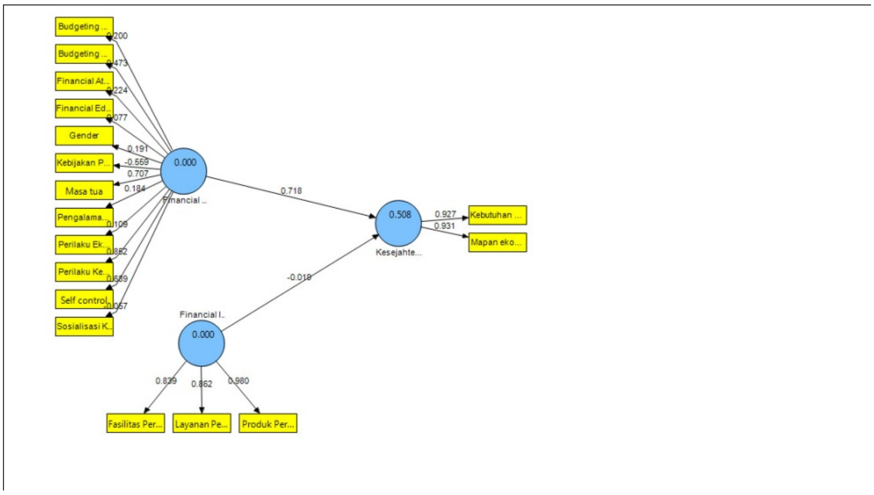


Figure 3
Outer Loading

Convergent validity of measurentment model with reflective indicator can be seen from correlation between score item / indicator with score structure. Individual indicators are considered reliable if they have a correlation value above 0.70. however, in research the development stage of the loading scale 0.50 to 0.60 is still acceptable. By looking at the results of the correlation between the indicator with the construct as seen in the output below ini.Suatu indicated otherwise valid if it has a loading factor above 0.50 to the targeted construction. The SmartPLS output for the loading factor gives the following results.

Based on table 5.2 Outer Loadings above, there are indicators issued from the constructs (model) because it is stated not valve that is below 0.50 based on PLS assessment criteria. Indicators that have been excluded from the construct (model) are, among others, Financial Literacy as measured using Family Finance Budgeting has value 0,200 <0.50 and not significant, Financial Literacy as measured by Business Finance Budgeting which has value 0,472 <0,50 and not significant , Financial Literacy as measured by Financial Attitude having value 0,223 <0,50 and not significant, Financial Literacy as measured with Financial Education which have value 0,077 <0.50 and insignificant, Financial Literacy as measured by Gender having value 0,190 < 0.50 is not significant, the Financial Literacy as measured by the Government Policy has a value of -0.56 <0.50 is not significant, Financial Literacy as measured by Financial Experience having a value of 0.184 <0.50 is not significant, Financial Literacy as measured by Behavior Economies that have a value of 0.109 <0.50 are insignificant, Financial Literacy as measured by Socialization Finance from the Government with a value of -0.056 <0.50 is not significant. The following is the result of the correlation output that has experienced the Dropping construct (model).

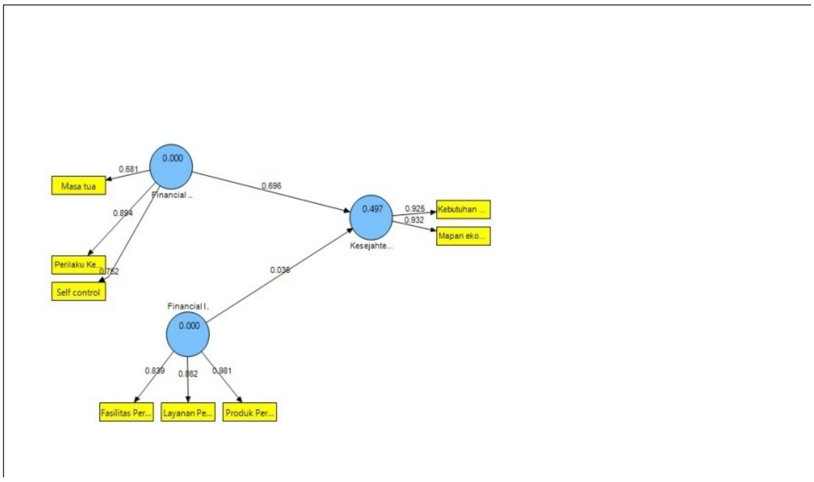


Figure 3
Oouter Loading Dropping

Loadings Dropping the indicator is not excluded from the construct (model) because the value of each indicator either from the Financial Literacy construct measured using the old age which has a value of 0.681> 0.50, Financial Literacy as measured using the Financial Behavior that has a value of 0.893> 0, 50, Financial Literacy measured using Self Control has a value of 0.752> 0.50. Financial Inclusion as measured by using Banking Facility that has a value of 0.838> 0.50, Financial Inclusion as measured by Banking Services which has a value of 0.861> 0.50, and Financial Inclusion as measured by using Banking Products that have a value of 0.980> 0, 50. The society welfare variable measured by using life requirement has a value of 0.925> 0.50 and measured by using Mapan Ekonomi has a value of 0.932> 0.50

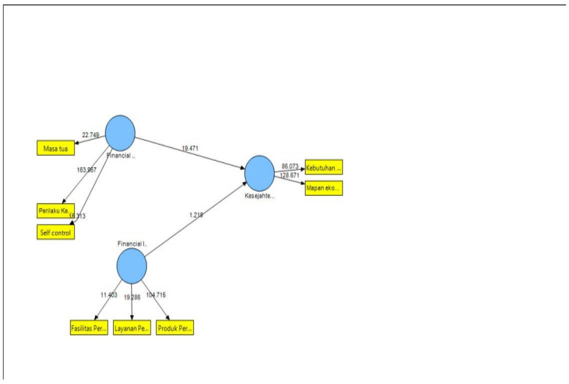


Figure 4.
Inner Model

The influence of Financial Literacy uses indicators of the Old Age, Financial Behavior and Self Control on the Welfare of Society Inner Image The above model shows that the effect of Financial Literacy by using indicators of Old Time, Financial Behavior, Self Control on Society welfare is significant with T-statistics of 19,471 (> 1,966). The original value of the estimate sample is 0.696 which indicates the direction of the relationship between Financial Literacy by using indicators of Old Time, Financial Behavior and Self Control on the Welfare of the Community is positive.

