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From the Desk of the Chief Editor

We are pleased to launch the Jan-Jun 2018 issue of the 14 volume of our journal, viz. JIM QUEST. JIM QUEST is a bi-annual refereed journal which stands for dispersal of knowledge amongst researchers, academicians and management practitioners. It focuses various concepts, theories, research methods and applications related to rising perspective in the turf of management and application. A blind review process is followed for screening the research papers before being published. We anticipate that this issue will give confidence to researchers and practitioners to reinforce their contribution towards research.In the present issue, 13 articles based upon different functions and applications of management have been preferred.

The present issue is rich in content and covers some interesting articles. In this issue, we are pleased to present 13 articles that demonstrate new capabilities for infrastructural analysis, sustainable growth, planning and management. The research papers cover issues like Marketing Strategy of Patanjali Group, Financing pattern of IT Companies in India, Drivers of African Tobacco Export, Impact of transportation on economic development, Ethical issues, etc.

I trust the readers expectations with JIM QUEST will be satisfied and appreciated. It is my conviction that our sincere efforts will benefit both academia and practitioner. I would also like to concede the authors of the papers, the editorial team members, and there viewers for their continuous support and involvement in bringing out this journal.

Prof. (Dr) Daviender Narang
Chief Editor

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Financing Pattern of Indian IT Companies

Ashutosh Singh*

Abstract

Capital is an important component in the balance sheet of any business. Capital structure is not considered important for sole proprietors and in a partnership firms due to lack of options. But in case of a company there are multiple options of financing. This research work is an effort to identify the variables which play a vital role while designing the capital structure of an organisation. This study is helpful for the start-ups for determining the factors helpful capital structure decisions.

Introduction

While accounting looks into the past of a firm finance looks into its future. Discipline of finance takes care of return, risk and value. Value of firm or enterprise refers to the value of future cash flow discounted at the rate of return required by investors (Quiry, Dallocchio, Fur and Salvi, 2009). Value of a firm is sum of value of equity and value of debt. Value of equity can be further explained as firm's market capitalisation if it is publically traded and the market value of debt or total currency value of firm's share in the stock market. Financing decisions of firms are also known as capital structure decisions or financial leverage decisions.

Capital structure of an organisation is one of the most important indicators for an investor. It's the permanent financing of the firm. He/she checks how organisation finances itself. Firms can finance itself for long term via equity shares, preference shares, debt and retained earnings. Firms opt the options via due to various factors like- nature of business, stability of earnings, amount of fund required, rapidity of growth, nature of investor, financial leverage, rate of return earned upon investment, distribution of voting control, trends in capital market, cost of capital and availability of funds, assets structure, attitude of management, lender's attitude, tax concession and advice from financing agencies.

Investor wishes to get maximum return of his/her investment and safety of the invested funds. A query which lies among every manager and investor – is there any combination internal and external exist that can be termed as an optimum capital structure? Or a capital structure where weighted average capital should be minimum. Entrepreneur starts a venture with his own capital or debt. When firm expands itself an option of getting funds via equity also opens up. Debt has an advantage of tax deduction of interest payment and fix rate of payment of interest. On the other hand it's a riskier affair too as a higher debt ratio is not good for an organisation secondly it affect adversely too an organisation while its hard times. Because it's a compulsion to pay interest on debt doesn't matter how bad firm's financial position is, this situation further ends up in bankruptcy of firm.

Choosing equity capital raises the security issues for instance will firm get fair price in the market?; Tax penalties, preliminary expenses, and future changes in the trends of financing firms. Modern financing pattern can also affected by accumulated funds, pay off debt or pay dividends, or conduct share purchase. Equity debt mix across industry choice of manager is different, software companies are less levered in comparison to automobile companies (Berk, DeMarzo and Harford, 2012).

Damodaran (2004) financing choices of a firm changes according its stages in the lifecycle. In general start ups are funded by owner's equity or by bank's debt. For expansion firms look for private equity or venture capital to fill the gap. While situation of high growth firms go for more private equity or debt as internal financing is not enough to fulfil financial needs. A mature firm trust on debt more because it has already floated substantial stocks in the market.

Pandey (2015) firm's objective should be maximisation of value of firm. Capital structure decisions are evaluated if they are increasing the value of firm. Chandra (2015) suggests that capital structure of financing decision of a firm is a choice that how firm will decide to use its future cash flow to meet future

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obligations. Capital structure is a relationship between financing options their cost and value of firm. Value of is affected by the financing option a firm is selects.

Literature Review

David Durand from his research titled as "Costs of debt and equity funds for business: trends and problems of measurement" opened up a debate- whether or not capital structure affects the value of firm or not. He presented two theories of capital structure Net Income approach and Net Operating Income Approach. The former one assumes there is no existence of tax regime; cost of debt is cheaper than other options. It concluded due to risk adverse perception of investors debt increases the value of firm. Later theory says that value of firm is independent from capital structure of the firm. It rationalize that investors demand more dividend as debt capital is a riskier option because it comprises a compulsory payment of interest in comparison to other options. Modigilani and Miller (1958) also supported Net Operating Approach there theory is based on the assumption that capital market is perfect no transaction costs, risk class of investors is homogeneous, firms can be grouped into equivalent risk classes on the basis of risk in term of expected earnings, no corporate taxes and dividend payout ratio is expected to be 100%. Donaldson (1961) gave a new approach with the name of pecking order theory. He said that firm should follow a sequence of financing, firm should first opt internal financing in case of insufficient funds debt instruments can be used equity capital should be the last option.

In a research work titled as Corporate Income Taxes and the Cost of Capital: A Correction (1963) Modigilani and Miller considered corporate taxation. Debt capital reduce the cost of capital on the other hand equity capital increases the cost of capital. Ezra (1963) introduced traditional approach of capital structure. It was suggested that a firm can increase its value and reduce its overall cost of capital by increasing the proportion of debt in the capital up to an extent. A justified mix of equity and capital can increase the value of firm. The research further suggested steps of optimizing capital structure. First, use debt it will increase cost of capital slowly. After a certain level cost of capital will start increasing due to increase in risk. Second, we will find a level where value of firm will start falling this will be the optimum level of capital structure. This approach is considered as mid way between net income and net operating income approach.

Agency relationship exists between shareholder and debt lenders in a firm with high leverage. There is a conflict of interests of debt lenders and shareholders (Jensen & Meckling, 1976). Firm should use retained earnings for paying debt instead of investing it in non profitable or riskier investment an projects. This will allow firm to use more debt financing as firm has good credibility of paying debts and vlue of firm will increase due to less overall cost of capital.

Optimum capital structure can be achieved by equilibrium between tax saving benefits of debt and dead-weight cost of bankruptcy (Kraus & Litzzenberger, 1973). This theory is known as trade-off theory. Disadvantage of debt financing is, it increases cost of financial distress and agency cost of debt. Although debt provide tax shield but a firm need to balance it with the mix of other financing options. So this theory attempt to bring balance between debt and equity. It also attempts to minimize the cost of financial distress which occurs during bankruptcy and agency cost. The authors further suggest that profitable as well as large firms can opt high debt because they have less chances of bankruptcy, there will be positive relationship between profitability and leverage. For the firms that have less earning will get benefit from tax shield.