The Influence of Financial Inclusion uses indicators of Banking Facilities, Banking Services and Banking Products on the Welfare of the Community

Financial Inclusion using Banking Facility indicators, Banking Services and Banking Products is not significant with T-statistics 1,218 (, 1,966). Nili original sample estimate is 0.036 indicating the direction of relationship between Financial Inclusioni by using indicator of Banking Facility, Banking Service and Banking Product to Society welfare is positive

Table 2.
Swot Analyse

Strength	**Weakness**
• Motivation, education, Financial Literacy • Controlling business finances • Willing to follow Training on business finance budgeting • The desire to develop business for old age • High creativity	• There is no separation of business finances with family finances • Lack of discipline in spending money • Not yet optimally utilizing the banking facilities so it needs education about financial inclusion • The development of its business from its founding up to the research is still impressed stagnant
Oppurtunity	**Thread**
• The production is much needed by local and even regional communities • Labor is available from the surrounding environment so that the potential to increase productivity • Infrastructure is undergoing rapid development • Large industries have B to B opportunities • Captive potential	• The entry of middle and upper investors • Manufacture of batik tulih can not compete with other regions in terms of price • Access to capital can only be enjoyed by medium and large scale enterprises • The entry of imported products

CONCLUSION

1. Financial Literacy has a significant influence on the welfare of the community of Giri regency tourism industry, while financial inclusion has an insignificant effect on the

welfare of the community of tourism industry in Giri regency of Gresik

2. Significant indicators affect financial literacy is old age, financial behavior and self control
3. Significant indicators affecting financial inclusion are banking facilities, banking services and banking products
4. Indicators affecting the welfare of the people are the necessities of life and well-established economy
5. The welfare of the small tourism industry in Gersik Regency has an indicator of the fulfillment of the necessities of life to achieve the economic establishment is highly dependent on the understanding and steps taken by the industrial community in terms of financial literacy.
6. The importance of financial education, the experience of managing small-scale industry finance needs to be budgeted business, pay attention to economic behavior and financial attitude, for that financial management (Gender) also need to be considered.
7. Financial behavior and financial self-control of small industries also need to continue to be reformed so that the small industrial community more literasi in the financial management.
8. Evaluation of government policies and financial socialization of the government also needs to be done so that the small-scale industry knows the steps to be taken and the financial strategy plan in the short term, medium and long term.
9. If the financial correction to improve the financial literacy has been done then family financial budgeting should be done as a final step in order not to interfere with its business finances.
10. Small industrial community of tourist area of Gresik regency of East Java is detected still not able to exploit the potential as a tourist destination in order to improve their welfare.

SUGGESTION

1. Should be formed a group of small industries of the same kind in the field of business
2. The banking party shall determine the services of the type of products and banking facilities to the tourist village and be accessible to the industrial community.
3. The active role of local government is needed in socializing and educating the community of small industry regarding financial literacy and financial inclusion in business finance and family finance so that they become financially capable and able to develop their business and realize the expected prosperity.

They still need socialization and education related to financial literacy and financial inclusion in business finance and family finance to develop business and realize the welfare of his family.

References

Albert, Michael, and Robin Hahnel. "Traditional Welfare Theory." *A Quiet Revolution in Welfare Economics* 19 (2005).

Chen, H., & Volpe, R. P. (1998). An Analysis of Personal Financial Literacy among Vollege Students. *Financial Services Review, 7(2): 107128*.

Fatma Rohmasari.(2011). Analysis of Household Expenditure Pattern on Financial Quotient of Housewives in Surabaya (Case Study On Civil Servants & Private Employees in Surabaya City Government). *Thesis Master's Degree Program in University Management August 17, 1945 (Untag) Surabaya*.

Financial Fervices Authority. (2013). National Strategy of Financial Literacy of Indonesia. Directorate of Literacy and Education of Financial Services Authority, November 19, 2013, Jakarta.

Hung, A.A., Parker, A.M., & Yoong, J.K. (2009) "Defining and Measuring Financial Literacy", Rand Labor And Population. Diambil dari http://www.rand.org.

Huston, S.J. 2010. Measuring Financial Literacy. *Journal of Consumer Affairs,* 44 (2)

Inclusive Finance by Bank Indonesia http: // www. bi.go.id/ id / banking / financialinclusive / Indonesia / Contents / Default.aspx

Khaki, Audil Rashid and Sangmi, Mohi-ud-Din, Financial Inclusion in Jammu & Kashmir: A Study on Banker's Initiatives (2012). *Journal of Arts, Science & Commerce,* Volume III, Issue - 4(2), October 2012 (115-123), (E-ISSN 2229-4686, ISSN 2231-4172). Available at SSRN: https://ssrn.com/abstract=2184832

Keown, L.A. (2011) "The Financial Knowledge of Canadians". Canadians Social Trends, 11(8), 30-39

Lusardi. Annamaria.,& Mitchell, Olivia S. (2006). Financial Literacy and Planning: Implications for Retirement Wellbeing. Diambil dari: http://www.dartmouth.edu/~alusardi/Papers/FinancialLiteracy.pdf

Mandala Manurung. Prathama Rahardja. (2008). Macroeconomic Theory: An Introduction. Ed.4. Lembaga Penerbit Faculty Economi-University of Indonesia

Nur Sitti Khumairoh. (2013Investment Analysis with Feasibility Study to Improve Financial Intelligence on Fish Cultivation in Sidoarjo . *DIE: Jurnal Ilmu Ekonomi & Manajemen Vol.9 No.2 April 2013 hal.184-193, Universitas 17 Agustus 1945 (Untag) Surabaya*.

Otoritas Jasa Keuangan. (2013). National Strategy of Financial Literacy of Indonesia. Directorate of Literacy and Education of Financial Services Authority. November 19, 2013.

Remund, D.L. (2010). Financial Literacy Explicated: The Case for a Clear Definition in an Increasingly Complex Economy. *The Journal of Consumer Affairs*, 44(2), 276-295.

Servon, L., & Kaestner, R. (2008). Consumer Financial Literacy and The Impact of Online Banking on Financial Behavior of Lower-Income Bank Customers. *Journal of Consumers Affairs, 42(2)*, 271-305.

SK. Bhowmik.D. Saha, 2013."Financial Inclusionof the marginalized:street vendors in the urban economy.Diambil dari https: // scholar. google. co. id/ scholar?q =bhowmik+ 2013+financial+inclusion+&btnG=&hl=id&as_sdt=0%2C5

Suyoto, Augustine, 2004, "The Concept of Creative Family as an Alternative for the Realization of a Prosperous and Self-Reliance Family in the Era of Globalization", Essay / Articles of Hope Winner II National Family Writing Competition

Tri Ratnawati, Siti Mujanah, & Erwin Dyah Astawinetu. (2012). Model Financial Quotient Financial Intelligence) through Reconstruction of Household Expenditure Pattern to Improve Family Welfare in East Java. Competitive Grant Research Department of Higher Education Department of National Education of Indonesia.

Vjay Kelkar"Financial inclusion for inclusive Growth. ASCI Journal of management. https://scholar.google.co.id/scholar?q=kelkar+2010+financial+inclusion&hl=id&as_sdt=0,5

Vitria Linawati Boentoro. (2012). Financial Planning Model Based on Financial Quotient Differentiation Variables for Housewives in Surabaya City. Graduate Program, Master Program Management, University of 17 August 1945 Surabaya. (Thesis).

Inclusive Finance by Bank Indonesia http: // www. bi.go.id/ id / banking / financialinclusive / Indonesia / Contents / Default.aspx

Xu, Lisa., dan Bilal Zia. (2012). Financial Literacy around the World – An Overview of the Evidence with Practical Suggestions for the Way Forward. The World Bank: Finance and Private Sector Development.

Archives of Business Research – Vol.5, No.9
Publication Date: Sep. 25, 2017
DOI: 10.14738/abr.59.3728.

Soares, W. L. P., Pozo, H., & Akabane, G. K. (2017). Collaborative Networks Strategies of Transportation Systems with RFID: A Case Study For a Depot of Empty Containers. *Archives of Business Research,* 5*(9),* 164-175.

Collaborative Networks Strategies of Transportation Systems with RFID: A Case Study For a Depot of Empty Containers

Washington Luiz Pereira Soares
Universidade Católica de Santos
Santos, Brazil

Hamilton Pozo
SCEETEPS - Fatec Rubens Lara
Santos, Brazil

Getulio Kazue Akabane
CEETEPS - Fatec São Paulo
São Paulo, Brazil

ABSTRACT

This paper proposes ways to reduce operating costs for a Depot of empty containers, mainly to avoid wasting time with the separation of containers for cargo operations directed at offshore oil rigs. The methodology is exploratory and qualitative and looks at technological innovations such as Radio Frequency Identification (RFID). The technology is applicable in a depot of empty containers so that by using RFID solutions movements of containers on the backyard can better control the mobility and supply for critical situations such as offshore platforms that are located two hundred kilometers up the coastal port.

Keywords: RFID, Strategy, Technology, Cost reduction

INTRODUCTION

Technological innovations are organizational changes that depend on important tools in managing top performers as agents involved in cases, which are very important because they are driving development in various sectors. Understanding the effects of these changes by interactions in technological processes is necessary to discuss the positive interactions in relation to empirical foundation, which is investigated in a pragmatic way, without generalities, to be verified by theoretical correlations applicable mainly to the change process technology platform.

In a collaborative transportation system connected by various technologies, various management functions or interacting elements can occur, as well as numerous opportunities for better engagement of the parties involved in the business of technology innovation focused on business logistics. In this respect, for example, there are several guidelines being tested for modal transition in RFID data, with the goal of logistical service item products.

The technology of Radio Frequency Identification (RFID) is briefly composed of three parts: an antenna, a tag and a reader that operate within a transmission range of the radio, the frequency of which operates from about 15,000 to 1011 cycles per second. In other words, the RFID operates as a wireless technology that uses a frequency band of radio waves exclusively, as authorized by the regulatory agency in Brazil, ANATEL, and the National Telecommunications Agency, whose duties are techniques specific to the RFID system, which can be rewording.

Once established in a transportation system, the system is able to read the RFID radio frequency identification and digital form, can establish communication with a data channel intranet where information can expand when linked, and give new instructions electronically using the intranet network or internet. In view of the diversity of businesses, a specific understanding of the differentiation of the systemic collaborative processes is needed, as well as for the transport systems of empty containers.

It is necessary to discover the effects of the relationship between supply and demand of RFID technology, which can in logistics, not fully meet all phases of the business, where the resources needed and the supplies chain flows vary between physical and digital virtual systems.

However, to expedite the businesses involved in the development of the supply chain, the new RFID interfaces that appeared were aimed only at the preliminary service data collection system and currently have debased other strategic perspectives. For example, one of the main strategic options for investments in P & G - Oil and Gas in RFID, whereby it is hoped to associate data and control devices which rely on quick responses in order to organize inventories.