Till now it was believed that an investor has all access to the information as it is to the manager. But in a real life situation a manager have access to more information in comparison to investor. A firm's capital structure gives signal of prospective investment decisions and growth opportunities to increase its value (Ross, Stephen A. 1977). As per the signaling theory investment decisions is an important variable affecting capital structure. While issuing new share in an old and established company existing shareholder may recognize it as a negative signal. In case of an overvalued firm the investor would realize that existing shareholder are not interested to bear burden of decline value of the firm so firm is issuing new shares. In the circumstances of a new undervalued firm which have good growth prospects can opt debt options because the value of firm will increase in future due to favorable growth opportunities, share capital can reduce the share of profit. Finally, this theory elucidates that old firms with low growth prospects may negatively correlated with debt ratio and new firms with high growth prospects positively.

Firms follow a pattern of financing their capital structure (Gordon, 1961). Firms use retained earnings for financing long term requirements of firm. In case of insufficient flow of retained earnings second option is debt financing and last option is equity. This theory further named as pecking order approach. Firms follow a strict dividend policy for all business conditions. This concept of pecking order approach is known as modified pecking order approach (Myers, 1984). This approach is based on asymmetric information and recognizes the concept of financial distress. It suggests that firm should avoid financing itself from equity or other riskier options; it needs to keep debt into a safe limits. The safe limit of debt avoids cost of financial

distress and default risk. Profitable firms should go for low debt ratio; these firms can finance them with retained earning easily. Equity can have negative correlation with growth and leverage. For old firms with volatile earnings may have less leverage. Age of firm have negative correlation with its leverage due to lack of growth prospects. Greater dividend payout ratio leads to greater requirement of funds technically a positive relationship in leverage and dividend payout ratio.

Investor behaves rationally for deciding present and future position. Manager doesn't works in favor of investors so investors need to be disciplined. Managers don't provide complete information to investor and also don't wish investor to sell firms share. Because managers are not complete information so investor uses debt to generate information and monitor firms performance (Harris & Raviv, 1990).

Market timing theory suggests to issuing shares at high price and repurchase at low price. There is no level of optimum capital structure (Baker & Wurgler, 2002)

Research Methodology

a) Data source and sample size- Data for the study was collected from financial reports of 26 listed IT companies available at CMIE prowess data base.
b) Period of the study- Financial data studied from 2012-17 i.e. 6 years time duration.
c) Method of analysis- Multivariate regression analysis is used for the analysis of the data. Companies are divided into two groups group was considered as firms with no debt in capital structure and second group with debt in capital structure.
d) Explanatory Variables-
i) Dependent variables- Dependent variable under this study is capital structure of the firms.
ii) Independent Variables- Independent variables in the study are liquidity, earning volatility, tangibility of assets or growth, size and profitability of the firm.
e) Objectives and Hypothesis

	Objectives		Null hypothesis
1	To study and analyse the determinants of the capital structure of Indian IT companies by investigating the impact of profitability and capital structure.	H_1	There is no significant relation between profitability and capital structure of firm.
2	To study and analyse the determinants of the capital structure of Indian IT companies by investigating the impact of liquidity and capital structure.	H_2	There is no significant relation between liquidity and capital structure of firm.
3	To study and analyse the determinants of the capital structure of Indian IT companies by investigating the impact of tangibility and capital structure.	H_3	There is no significant relation between tangibility and capital structure of firms.
4	To study and analyse the determinants of the capital structure of Indian IT companies by investigating the impact of size of firm and capital structure.	H_4	There is no significant relation between size of firm and capital structure of firms.
5	To study and analyse the determinants of the capital structure of Indian IT companies by investigating the impact of earning volatility and capital structure.	H_5	There is no significant relation between earning volatility and capital structure of firms.

Results

Table no.-2 reveals the result of the companies with no debt component in the capital structure. A negative correlation found among all the variables except tangibility, liquidity A negative correlation exists between liquidity of firms and capital structure similarly between liquidity and tangibility. Correlation between liquidity and size, earning, volatility and profitability was found positive. Size of the firm is positively correlated with liquidity, earning variability and highly correlated with profitability. There is a weak and negative correlation between size of the firm and its capital structure.

Table no.3 shows that Capital structure have negative relationship with all variables but positive with tangibility. Liquidity and capital structure have negative relationship same as with size and tangibility. On the other hand capital structure prevail positive relationship with earning variability and profitability. Size has negative association among capital structure, earning viability and liquidity; a positive relation between profitability and no relationship with tangibility. Negative relationship was seen when earning viability was compared with size and earning viability; positive with capital structure, liquidity and profitability. Profitability has a negative connection with capital structure and tangibility; positive with rest other variables. Tangibility has positive relation with capital structure only but negative relationship with liquidity, earning viability and portability. There was no relationship between tangibility and size.

Table no.4 shows regression result. R-square signifies that there is 49.8% of the variation for firm with no debt component in capital structure and 48.8% with debt component. ANOVA test indicates 4.576 and 3.834 respectively and it is significant at 5% level. It means that the model has a good fit and there is 95% chance that the variables are have statistically significant.
Table no. 5 indicates firms with no debt and liquidity is positively related with capital structure. Coefficient 0.027 while t-test

result is 0.333 and p value is 0.740. It shows that there is a significant relationship between liquidity and capital structure; H2 is rejected. Size of the firm is also found positively related with capital structure and coefficient of 0.023. T-test is 0.225 and P value is 0.822, it confirms there is a significant relationship between size and capital structure. Earning viability and capital structure have a weak positive relation with coefficient of 0.00003675, t-test 0.192 and P value is 0.848. This rejects the null hypothesis. Negative correlation exists between capital structure and profitability. Coefficient is -2.547, t-test -4.0788, and P value is 0.000. Null hypothesis is accepted that there is no significant relationship between capital structure and its profitability. It supports the pecking order which recommends firms should firstly finance it from internal sources and second option should be debt financing. While earning abnormal profit firm should use retain earning that will reduce debts. It shows that there is a negative relation between profitability and debt. At the end in the table, tangibility has a positive correlation with capital structure. Coefficient is 0.046; T-test 0.082 and P value 0.933. Result proves that null hypothesis is accepted.

Table no. 6 showed that liquidity is negatively correlated with capital structure. Coefficient is -0.014, T-test -0.125 and P value 0.800. Null hypothesis is rejected there is significant relation between liquidity and capital structure. Size of the firm is also positively correlated with capital structure with coefficient 0.030, T-test 0.249, P value 0.703. Null hypothesis is rejected there is a significant relationship between capital structure and size. Earning volatility has a weak positive relationship with capital structure with t-test 0.444 and P value 0.650. Null hypothesis is rejected; there is a significant relationship between capital structure and earning viability. Profitability is negatively correlated with capital structure; coefficient is -2.557, T-test -3.653, P value 0.001. Null hypothesis is accepted, so there is a significant relation between capital structure and profitability. A positive relationship exists between tangibility and capital structure having coefficient 0.082, T-test 0.109 and P value 0.910. So null hypothesis is rejected and there is significant relationship with capital structure.