However, it is necessary to invest in advance technologies in order to detect specific supply capabilities, including understanding of inventory in the supply chain in the land beyond the sea. This is a critical situation because there are various forms of operational details of groceries, for example by expiration date, location, and availability of resources and geographical inter alia where the automated information is important and sometimes strategic. In order to generate eco-efficiency guidance, one can embed the RFID application in logistics, minimize supply errors with the best speed available, and incorporate the decision-making processes of the supply location, which involve the physical movement of products or fillers.

The situations analyzed and the associated case study proposed in this paper reveals the possibility of benchmarking distribution processes, with which RFID technology is applied to manage a stock of empty at depots which may assign the transport service of supplies to oil and gas platforms.

The study remains mainly restricted to operating assumptions, which may subsequently be directed to oil and gas developments in the study, where there is a lack of control over the ways of different types of inventories. However, the development of a management of empty containers depot of chain oil and gas in the organizational changes in the distribution of physical resources are very impactful in terms of space and separation platforms, for the inventory accuracy in the process of physical distribution of loads positioned in different locations.

The main goal of this understanding of the results is therefore to focus on minimizing errors in the depot logistics organization in relation to empty containers. Therefore, the study researches the best results of eco-efficiency, without the need for constant exchange of resources transferred mistakenly between areas, except to save time wasted in logistics, transportation or activities in relation to possible mistaken shifts of resources by operational failures given the scenario’s complexity, which is geographically limited depending on whether the destination loads are platforms located offshore.

Therefore, the benefits of RFID data are expected in this circumstance to attract plenty of interest from suppliers of oil and gas chains seeking to better manage their inventories and assets, in critical situations. However, based on a single case study of developing a depot of empty containers in Brazil, it can be argued that the benefits of RFID tracking for real-time assets may exceed the benefits not fully identified by better inventory visibility.

In this work, we emphasize the ways to add value by using automated information collaboratively, which can be applied by service providers where there are agents or operators of logistics, with investments in RFID technology in the supply chain.

REVIEW OF LITERATURE

According to Gonçalves (2011) information guides decisions that give logic to the actions operating through telecommunications or highways, which are logistical resources in fundamental processes that involve greater complexity in an integrated manner across multiple systems or international operations.

In this case, the type of inter-organizational network design implemented into a transportation system can improve performance and facilitate the alignment of goals to strategic thinking, and can provide the suppliers involved more collaborative projects.

According to organizational priority, it can guide the focal point of the applicability of resources for various technical dimensions, even when attention is directed to a transport system.

In terms of rules of planning systems, the example of RFID remains directed at the possibility of transforming the processes of information flows and decision networks, to focus only on the second level proposed by Goncalves (2011).

From a technological standpoint, Machado, Vaz and Sacramento (2012) describe the automated readings to integrate RFID business processes managed by the ERP - Enterprise Resource Planning, WMS - Warehouse Management System, which among others, can be very complex given the diversity and quantity of devices of the volume of RFID data generated by a network of readers.

From a strategic standpoint, it is important to note that when the proposed innovation project involves a change in network technology platform, the application is directed to RFID, there will also be information sharing between trading partners regarding the assets within each step of the manufacturing process, storage and transportation in a supply chain.

Due to the complexity involved in the creation of a transportation system, a priori, it is important to investigate the links are aligned where new technological mechanisms have been replaced after mapping the flow of agents involved in the process of physical distribution of cargo for deploying RFID.

As in the Collaborative, Planning, Forecasting and Replenishment (CPFR) processes, the mapping strategy can avoid overlapping perspectives in interactive integration with RFID every step, item by product, or directly in the management process improvements to achieve operational results more economically.

The initial idea for the implementation of RFID chain involves a model of organizational CPFR management at points of data collection, radio frequency and technology that can be adjusted, per process, from cooperative systems that automate deliveries through the operational status of the products or dispersion of stocks by supplier locations.

In the model of collaborative management of suppliers with RFID is very important integrated the process control for physical distribution. The importance of mapping activities directed to collaborative management system requires quick responses from suppliers whose needs should be adjusted for collaborative processes with new technologies, as figure 1 below.

Programs quick answers	Acceptable strategy	Who decides replacement	How decides to spare	Property stocks	As the supplier uses the data demand
QR – Quick Response	QR – Quick Response	Customer	Forecast sales and vendor independent.	Customer	Improve Sales Forecasting and synchronization operations.
CRP – Continuous Replenishment Program	CRP – Continuous Replenishment Program	Provider	Based on the position of the stock. The replacement level is decided jointly.	Supplier / customer	Update inventory position and modify replacement level in conjunction with the retail.
ECR – Efficient Consumer Response	ECR – Efficient Consumer Response	Provider	Based on the position of the stock. The replacement level is decided jointly.	Supplier / customer	Update inventory position and modify replacement level in conjunction with the retail.
CPFR – Collaborative Planning, Forecasting and Replenishment	**Collaborative Planning, Forecasting and Replenishment**	**Provider**	**Based on the position of the stock. The replacement level is decided jointly.**	**Supplier / customer**	**Improve Sales Forecasting and synchronization of operations with customer participation.**
VMI – Vendor Managed Inventory	VMI – Vendor Managed Inventory	Provider	Based on projected net need.	Supplier / customer or payroll	Generate sales forecast and project need liquid.
JIT - II	Just in Time II	In - Plant	According to the decision support system of the client.	Supplier / customer	Improve Sales Forecasting and synchronization operations.
A-CPFR- RFID	Adjustment Planning, Forecasting and Replenishment Collaborative /RFID.	On - Time	System for real-time location (RTLS) with exchange of shared resources on a network.	Supplier / customer or lessee or consignee	Generate sales forecast and project need liquid.

Figure 1. Summary of Rapid Response Strategies (Wanke 2004
Source: Adapted by the author (Soares, 2012)

According to Wanke (2004) several customers and suppliers seek to cost-effectively redesign their product flow in manufacturing operations and distribution through improved information sharing. According to the author, during the last ten years these initiatives are often used in the literature rapid response programs (PRRs). The PRRs logistics services are grounded in cooperation and information sharing of customer demands of their supplier (Wanke, 2004).

The goal of deploying RFID at distribution points is therefore also to get quick answers about the needs of each actor terminal dedicated to platforms, offshore, particularly where it is critical supplies to generate velocity, however, the model form of CPFR is more collaborative.

Logistics management is that part of the supply chain that plans, implements and controls the efficient flows, forward and reverse, and storage of goods, services and information between the point of origin and point of consumption in order to meet the requirements of customers (CSMP, 2012). A priori, the RFID *Journal LLC* (2012, p.24) defines technology as RFID: Radio Frequency Identification, or any method of identifying unique items using radio frequency waves where the operating system of logistics management of retail, boils down to one reader also called interrogator communicates with a transponder, which holds digital information in a microchip or other resources strategically positioned in the links of the chain by forms of RFID tags applied to product control. To this end, the labels are used for specific material to reflect chipless or return information for a portion of radio waves transmitted during each event in a transportation system.

In Brazil, associate technologies in logistics management CPFR model for data automation, RFID for example, are very significant changes in economic enterprises that use information systems for production control in the management of the supply chain. However, most Brazilian companies in the logistics management of transport systems do not usually apply RFID, except in the retail market, where, as a pioneer, RFID has been most commonly applied at points of sales.

The use of Information and Communication Technologies (ICT) is facilitating closer collaboration and promoting a new approach of supply chain transparency. The use of an ICT framework based on intelligent multi-agents allows the integration of different supply chain strategies with the stocks and transportation reduction. Many companies identify the best suppliers of services and products to meet their needs and help drive down costs with integrating and automating all components of their logistics process.

A lot of Investments on RFID technology help to leverage reliable and timely RFID, according Chao *et al.*, (2007). The Supply Chain Management optimal demand and logistics execution. The RFID solutions are designed to facilitate the gathering usage and storage of RFID data. It has been observed that the use of RFID technologies will enable a framework for enterprises to collaborate, plan monitor and execute, while optimally adapt in real- time to operate under unplanned occurrences in the extended supply chain

The organizational changes of the VICS CPFR (2012) involve norms and this organ first defines CPFR not only a technological tool, but also a practice management system or business that gathers intelligence various companies in the planning and care of customer demands. The standardization of fact arises from rules imposed by VICS in 2010, where the aims is for automation through RFID data to corroborate management systems for collecting and forecasting supply, which should occur in the case of retail, from the POS in real time.

CPFR (2012) describes the collaborative management model, which relies on technology, so there may be specific tools for example RFID, as there may be generic tools for electronic data exchange. According to CPFR (2012), the supply chain management encompasses the planning and management of all activities involved in sourcing and procurement activities developed for a particular purpose.

Van (2005) argues that with the practice of management, the prospects of procurement should be understood as all the activities required in order to get a vendor's product to its final destination, encompasses the purchasing function, stores, transit and transportation; arrival inspections, quality control and assurance, making companies select suppliers using the TCO or Total Cost Ownership and not just the price of feedstock or raw material.

The CPFR concept underscores the accession of new automation technologies to RFID procurement where the aim is to control the process interface products supply by suppliers per item of supply. It is with this understanding that one develops more collaborative logistics as there is data transparency and a concomitant need for constant investment in the transport system (VICS, 2012).

Some researchers argue that RFID is an evolution of the bar code, which allows the identification of products without human interference and can replace the activities that are currently performed with scanning bar codes. In the case of the intelligent RFID tag, there is a microchip that can be affixed to each item, thus tracing such products throughout the chain, radio frequency and bounded function of the type of supply, by picking up signals a transponder.

Another advantage of RFID smart labels can be seen as an advantage in the application and if the item/product is dirty, wet or otherwise damaged the RFID does not impede the reading, which does not happen with the example of the control of management by code bar. This is possible because RFID tags are read by radio waves rather than optical means (again, RFID does not require "line of sight"). The reading speed is less than 100 milliseconds, even in extreme temperatures or obstructed. Another unique feature of the RFID option is called "kill", in which an RFID tagged item is disabled, for example, when a user exits a department of an environment or a transportation system.

Stanczak (2007) compared the operational aspect of the UPC operations of the RFID; the reader reads an RFID tag as, and for example, a scanner reads a UPC code. Unlike the UPC code reader, RFID tags do not require what is called a "line of sight"; they do not require the optical reader tags. Another advantage is that RFID tags can also contain more product information than a UPC tag; this case study is that the main focus of this comparison. Stanczak (2007) argues that RFID technology is often compared to the UPC code.

To clarify this understanding Stanczak (2007) describes the operation of the RFID system as a wireless technology that uses radio waves to read or "identify" a product/substance that contains a label whose duties are intrinsic operational road information in a specific system.

RFID Tag Attributes

	Active RFID	Passive RFID
Tag Power Source	Internal to tag	Energy transferred using RF from reader
Tag Battery	Yes	No
Availability of power	Continuous	Only in field of reader
Required signal strength to Tag	Very Low	Very High
Range	Up to 100m	Up to 3-5m, usually less
Multi-tag reading	1000's of tags recognized – up to 100mph	Few hundred within 3m of reader
Data Storage	Up to 128Kb or read/write with sophisticated search and access	128 bytes of read/write

Figure 2 - System RFID divided into three parts: an antenna, a tag and a reader
Source: Stanczak, M. (2007) - RFID Journal (2012).