Conclusion

This research work worked on the various dimensions under which profitability in negatively related with capital structure in terms of debt. As per increase in the profitability firms prefer internal finance (retained earnings). Size of the firm matters a lot, as the size of the organisation grows its level of risk reduces. The study suggests- old firms have high integrity which results of low chances of default in terms of debt. But the study shows that firms are more interested to go for internal finance and equity instead of debt when their size becomes bigger. There is a weak but negative correlation between size of firm and capital structure. It proves that firms prefer to use their goodwill in the stock market to raise the finance at the place of raising debt and increasing fixed cost in terms of interest.

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Table 1: Descriptive Statistics

	Firms without Debt			Firms with Debt		
Variables	Mean	SD	N	Mean	SD	N
Capital Structure	0.32	0.584	26	0.27	0.561	26
Liquidity	2.07	1.095	26	2.26	1.343	26
Size	2.60	0.893	26	2.68	0.920	26
Earning Variability	156.58	567.134	26	143.10	537.591	26
Profitability	0.12	0.160	26	0.14	0.164	26
Tangibility	0.24	0.134	26	0.22	0.137	26

Table 2: Correlation Matrix of Firm with no Debt

Variables	Capital Structure	Liquidity	Size	Earning Variability	Profitability	Tangibility
Capital Structure	1.000	-0.328	-0.110	-0.106	-0.700	0.265
Liquidity	-0.328	1.000	0.055	0.395	0.542	-0.421
Size	-0.110	0.055	1.000	0.055	0.184	-0.075
Earning Variability	-0.106	0.395	0.395	1.000	0.201	-0.104
Profitability	-0.700	0.542	0.543	0.542	1.000	-0.383
Tangibility	0.265	-0.421	-0.075	-0.104	-0.383	1.000
Sig. (1-tailed)						
Capital Structure	.	0.040	0.282	0.289	0.000	0.080
Liquidity	0.040	.	0.385	0.016	0.001	0.010
Size	0.282	0.385	.	0.007	0.169	0.346
Earning Variability	0.289	0.016	0.007	.	0.146	0.292
Profitability	0.000	0.001	0.169	0.146	.	0.019
Tangibility	0.080	0.010	0.346	0.294	0.019	.

Table 3: Correlation Matrix of Firm with Debt

Variables	Capital Structure	Liquidity	Size	Earning Variability	Profitability	Tangibility
Capital Structure	1.000	-0.338	-0.075	0.122	-0.695	0.210
Liquidity	-0.338	1.000	0.210	0.560	0.493	-0.311
Size	-0.075	-0.210	1.000	-0.460	0.119	0.000
Earning Variability	0.122	0.559	-0.460	1.000	0.251	-0.152
Profitability	-0.695	0.493	0.119	0.251	1.000	-0.279
Tangibility	0.210	-0.311	0.000	-0.152	-0.279	1.000
Sig. (1-tailed)						
Capital Structure	.	0.044	0.355	0.274	0.000	0.149
Liquidity	0.044	.	0.150	0.001	0.004	0.059
Size	0.355	0.150	.	0.008	0.278	0.499
Earning Variability	0.294	0.001	0.008	.	0.106	0.227
Profitability	0.000	0.004	0.278	0.106	.	0.082
Tangibility	0.149	0.059	0.499	0.227	0.082	.

Table 4: Regression

Model	R	R^2	Adj. R^2	F	Sig.
Firms without Debt	0.705	0.498	0.389	4.576	0.004
Firms with Debt	0.699	0.488	0.361	3.384	0.012

Table 5: Beta, Standard Error, T-statistics and level of significance of Firms with no debt

Model	Coefficient β	Standard Error	Standardised Coefficients β	t	Sig.	95% Confidence Interval	
						Lower	Upper
Constant	0.510	0.377		1.351	0.189	-0.270	1.293
Liquidity	0.027	0.082	0.065	0.333	0.740	-0.143	0.198
Size	0.023	0.106	0.039	0.225	0.822	0.1969	0.244
Earning Variability	0.00003785	0.000	0.035	0.192	0.848	0.000	0.000
Profitability	-2.547	0.623	-0.747	-4.0788	0.000	-3.839	-
Tangibility	0.046	0.680	0.013	0.082	0.933	1.254	1.464

Dependent Variable: Capital Structure

Table 6: Beta, Standard Error, T-statistics and level of significance of Firms with debt

Model	Coefficient β	Standard Error	Standardised Coefficients β	t	Sig.	95% Confidence Interval	
						Lower	Upper
Constant	0.548	0.468		1.169	0.256	-0.428	1.529
Liquidity	-0.014	0.116	-0.027	-0.125	0.800	-0.258	0.231
Size	0.030	0.122	0.046	0.249	0.703	-0.225	0.287
Earning Variability	9.853E-004	0.000	0.094	0.444	0.650	0.000	0.001
Profitability	-2.557	0.699	0.705	-3.653	0.001	-4.017	-1.099
Tangibility	0.082	0.739	0.018	0.109	0.910	-1.462	1.628

Dependent Variable: Capital structure

Capital Structure Theories				
Sr. No.	Year	Theory	Author	
1	1952	Net Income Approach	David Durand	Value of firm and capital structure is inter -independent.
2	1952	Net Operating Income Approach	David Durand	Value of firm and capital structure is independent.
3	1958	MM Approach	Franco Modigilani and Merton Miller	Capital structure decisions don't affect value of firm.
4	1961	Pecking Order Theory	Gordan Donaldson	A discipline while financing capital structure, first debt than equity.
5	1963	MM Approach (with corporate taxation)	Franco Modigilani and Merton Miller	Debt reduces cost of capital and equity increases cost of capital.
6	1963	Traditional Approach to Capital Structure	Soloman Ezra	Firm can increase overall cost of capital by increasing debt up to an extent.
7	1973	Trade-Off Theory	Kraus & Litzenberger	Bringing balance between debt and equity.
8	1976	Agency Costs Theory	Jensen & Meckling	Using retained earnings for debt payment instead of investment.
9	1977	Signaling Theory/Asymmetric Information	Ross S.A	Old firms with low growth prospects have negative correlation with debt financing and value while new firms with high growth opportunities have positive relationship.
10	1984	Modified Pecking Order Theory	Stewart C. Myers	Equity is a riskier option then debt, but debt should also be used in a safer limits.
11	1990	Debt as a Disciplining Device	Harris and Raviv	Investors behave rationally while investing in a firm and use debt as a major source of gathering information about firm.
12	2002	Market Timing theory	Baker & Wurgler	There is nothing like an optimum capital structure.

Case study of Marketing Strategy of Patanjali group: E-Commerce vs. Traditional Marketing

Anuradha Yadav*

Abstract

The Case talks about the marketing strategy of India's fastest growing FMCG brand Patanjali, with a tremendous revenue growth rate of 100 percent for the past five years. Patanjali's product line ranges from healthcare, personal care, home care, to food and more. These included Patanjali Chikitsalayas which were franchise dispensaries and clinics along with doctors. Now days Patanjali is also moving towards digital marketing which is a new integrated marketing strategy of this group.

This case will show that by integrating the new strategic frameworks with the traditional marketing strategies a more thorough framework can be developed. Then, the integrated framework has been shown by taking the analysis of case study of e-commerce strategy for Patanjali group, an established consumer products company that has begun to formulate its e-commerce strategy as well.