In Figure 2, above, technology Radio Frequency Identification, or RFID, is usually composed of three parts: an antenna, a tag and a reader. The tag is also called a transponder or device that responds to a specific radar signal / or radio that contains a printed circuit board and / or semiconductor.

The reader is also called a transceiver or transceiver information, and decodes the signal sent by the transponder. Generally, an antenna itself is a tag that generates or obtains energy, in this case radio waves. The tag data is sent out of the system through the antenna, where information is read by the reader / transceiver.

Stanczak (2007) explains that there are two types of RFID tags – active and passive. The passive RFID tags do not use batteries and must be used in a narrow strip of 3 m or less. That is, the antenna must be tuned into a particular radio frequency, and thus send radio waves. Then the player must send a radio signal to the tag / or antenna, which is activated to transmit pertinent information. The radio signal contains enough energy to power the tag, as well as enough time to send your information (Stanczak, 2007).

Most passive RFID tags typically utilize a read-only memory electrically erasable and programmable memory (EEPROM) for small amounts of data, as shown in Figure 3 below.

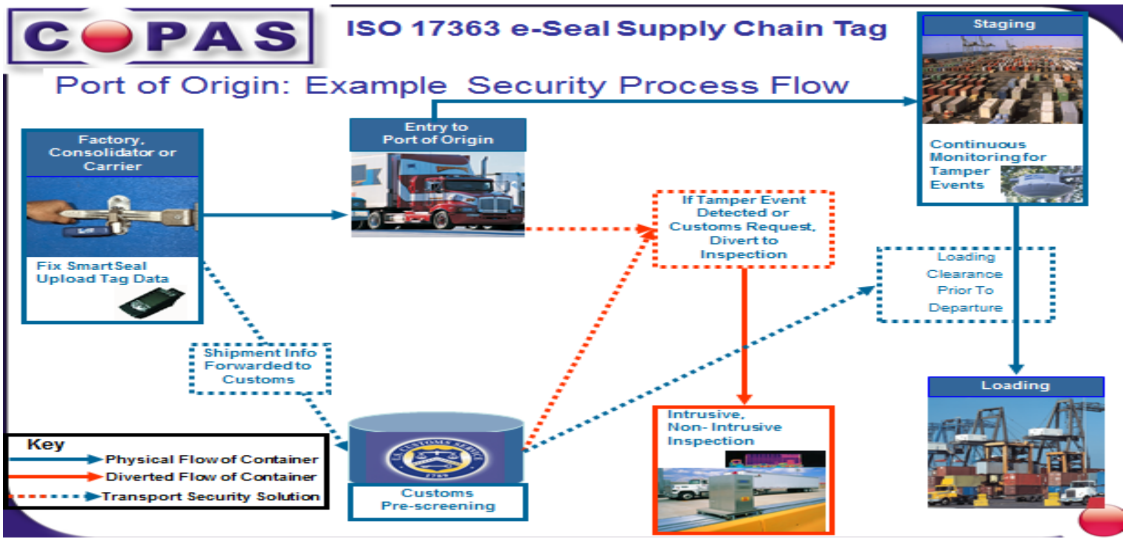


Figure 3 - Attributes of an RFID TAG (2007)
Source: Stanczak, M. (2007)

According Stanczak, (2007) active tags are more sophisticated and therefore more expensive because they use batteries. However, the reader can read tags at a distance of 100 m (300 ft). Many active tags make use of static random-access memory (SRAM), which means that the information contained in the label is available as long as the tag is powered, for example, by a battery. In summary, an active tag uses an internal power source (battery), while a passive tag uses an external source of energy (radio waves of the reader).

While UPC codes are fairly standardized in a limited way, RFID technology comes in many shapes, sizes and capabilities. The plastic labels found on clothing, in stores, are a familiar example of RFID tags. Other applications of RFID have been innovation of device formats. For example, sub dermal implants are used to identify pets, or endangered shaped devices may be as small as a grain of rice or graphite pencil (> 10 mm in length).

Other RFID tags are small enough so they can be built to be embedded in casino chips or be as large as credit cards (Stanczak, 2007). For applications of labels especially large ones such as for reading the contents of railway wagons or containers, an RFID tag can be so large as to measure between 120/100 per 50 mm (Stanczak, 2007).

Employees and stakeholders tend to observe that in the transportation system there are several elements in interaction and collaboration that are essential for effective deployment of RFID, which greatly fosters new opportunities for engagement of stakeholders in the business. For this reason, all sectors of the logistics should be integrated with appropriate technological resources where RFID can understand essential information for container based on historical logistics are recorded reference numbers or process (BL/DTA/DI/ NF). Above all, there is the need to associate and link the control of equipment with logistics management in service to meet the operational needs of the supply chain.

Thus, in order to disseminate information collectors systematically the RFID network supports employment of guards to aid with the inventory of empty containers at depots. According to Machado, Vaz and Sacramento (2012) a solution to reconcile a number of devices on a network of readers who demand a huge amount of RFID data, is the use of an RFID middleware platform. According to Machado, Vaz, Sacramento, (2012) RFID middleware platform can be used with the purpose of integrating RFID data to business processes, the platform being responsible for collecting data from multiple readers and turn them into events so semantics for event business, which means integrating events with the logic that governs the business process of a company.

Operating procedure for collaborative control strategies for RFID

In the system implanted with RFID, the CIMC alerts are issued on the mobile computer, for example, if a forklift operator or crane grabs the wrong container. The sensors are connected to computers in vehicles through the serial port to help in locating the best access to the court's container yard.