Keywords: *E-commerce, Traditional Marketing, Competitive Strategy, Patanjali group*

Introduction

The retail sector is one of the fastest growing sectors in India. It is one of the backbones of the economy and accounts for about 10 percent of the country's GDP. The growth of retail sector in India is one of the fastest globally. Indian consumers are very particular about their products. The consumer choices vary based upon their preference towards online shopping versus offline shopping.

The fundamental issue which arises in front of a consumer when he/she embarks on buying something is which mode of shopping they should choose to satisfy themselves. There are both online and the traditional brick and mortar shops available to fulfil their purchase interests. This abundance of choice available for consumers has thrown up a serious challenge for companies regarding the way they should target consumers to maintain competitive advantages.

Greatly reduced search costs on the internet would encourage consumers to abandon traditional marketplaces in order to find lower prices for goods. Market entry costs would be much lower than those for physical storefronts and online merchants would be more efficient than offline competitors .Traditional offline physical store merchants would be forced out of business .Some industries would become disinter mediated as manufacturer built direct relationship with consumer.

Ultimately, few of the above assumptions proved to be correct and structure of retail marketplace in the India has correct and structure of retail marketplace in the India has not been revolutionized. This is because consumers consider brand name, trust, reliability, and delivery time as important as price
As a result of these analysis Marketers have to redesign their strategies for consumer's attraction towards them. For this Online and Traditional both industries are modifying their competitive strategy at the marketplace. Numerous strategic frameworks have been proposed to help organizations market themselves on the Internet. Many of these strategic frameworks represent new versions of familiar themes in the marketing process.

Case study of Marketing Strategy of Patanjali group

Patanjali has a major advantage as it is associated with a famous personality, Baba Ramdev, who is a yoga guru who has a fan following of millions who directly popularize this brand through his yoga camps. Baba Ramdev direct interactions with the consumers have helped promote the brand internationally.

Today, Baba Ramdev's Patanjali is sweeping away everything in its path. From local stores to Amazon, Patanjali Products are everywhere. The product quality is best in breed, the prices competitive and the distribution chain is probably the first that is rivaling even the Cola majors.

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For the last decade, Baba Ramdev did not focus on proclaiming that his brand was the best. Instead, he told us about the evils of MNCs, the virtues of products made in India, the corruption of corporate, the exploitation of farmers, the cancerous effects of fertilizers and chemicals and just about everything that surrounded his products. He just showed us the reasons and left us on our own to explore his products.

See, when someone forces you to try out a product you might have a bias to reject it as 'overselling'. But here no-one was pushing anything, only an environment was created where you wanted to see if the alternative to above evils was usable.

You might have been influenced by the fear of diseases or you might just have been patriotic enough to shun all evil US firms. Whatever the reason, you already had a positive environment to try the "Patanjali" products.

So now the "Patanjali" brand had a willing consumer.

Was this enough? Obviously not, you still had to deliver. And did they do that! The product quality was brilliant. Yes, they were not the panacea of everything as (often) claimed – but the toothpaste was as good as any other in the market, as were the oils, as were the extracts, and as was everything else. And guess what, Patanjali overdid even its own stupendous record in the distribution department. Is there any village, any city in India where you cannot find these products?

The recent news reports of Baba Ramdev's FMCG Empire (2013-2014 turnovers at INR 1200 crores) were meant to provide shock value, but they underplayed the true learning for entrepreneurs aiming to displace huge incumbents. Patanjali reported Indian revenues of around Rs. 5,000 crores (~ USD 750 million) for the last financial year — and in doing so went past Colgate in India.

Even more interesting is that Colgate is almost 8 decades old in India while Baba Ramdev's brand is barely 8 years old

STRATEGY Used by Patanjali group:

-Yoga guru Baba Ramdev's consumer goods company Patanjali was the third most advertised brand on television in India during the last week of November, behind Cadbury and Fair & Lovely.

-The saffron-clad Baba's forecast was quite eye-catching too—he thinks the brand will double revenues to Rs. 10,000 crores (~USD 1.5 billion) in India by next year, 2017—which would effectively take them past two other-decades old companies—Nestle and Procter & Gamble—and leave Patanjali second only to Unilever in India, all in just about 10 years.
Baba Ramdev is the brand who has helped the brand grows with a very low advertising expenditure. Promotion of Patanjali is done directly by Baba Ramdev. Recently he was seen promoting the brand in a reality show India's Best Dramebaaz which has also been sponsored by Patanjali.

How Patanjali promotes itself through Digital Marketing?

1. .net:

.net is their main e-commerce website. The entire range is on display here and can be bought online. Prices seem to be in INR. People may laugh it off, but need to remember that none of our MNCs actually sell their products online in spite of their media comments about how they are embracing digital, which of course is more stylish than real these days.

2. org

Now .org is almost their corporate website. This is where they get into what they are about, the mission and philosophy and of course inviting dealerships.

Finally,
Baba Ramdev's brand seems well configured and ready for takeoff. It seems to have all the magic ingredients of success.

a) The brand has moved into e-commerce besides being available with retail chains and under its own distribution centers.
b) The Ramdev Medicines brand is ready for export with foreign exchange earning potential and could be a great success if marketed successfully given the weakness that the West has for both Yoga and Herbal alternatives.
c) The brand pyramid has legs. Products are available online and through offline retail.
d) And finally it's not only his companies that are digital. Baba Ramdev is himself digital. He has 541k followers on Twitter. Our MNC CEO's are going to find it difficult to match his following in the near future. On Facebook Baba Ramdev has 5.7 million people liking his page.

Conclusion

Baba Ramdev's live yoga classes became a passion. And it all began in the year 2002 when Sanskar Television channel started airing Baba Ramdev's yogic classes; overnight, Baba Ramdev became a sensation he had hundreds of followers who morphed into thousands. Then Sanskar channel's rival Astha channel signed him. In two years time he was a hit and with him. Then Baba came with the FMCG group Patanjali which is also a hit in today's market and now He started online stores as well.
To manage e-brands effectively and efficiently, company has to employ promotion strategies different from those used by traditional marketing. One tactic is to build a direct link with consumers and enter into a dialogue with them about products. As consumers become proficient at using the Internet, they will only buy products that precisely match their needs.

Think About It!

Patanjali as a brand has a strong positioning in the minds of consumers as a natural and Ayurvedic brand. Now days Patanjali started the integrated marketing strategy i.e. traditional as well as online stores are running of the group. Above all these questions arise in these conditions are:

- Will Patanjali's foray into so many diversified segments lead to a brand extension trap and confused positioning? Because Patanjali as a brand solely rides on Baba Ramdev's image, if Baba Ramdev ever finds himself at the centre of a controversy, will Patanjali's brand equity take a hit?
- Will it affect the brand Patanjali? Even if Baba Ramdev does not get into any controversy, what will happen to the brand Patanjali when Baba Ramdev is no more? Who should be the next face of Patanjali? Can the brand survive without a face?
- What will be the Marketing strategy of Patanjali Group after Him?
- Will the Integrated Marketing Strategy also be a Magic! For Patanjali Group?

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Drivers of African Tobacco Export

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Abstract

The present research empirically study the effects of macroeconomic indicators on the export performance of African tobacco using dated data spanning from 1991 to 2017 sourced from FAO, CBN and UNCTAD databases. The data were analyzed using descriptive and inferential statistics. The empirical findings showed that African tobacco export is been fraught by smuggling due to poor product pricing which make the producers to sell their products in the black market as against the local licensed buyers. In addition, poor product quality hinders the continent integration into the global tobacco market. In lieu of these, the study recommended the need for remunerative product price i.e. price stabilization for the producers in order to minimize smuggling which affects the foreign exchange earning that accrue to the continent. Also, there is need to improve the quality of the product in order to increase the trade share or size in the global tobacco market.

Keywords: *Drivers; Export; Tobacco; Africa*

Introduction

Holding firmly onto development and sustainability of sub sectors on which a country's agriculture strongly depends upon how the actions reflected by various regimes in most of the developing countries worldwide (David, 2013). Such actions are reflected in their pursuit to enhance food security, minimize poverty and increase foreign exchange earnings via exports as against draining its reserve through import bills.

Trade theorists have posited that countries should specialize in the production and exportation of products that they have comparative advantage (ITC, 2016). Consequently, many Sub-Saharan African (SSA) countries largely export primary agricultural and other products which they have abundant factor endowments and import mostly processed food and manufactured commodities, which they do not have sufficient capital and technology to produce as postulated by dependency theories (Verter, 2015). Agricultural trade has been identified as the key drivers of economic growth and development for Africa to take advantage of the trade liberalization in the era of globalization (Verter, 2016). Given that the overall success of the agricultural export promotion strategy will depend among other things on what factors constrain export growth and on the responsiveness of producers to changes in price and non-price incentive structures, a better understanding of key variables affecting export performance and the direction and magnitude of the relevant elasticity are desirable. Therefore, this research aimed at determining the drivers of African tobacco export.

Methodology and Materials

The study used annual dated data spanning from 1991 to 2017, sourced from the FAO, Central Bank of Nigeria (CBN) and UNCTAD databases. The macroeconomic indicators used were tobacco export and import in physical and monetary terms, CPI, Direct Foreign Investment (DFI) inflow, Exchange rate, GDP of major importing countries (Russia and USA), Producer and World prices of tobacco. The analytical techniques used to achieve this research were descriptive statistics, growth model, instability index, unit root tests and the Engel-Granger two step procedures.

2.1. Empirical model

2.1.1. **Growth rate:** The compound annual growth rate calculated using the exponential model is given below:

$\gamma=\alpha\beta^{t}$ ..... (1)

$\ln\gamma=\ln\alpha+t\ln\beta$ ..... (2)

$CAGR=[Antilog\beta-1]\times100$ ..... (3)

Where, CAGR is the Compound growth rate; t is time period in year; γ is export quantity/value; α is intercept; and, β is the estimated parameter coefficient.

2.1.2. **Instability index:** The simple coefficient of variation (CV) over-estimates the level of instability in time series data characterized by long-term trends, whereas the Cuddy-Della Valle Index corrects the coefficient of variation by instability

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index which is given below:

II = CV*(1-R2)0.5 ..... (4)

Where, II is the Instability index; CV is the Coefficient of variation; and, R2 is the Coefficient of multiple determination. The instability index was classified as low instability (15%) and high instability (> 15%).

2.1.3. **Augmented Dickey Fuller Test:** Following Blay et al. (2015); Singh, et al.(2016); and, Sadiq et al.(2016) the Augmented Dickey-Fuller test (ADF) used is given below:

$$\Delta P_t = \alpha + P_{t-1} + \sum_{j=2}^{it} \beta_i \Delta P_{it-j+t} + \varepsilon \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (5)$$

Where, P_{it} is the i^{th} variable at the time t, ΔP_{it} $(P_{it} - P_{t-1})$ and α is the intercept or trend term.

2.1.4. **The ADF-GLS test:** Elliott, Rothenberg and Stock (1996) proposed a variant of the ADF test which involves an alternative method of handling the parameters pertaining to the deterministic term Ut : these are estimated first via Generalized Least Squares, and in a second stage an ADF regression is performed using the GLS residuals. This variant offers greater power than the regular ADF test for the cases

Ut = U0 and Ut = U0 + U1t. ..... (6)

2.1.5. **Engel-**Granger two step procedure model

2.1.5.1. **Long-run dynamic model:**

TEXPQt = β0 + β1TOPt + β2TPQt + β3EXRt + β4INFt + β5RGDPt + β6UGDPt + β7WPt + β8PPt + β9ERRt + β10WPRt + β11PPRt + β12ACt + β13DFIt + ε_i ..... (7)

2.1.5.2. Short-run dynamic model:

ΔTEXPQt = β0 + β1ΔTOPt + β2ΔTPQt + β3ΔEXRt + β4ΔINFt + β5ΔRGDPt + β6ΔUGDPt + β7ΔWPt + β8ΔPPt + β9ΔERRt + β10ΔWPRt + β11ΔPPRt + β12ΔACt + β13ΔDFIt + 〖ECT〗_(t-1) ..... (8)

Where, EXPQ is the Export quantity of tobacco; TOP is the Trade Openness; TPQ is the Tobacco production quantity; EXR is the Exchange rate; INF is the Inflation rate; RGDP is Russia GDP; UGDP is USA GDP; WP is the World price of tobacco; PP is the Producer's price; EXRR is Exchange rate risk measured by standard deviation of two preceding years; WPR is World price of tobacco measured by standard deviation of two preceding years; PPR is the tobacco Producer's price measured by standard deviation of two preceding years; AC is the Agriculture credit; DFI is the Direct foreign investment; ε_i is the error term; t is the current time; β_0 is the intercept; β_(1-n) are the parameter estimates; and, Δ is the first difference operator.

Results and Discussion

3.1. **Export Trend and Growth Rate:** The results showed an increasing trend for Africa tobacco export quantity but the unit price of the product was on the decline due to low quality

Table 1a: Africa export trend of tobacco during 1991-2017

Year	Export quantity		Export value ($)		$ per ton	
	Qty (MT)	Index	1000 $	Index	$	Index
1991	253995.00	100	890124.00	100	3504.49	100
1992	284258.00	111.91	807229.00	90.68	2839.77	81.03
1993	322828.00	127.10	656617.00	73.76	2033.95	58.03
1994	444797.00	175.12	920594.00	103.42	2069.69	59.05
1995	315823.00	124.34	835719.00	93.88	2646.16	75.50
1996	370063.00	145.69	1147242.00	128.88	3100.12	88.46
1997	349904.00	137.76	1060807.00	119.17	3031.70	86.50
1998	379058.00	149.23	960140.00	107.86	2532.96	72.27
1999	318121.00	125.24	937000.00	105.26	2945.42	84.04
2000	332457.00	130.89	1034995.00	116.27	3113.17	88.83
2001	401921.00	158.23	1052206.00	118.20	2617.94	74.70
2002	314779.00	123.93	731939.00	82.22	2325.24	66.35
2003	328035.00	129.15	932210.00	104.72	2841.80	81.09
2004	387309.00	152.48	920365.00	103.39	2376.30	67.80
2005	340441.00	134.03	824667.00	92.64	2422.34	69.12
2006	403166.00	158.72	1072975.00	120.54	2661.37	75.94
2007	391364.00	154.08	1161849.00	130.52	2968.71	84.71
2008	375502.00	147.83	1398936.00	157.16	3725.50	106.30
2009	419339.00	165.09	1500585.00	168.58	3578.45	102.11
2010	446566.00	175.81	1898698.00	213.30	4251.77	121.32
2011	488366.00	192.27	1792515.00	201.37	3670.43	104.73
2012	506012.00	199.22	1959283.00	220.11	3872.00	110.48
2013	507610.00	199.85	2147431.00	241.25	4230.47	120.71
2014	509352.90	200.53	2170266.00	243.81	4260.83	121.58
2015	519153.00	204.39	2236530.00	251.26	4308.03	122.92
2016	528953.20	208.25	2291384.00	257.42	4331.92	123.61
2017	538753.40	212.11	2349236.00	263.92	4360.50	124.42
Average	399182.50		1321909.00		3208.19	

standard of the product, thus, affecting the foreign exchange earning that accrued to the continent from the product (Table 1a and Figure 1). Therefore, it can be inferred that the rising trend from the year 2006 to 2017 is attributed to increase in the quantity of export.