In the factory, passive tags are attached to the container by tape when they leave the assembly line. Labels identify information incorporated in full containers, including the weight, the date and time of manufacture and the customer for which the container is designed. All this information is recorded in the central database of the company. RFID tags are mounted on the windshields of trucks transporting containers from the factory to the stockyard. RFID interrogators are installed at the factory gates, then read the tags on both trucks and containers as they pass the gates, for sending information about the movement to the central database. When the trucks arrive at the container yard, interrogators can digitize both the trailer and the marks of containers, making automatic check-in. Before the pilot project when CIMC containers were ready for transportation from the factory to the storage yard, the truck drivers had to check a huge amount of paperwork to control the gate of the courtyard.

According to RFID *JournaL* (2012), with the RFID forklifts stacking or discharging containers are equipped with touch screen for on-board computers that run a Mobile Locator and an RFID interrogator, while the mobile computer and the RFID interrogator transmit data through the wireless network. Thus, when a container reaches the place assigned by management, this RFID tag appears on the computer screen mounted on the truck, along with the corresponding information for the identification of container and a three-dimensional map of the terminal.

According to data from the CIMC, the company spent more than U.S. $ 128,000 in the pilot and continues to save about $ 126,000 U.S. dollars per year as a result of such transactions. Due to this benefit for radio frequency management, the CIMC wants to expand the use of RFID to cut costs in other facilities with similar activities.

METHODOLOGY

Marconi and Lakatos (2011) and Malhotra (2001, p.106) explain the exploratory research as "a type of research that has as main objective to provide insights about the problem situation faced by the researcher and his understanding." For this purpose, we study a group or community in terms of its structure, emphasizing the interaction of their components (Yin, 2005).

Chizzotti (2005) describing the case study refers to a variety of surveys that collect and record data from a particular case or several cases in order to organize an orderly and critical report of an experience, or evaluate it analytically, in order to make decisions about it or propose a transforming action.

The research is exploratory and qualitative. The choice of this methodology aims to seek information in relation to technological innovations globally, although, qualitatively and bounded within the description of the phenomenon investigated. For this insight, we opted for a single case study to substantiate the enclosed form of industrial container in the process of physical distribution of loads.

Marconi and Lakatos (2011) perceive relevant documentary research as that which is does not have relevant scientific treatment, but it shows the problem situation clearly, consisting of information collected at the company that can provide a coherent overview on the problem situation.

Thus, the case study methodology is applied to an associated literature review to compare the results of interviews that favor specific experiences of CPFR by representatives of companies associated with VICS and publications collected by RFID in the RFID *Journal.*

CASE DEPOT OR CONTAINER YARDS BY MSHIFT CONSULTING

The innovation to control empty container status with RFID has improved the performance of container terminals, which have depot functions for handling units for picking activities on container yards. Normally, in empty depot containers the operational procedures is started before a container is opened. For example, it should be ensured that it possesses a valid Container Safety Approval Plate and that the re-examination date has not passed. Once this has been established, the following aspects of the container's exterior should be assessed before it is opened or entered.

Based on the technology incorporated in the portable RFID integrated transport system, the technology is applied to provide transparency of the automatic status of the container, in the courtyards of interface criticism. The strategic objectives of the supply chain are defined and established by the portals to generate systemic control. From this initial idea it is possible to accelerate the efficiency of organizational models associated with new technologies, which also incorporate RFID to provide safety and efficacy to the control process.

The call server can act as a location server or standalone system as an add-on to existing system. It includes a business rules processor that allows customers to set their own rules or parameters to maximize operations and workflow. Using this information, the system can create alerts and fix problems or define optimal routes and schedules for moving products between the blocks.

In the case study of benchmarking processes for distribution of empty containers in Brazil, the application of RFID in the transportation system occurs in a DEPOT or empty container yard located in Suzano/SP, which describes ways to identify the management system for the status of container, which is classified in the inspection and data are released virtually or by middleware software, designed to work with RFID.

With respect to the hardware implementation of physical data, information is recorded virtually on tags that are set out in containers. However, one should choose the device carefully as the employee may require different kinds of tags for an effective information system with data such as where the containers are inspected and the owner of the transport system, and it may be integrated with a CPFR model with carriers to control demurrages or detention.

Based on RFID, it is possible to describe that after the stored containers, collectors receive the radio frequency signal and so they get the data from the container without physical contact officials. The moment of human participation is unique only when transcribe the status in EIR container is in receipt of the document by the truck driver for data control and inspection of the unit.

In this case, the side lifter container moves between areas and so we opted for the installation of sinks that are deployed on the straps or spreader, whose readers are located in the side lifter cranes and RFID tags, in containers, after the passage of these the gates. Strategic information is collected only once at the time of inspection of container, as they enter the depot where are standardized codes of malfunctions and handling, as well as the historical manufacturing unit mentioned in plate Container Safety Approval Plate.

The data indicate the RFID side lifter equipment operator, the right stack of container or container to collect, due to refueling the offshore sector, in oil and gas platforms.

CONCLUSION

Based on the pilot project of CIMC it is possible to argue that the benefits of RFID tracking for real-time assets may exceed benefits not fully identified by better inventory visibility, but in the management process. The savings arose for a number of reasons: the number of containers lost in the courtyard of Shenzhen was reduced from four to zero. The rental of forklifts was cut, at peak times, given the speed obtained with the new RFID technology.

In the case study on the enterprise system this dynamic capability associated with customer service is extremely dependent on RFID technology. It is inferred that RFID technology combined with other technological devices such as side lifters can add value to measures that reduce the cost of replacement processes for generating eco-efficiency with integrated solutions for handling the operation of the containers on the backyard.

The RFID provide better management by minimizing handling errors and distribution assets, and concurrently improving the quality of the production process, to reduce the risk of misunderstanding inventory control, every need for physical movement or distribution of empty containers in constant inspection process by the human resources selection process containers in a depot. The use of RFID technologies will enable a framework for enterprises to collaborate, plan monitor and execute, in real-time the extended supply chain management.