Also, the results in Table 1b revealed that the exported quantity and the generated export revenue during the study period recorded an annual increase of 7584.05 MT representing 1.90% of the average exported quantity and $49.2 million

Table 1b: Growth rate of tobacco export from 1991-2017

Variable	Export (ton)	Export ($)	$ per ton
Intercept	286457	567531	2326.11
Slope	7584.05	49242.4	57.46
Average	399182.50	1321909.00	3208.19
Annual change (%)	1.90	3.73	1.79
R^2	0.564	0.631	0.368
t-statistic	5.21***	6.00***	3.50***
F-statistic	27.16 (3.6e-05)***	36.00(5.9e-06)***	12.27(0.002)***

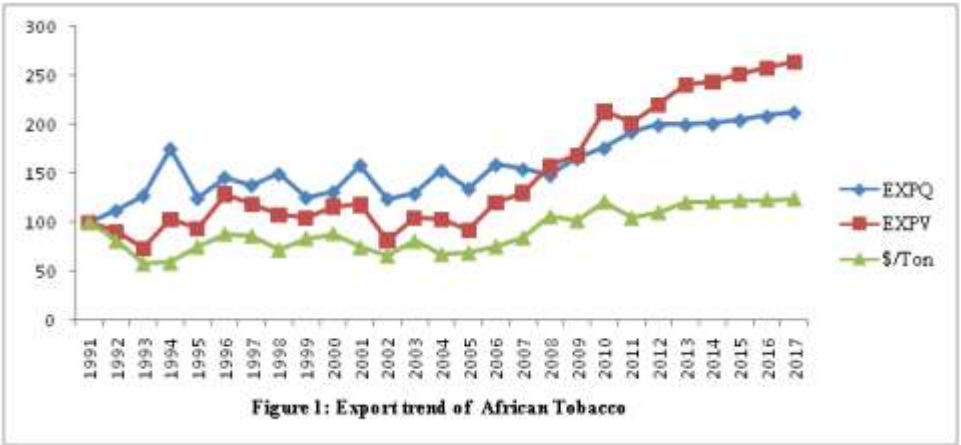

Figure 1: Export trend of African Tobacco

representing 3.73% of the average export revenue respectively. Furthermore, the results showed that the unit price of exported quantity recorded annual increase of $57.46 representing 1.79% of the average unit price of exported quantity ($ per ton).

3.2. **Degree of Stability of African Tobacco Export:** A perusal of the results showed the export quantity of Africa tobacco to be

Table 2: Stability index of African tobacco export

Variable	Index (%)
Export (ton)	11.94
Export ($)	21.90
$ per ton	16.67

stable but the export value and the unit price were not stable (Table 2). Therefore, it can be inferred that Africa tobacco did not have competitive advantage in the global tobacco markets and this may be due to low quality of its product.

3.3. **Unit Root Test and Co-integrating Relationship:** A perusal of the Table showed the ADF-GLS unit test results at level for all the variable series to be non-stationary as indicated by their respective tau-statistics which were greater than the t-critical value at 5% risk level. Further application of the unit root test at first difference showed all the variable series to be stationary as evidenced by their respective tau-statistics which were lower than t-critical value at 5% probability.

Furthermore, ADF unit root test applied to the residual of the co-integrating regression at level indicated that the residual variable is stationary as evidenced by the tau-statistic which is lower than the Engel-Granger critical value at 5% degree of freedom (Table 3). Having met the conditions of the integration of order one for the variable series [I(1)] and integration of order zero [I(0)] for the residual variable, it can be inferred that the variable series had long-run association i.e. they are co-integrated. Therefore, the Engel-Granger two-step procedure was applied to examine the possibility of long-run equilibrium.

3.4. **Impact of Macro-Economic Indicators on Tobacco Export:** A cursory review of the results showed that the producer's price, Russian-GDP, USA-GDP, Exchange rate, Exchange rate risk, World tobacco price, World price risk and Agricultural credit have impact on African tobacco export as indicated by their respective estimated parameters which were different from zero at 10% risk level (Table 4a).

Table 3: Stationarity test

Items	Stage	ADF-GLS		Decision
		tau-stat	t-critical at 5%	
TEXPQ	Level	-2.412	-3.19	Non-stationary I(0)
	$1^{st}\Delta$	-7.610**	-3.19	Stationary I(1)
TOP	Level	-1.408	-3.19	Non-stationary I(0)
	$1^{st}\Delta$	-7.545**	-3.19	Stationary I(1)
TPQ	Level	-2.219	-3.19	Non-stationary I(0)
	$1^{st}\Delta$	-5.985**	-3.19	Stationary I(1)
EXR	Level	-0.155	0.630	Non-stationary I(0)
	$1^{st}\Delta$	-1.998**	0.044	Stationary I(1)
INF	Level	-2.739	-3.19	Non-stationary I(0)
	$1^{st}\Delta$	-4.170**	-3.19	Stationary I(1)
RGDP	Level	-1.527	-3.19	Non-stationary I(0)
	$1^{st}\Delta$	-3.568**	-3.19	Stationary I(1)
UGDP	Level	-0.178	0.622	Non-stationary I(0)
	$1^{st}\Delta$	-2.482**	0.012	Stationary I(1)
WP	Level	-0.753	0.39	Non-stationary I(0)
	$1^{st}\Delta$	-3.142**	0.0016	Stationary I(1)
PP	Level	-1.800	-3.19	Non-stationary I(0)
	$1^{st}\Delta$	-3.973**	-3.19	Stationary I(1)
EXRR	Level	-2.375	-3.19	Non-stationary I(0)
	$1^{st}\Delta$	-3.213**	-3.19	Stationary I(1)
WPR	Level	-0.398	0.528	Non-stationary I(0)
	$1^{st}\Delta$	-5.950**	3.6E-06	Stationary I(1)
PPR	Level	-1.094	0.239	Non-stationary I(0)
	$1^{st}\Delta$	-7.810**	2.5E-07	Stationary I(1)
AC	Level	-2.316	-3.19	Non-stationary I(0)
	$1^{st}\Delta$	-4.315**	-3.19	Stationary I(1)
DFI	Level	-1.283	-3.19	Non-stationary I(0)
	$1^{st}\Delta$	-11.86**	-3.19	Stationary I(1)
ECT	Level	-6.140**	-3.34	Stationary I(0)

*Note: ** indicate that unit root at level or 1st difference was rejected at 5% significant level*

The results showed that African tobacco export is income inelastic to RGDP and income elastic to UGDP, implying that the temperate nature of Russia make tobacco smoking a necessity while the high income elasticity is evidence of the speed of adaptation of the exports to local tastes in USA. This is consonant to the a priori expectation which inferred that demand and income have a positive relationship. Therefore, the elasticity implications of a percent increase in the RGDP and UGDP would increase tobacco export by 0.24% and 2.18% respectively.

The positive sign of the WP estimated coefficients indicated that remunerative price is an incentive that encourages the exporters to increase the export of tobacco to the global markets. Therefore, as far as greater percentage of the export price (free on-board) goes to the producers, an increase in the world price of tobacco would tends to favour or benefit the exporter than the producers due to the relatively low transmission of increments in price as reflected by the estimated coefficient. The marginal implication of a percent increase in the WP of tobacco will increase the export of African tobacco by 0.76%.

In addition, the positive elasticity of the world price risk implies that the fear of future losses as a result of price volatility would persuade the exporters to export more of tobacco in order to smooth-out the income gap likely to occur in the future. The elasticity implication of a percent increase in the WPR will increase export by 0.076%.

The negative elasticity of the producer's price showed that fall in the producer's price of tobacco incites the producers to dispose most of their produce through the black markets with high prices which end-up been smuggled as against domestic licensed buyers, thus affecting the foreign exchange earning of the continent. The elasticity implication of a percent increase in the PP will decrease tobacco export by 0.51%. Therefore, a decrease in the tobacco producer price affects cropping decisions, as well as farmers' decision to sell domestically or to smuggle.

The negative elasticity of the exchange rate (EXR) showed that cost-push inflation due to increase exchange rate negatively affects the exporters in the exportation of tobacco. In addition, devaluation in the currencies of the exporting countries in African as a result of increase in exchange rate does not make export cheaper in the international markets to warrant increase in African tobacco supply to the importing economies. The elasticity implication of a percent increase in the EXR will

decrease export by 0.50%. However, the fear of current losses as a result of exchange rate volatility spurred economic agents to produce more as an insurance cover for future earnings and income to smooth over their productive income during the entire period. McKenzie (1999) reported that most economic agents base their decisions on the worst scenario basis. The elasticity implication of a percent increase in EXRR will increase tobacco export by 0.12%.

The elasticity of credit showed that credit provided to the producers is not productive as it is diverted for other purpose other than what it is meant for due to pressing consumption needs of the producers. The elasticity implication of a percent increase in credit advanced to farmers will decrease tobacco by 0.33%.

3.5. Effects of Macro-Economic Linkages on Tobacco Export: The results of ECM which captured both the short-run and long-run equilibrium indicated the existence of long-run equilibrium between the export and the macroeconomic linkages as evidenced by the significance of the attractor coefficient at 10% degree of freedom. The significance of the attractor coefficient (1.53) means that about 153% of the proportion of disequilibrium experienced in tobacco exports in the previous year is restored back to the long-run equilibrium position within a year after the disturbance or shock. In addition, the speed of recovery is very slow as the approximate time required to re-establish equilibrium is 18.36 months. In other words, a shock that induces export deviation from the equilibrium level would induce the exporters to respond to the shock in a way that tobacco export would converge toward its equilibrium value.

Table 4a: Long-run and short-run predictions for tobacco EXPQ

Long-run dynamic model (LNEXPQ)				Short-run dynamic model (ΔLNEXPQ)			
Variable	Coefficient	SE	t-ratio	Variable	Coefficient	SE	t-ratio
Constant	−15.6292	10.2227	1.529^{NS}	Constant	0.0165	0.0192	0.858^{NS}
$lnTOP_t$	0.1222	0.1285	0.951^{NS}	$\Delta lnTOP_t$	0.0873	0.0477	1.829^{NS}
$lnTPQ_t$	−0.6793	0.3752	1.810^{NS}	$\Delta lnTPQ_t$	−0.6423	0.0822	7.810***
$lnEXR_t$	−0.5019	0.1564	3.208**	$\Delta lnEXR_t$	−0.2929	0.0428	6.831^{NS}
$lnINF_t$	0.0137	0.0236	0.582^{NS}	$\Delta lnINF_t$	0.0472	0.0175	2.697**
$lnRGDP_t$	0.2416	0.0517	4.665***	$\Delta lnRGDP_t$	0.1047	0.0256	4.087***
$lnUGDP_t$	2.1825	0.7524	2.901**	$\Delta lnUGDP_t$	1.6573	0.4807	3.448**
$lnWP_t$	0.7584	0.1676	4.523***	$\Delta lnWP_t$	0.7636	0.0708	10.78***
$lnPP_t$	−0.5100	0.1206	4.227***	$\Delta lnPP_t$	−0.4935	0.0691	7.142***
$lnEXRR_t$	0.1165	0.0444	2.622**	$\Delta lnEXRR_t$	0.0583	0.0123	4.718***
$lnWPR_t$	0.0754	0.0367	2.056*	$\Delta lnWPR_t$	0.0418	0.0129	3.229**
$lnPPR_t$	−0.0098	0.0176	0.555^{NS}	$\Delta lnPPR_t$	−0.0118	0.0038	3.088**
$lnAC_t$	−0.3334	0.1390	2.399**	$\Delta lnAC_t$	−0.2268	0.0365	6.214***
$lnDFI_t$	0.1166	0.2149	0.542^{NS}	$\Delta lnDFI_t$	0.0228	0.0378	0.605^{NS}
-				ECT_{t-1}	−1.5334	0.1278	12.00***
R^2	0.847			R^2	0.955		
R^2Adjusted	0.598			R^2adjusted	0.851		
Durbin-Watson	2.483			Durbin-Watson	1.707		
F-statistic	83.7(0.00)***			F-statistic	1197.0(0.00)***		
				Autocorrelation	$0.217(0.660)^{NS}$		
				Arch effect	$0.735(0.391)^{NS}$		
				Heteroscedasticity test	$14.12(0.44)^{NS}$		
				Normality test	$1.6804(0.431)^{NS}$		
				CUSUM test	$1.097(0.322)^{NS}$		

The results showed that macroeconomic linkages viz. tobacco production quantity, producer's price, Russia-GDP, USA-GDP, exchange rate, Agricultural credit, inflation, world price, exchange rate volatility, world price risk and producer's price risk have effect on the tobacco export. The macroeconomic linkages with positive effect on tobacco export are RGDP, UGDP, INF, EXRR, WP and WPR while macroeconomic indicators viz. TPQ, PP, AC and PPR have negative effect on tobacco export.

The positive income elasticity of RGDP and UGDP showed that the anti-smoking lobbying and campaigns in the developed countries does not affect African's tobacco exports to most countries. In addition, allegations about child labour utilization in most tobacco estates in Africa did not forced Russia and USA to scale down their order from Africa. However, the income elasticity of Russia is inelastic while that of USA is elastic, implying necessity of tobacco smoking due to the prevailing

climatic condition in the former and adaptation of the export to the local taste in the latter. The elasticity implication of a percent increase in RGDP and UGDP will increase tobacco export by 0.11% and 1.66% respectively. The positive elasticity of INF rate showed that demand-pull inflation for the product is an incentive that encourages production of tobacco. Therefore, the elasticity implication of a percent increase in the INF rate will increase tobacco export from the continent by 0.05%.