The limitation of the study concerns the analysis of a single case study depot container, where it is realized that the field investigation is very broad and has great potential developments.

References

Albright, B. (2002), “CPFR’s secret benefit”, Frontline Solutions, v.3(11):305.

American Heritage Dictionary (2000), 4th ed. In: www.bartleby.com/am. Accessed 18/07/2016.

Barratt, M.; Oliveira, A. (2001), “Exploring the experiences of collaborative planning initiatives”, International Journal of Physical Distribution & Logistics Management, v.31(4):266-89.

Bianco, L.; Toth, P. (1996) Advance Methods in Transport Analysis. Springer.

Chao, C.C., Yang, J.M. Y.; Jen, W.Y. (2007). Determining technology trends and forecasts of RFID by a historical review and bibliometric analysis from 1991 to 2005. *Technovation*, v. 27(5):268-279.

Chizzotti , A. (2005). Pesquisa em ciências humanas e sociais.7. ed. São Paulo: Cortez.

CIMC (2012). China International Marine Containers (Group) Ltd. in http://www.cimc.com/en/about/company/BusinessOverview/. Accessed 23/06/2016.

CNT (2010) Brasília DF. Uma proposta para sua estrutura e Elementos. p.171-190. ANPET. R.J.

CSCMP (2012). Council of Supply Chain Management Professionals. In http://cscmp.org. Accessed 17/05/2016.

Gambom, J. (2006). RFID Contains Solution to Chinese Shipping – Problems. RFID Journal. Eletronic Midia. in http://www.rfidjournal.com/article/articleview/2707/1/655/. Accessed 23/06/2016.

Gonçalves, M. A. (2011) – A racionalidade dos processos de interdependência organizacional em rede. 1. A questão supra-organizacional da interdependência em rede. Cap. 10. p.191-211.

Holmstrom, J., Framling, K., Kaipia, R.; Saranen, J. (2002), "Collaborative planning forecasting and replenishment: new solutions needed for mass collaboration", Supply Chain Management, v.7(3/4):136-45.

Katz, D.; Kahn, R. L. (1974) .Psicologia Social das Organizações. São Paulo: Ed. Atlas.

Machado, B.; Vaz, T.; Sacramento, V. (2012). Midleware RFID: Conceitos e Padrões. In: Implementando RFID na cadeia de negócios. Ed PUCRS. Porto Alegre.

Malhotra, N. (2011). Pesquisa de marketing. Porto Alegre: Bookman.

Manhein, M.D. (1979) Principles of Transport System Analysis. Highway Research Record, n.180.

Marconi, M A.; Lakatos, E.M. (2011). Metodologia científica 6. ed. São Paulo: Atlas.

Morlok, E. K. (1978) Introduction to transportation engineering and planning. MacGraw-Hill, Tokio.

RFID Journal (2006) – China International Marine Containers recently launched an RFID pilot to track containers from its factory to the storage yard. In http://www.rfidjournal.com/article/view/3412. Accessed 23/06/2016.

RFID *Journal LLC.* (2012).: http://www.rfidjournal.com/glossary/126 .Accessed 18/08/2016

RFID COE (2012). http://www.rfid-coe.com.br/_Portugues/CasosDeSucesso.aspx

Stanczak, M. (2007), The ABCs of RFID. CSA Editor: Technology Research Database (TRD); Copper Data Center (CDC). http://www.csa.com/discoveryguides/rfid/editor.php. Accessed 9/06/2016.

Tedesco, G. M.I.; Villella, T.M.A.; Cibulska, P.C.; Ganemann, S. R. (2009) – Procedimentos para a construção da estrutura de sistemas de transporte de cargas. In: Congresso de Pesquisa e Ensino de Transportes –XXII ANPET. Vitória,

Tien-Hsiang C.; Hsin-Pin F., Wan-I L., Yichen L.; Hsu-Chih H. (2007). A study of an augmented CPFR model for the 3C retail industry. Taiwan. Republic of China. Supply Chain Management: An International Journal. V.12(3):200–209.

Van W. A. (2010). Purchasing and Supply Chain Management: analysis, strategy, planning and practice. Hamsphire: Cenage Leaning.

VICS. Voluntary Interindustry Commerce Solutions Association. (2012). VICS Item Level RFID Initiative. Disponível em: http://www.vilri.org/ Accessed em 13/06/2016.

Wanke, P. (2004), Uma revisão dos programas de resposta rápida: ECR, CRP, VMI. CPFR, JIT II. UFRJ, in: http://www.ilos.com.br/web/index.php?option=com_content&view=article&id=726%3Aartigos-uma-revisao-dos-programas-de-resposta-rapida-ecr-crp-vmi-cpfr-jitii&catid=4&Itemid=182&lang=br. Accessed em 27/06/2016.

WORD SHIPPING COUNCIL – WCS (2012) http://www.worldshipping.org/about-the-industry/containers . Accessed 12/12/2016.

WCS (2012). Guidance Shippers Container Stuffers, in http://www.worldshipping.org/pdf/industry_guidance_shippers_container_stuffers.pdf. Accesed 12/11/2016.

Yin, R. K. (2005), Estudo de Caso: Planejamento e método. 3 ed. Bookman: Porto Alegre.

Houben, A.J.H.M., et al.,(1995). *Quantitative analysis of retinal vascular changes in essential and renovascular hypertension.* Journal of hypertension. 13(12).

Wasan, B.; Cerutti, A.; Ford, S.; Marsh, R. (1995).*Vascular network changes in the retina with age and hypertension.* Journal of hypertension. 13(12).

Koozekanani, D.; Boyer, K. L.; Roberts, C. (2001). *Tracking the Optic Nerve Head in OCT Video Using Dual Eigenspaces and an Adaptive Vascular Distribution Model.* Computer Vision and Pattern Recognition, IEEE Computer Society Conference. 1:934.