In considering the share of farmers in export price and the degree of transmission of increments, the positive elasticity of WP showed that both the producers and the exporters benefitted in the trade, thereby leaving no losers to be compensated by winners. In addition, the fear of future loss would encourage the exporters to increase their export to cushion the effect of near future loss in the global market. The elasticity implication of a percent increase in the WP and WPR will increase tobacco export from Africa by 0.76% and 0.04% respectively.

The negative elasticity of PP indicated that non-remunerative price create incentive for smuggling, thereby reducing the volumes of tobacco available in the domestic market for export and for domestic processing. In addition, decrease in the tobacco producer's price would discourage the producers to invest appropriately in their fields as their hopes for better and sustainable outputs in the coming years will be dashed. In addition, producers will likely embark on inventory accumulation of their current crop if the offered producer prices are too low. This indicated that producer's price is a crucial factor in the supply decision of farmers, and making it remunerative would have positive effect on export while making it non-remunerative will have plummeting effect on export. Therefore, the elasticity implication of a percent increase in the PP and PPR will decrease tobacco export by 0.49% and 0.01% respectively.

Table 4b: Multicolinearity test

Variable	VIF
$\Delta LNTOP_t$	3.042
$\Delta LNTPQ_t$	2.564
$\Delta LNEXR_t$	4.977
$\Delta LNINF_t$	2.610
$\Delta lnRGDP_t$	1.972
$\Delta lnUGDP_t$	1.984
$\Delta lnWP_t$	1.769
$\Delta lnPP_t$	1.398
$\Delta lnEXRR_t$	5.320
$\Delta lnWPR_t$	1.589
$\Delta lnPPR_t$	2.002
$\Delta lnAC_t$	4.829
$\Delta lnDFI_t$	2.630
ECT_{t-1}	1.316

Note: VIF > 10.0 may indicate collinearity problem

The results showed that agricultural credit advanced to the exporters is not productive as it does not guarantee savings due to mismatch, and a percent increase in AC would decrease export by 0.23%. Glut and convergent cobweb cycle affected export as it dampen the price, thus the reason for the negative elasticity of the TPQ. The elasticity implication of a percent increase in TPQ will decrease TEXP by 0.64%.

The fear of income loss motivated economic agent to produce more to cover up for the expected decline in current incomes, thus the reason for the positive elasticity of the EXRR. However, devaluation in the currency of exporting Africa countries did not make export cheaper to necessitate increase in tobacco export. Therefore, the elasticity implication of a percent increase in the EXR and EXRR would decrease export by 0.29% and increase export by 0.06% respectively (Table 4a).

The diagnostic test showed that the estimated coefficients are reliable for prediction as the residual of the ECM is devoid of serial correlation, auto-covariance, heteroscedasticity and normally distributed as indicated by the their respective test statistics which were not different from zero at 10% probability level. Furthermore, diagnostic tests showed that the estimated parameters are stable and there is absence of covariance as indicated by the CUSUM test statistic which is not different from zero at 10% risk level and the variance inflation factors (VIF) for the predictor variables which were less than 10.0 respectively. In addition, the significance of F-statistic at 1% probability level indicated that the estimated parameters are different from zero, thus reliable for prediction. Also, the value of the coefficient of multiple determination means that 95.6% of the variation in the tobacco export is influenced by the predictor variables captured in the model (Table 4b).

Table 5: Granger causality test results

Null hypothesis	F-stat	P < 0.10	Granger cause	Direction
$TEXPQ \leftrightarrow TOP$	6.6856**	0.0491	Yes	Unidirectional
	0.0367	0.8556	No	
$TEXPQ \leftrightarrow TPQ$	4.8308**	0.0793	Yes	Bidirectional
	4.8643**	0.0785	Yes	
$TEXPQ \leftrightarrow EXR$	1.4511	0.2822	No	Unidirectional
	8.7912**	0.0313	Yes	
$TEXPQ \leftrightarrow INF$	0.21134	0.6650	No	Unidirectional
	7.3747**	0.0420	Yes	
$TEXPQ \leftrightarrow RGDP$	16.2**	0.0101	Yes	Unidirectional
	1.9532	0.2211	No	
$TEXPQ \leftrightarrow UGDP$	1.6825	0.2512	No	None
	0.80916	0.4096	No	
$TEXPQ \leftrightarrow WP$	2.4999	0.1747	No	None
	3.8203	0.1080	No	
$TEXPQ \leftrightarrow PP$	16.062**	0.0102	Yes	Unidirectional
	0.1452	0.7188	No	
$TEXPQ \leftrightarrow EXRR$	0.00148	0.9708	No	None
	1.5975	0.2620	No	
$TEXPQ \leftrightarrow WPR$	22.252**	0.0053	Yes	Unidirectional
	0.07723	0.7922	No	
$TEXPQ \leftrightarrow PPR$	3.1493	0.1361	No	None
	0.89331	0.3880	No	
$TEXPQ \leftrightarrow AC$	6.2041**	0.0551	Yes	Unidirectional
	1.6266	0.2582	No	
$TEXPQ \leftrightarrow DFI$	3.404	0.1243	No	None
	0.22379	0.6561	No	

*Note: ** denotes rejection of the H0 at 10% level of significance*
NS: Non-significant
→ ←means forward and backward directions respectively

3.6. Causal Linkage between African Tobacco Exports with Macroeconomic Indicators: The granger causality results revealed the existence of bidirectional causality between the pair of TEXP-TPQ; unidirectional causalities between pairs of TEXP-PP, TEXP-RGDP, TEXP-TOP, TEXP-AC, TEXP-WPR, EXR-TEXP and INF-TEXP; and, non-causalities between the pairs of TEXP-UGDP, TEXP-DFI, TEXP-EXRR, TEXP-WP and TEXP-WPR as indicated by the significance of F-statistics at 10% for both in pair; significance of F-statistic at 10% for the former in pairs and non-significance of both indicator in pairs respectively (Table 5). For the bidirectional causality it means that the former granger causes the latter and the latter in turns granger causes the former i.e. there is feed-forward and feed-backward relationship, while for the unidirectional causality only the former granger causes the latter in the pair. However, for none causal relationship, neither the former nor the latter contain useful information to predict each other's direction. Therefore, it can be inferred that export quantity of tobacco from Africa has effect in determining the direction of producer price, tobacco global economy and world price volatility.

Conclusions and Recommendations

The empirical findings showed that African tobacco export is driven by income of importing economies, the tobacco price in the domestic and global markets, credit and effective exchange rates. However, the continent is not integrated into the global economy of tobacco trade which may be due to low quality of its tobacco products as evidenced by non-significant of trade openness. Therefore, in lieu of the above, the following recommendations were made:

- The continent should improve the quality standard of its tobacco product in order to control a sizeable share in the global economy of tobacco.
- Price stabilization mechanism should be established so that farmers can get remunerative prices for their product, thus reducing smuggling through black market.

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The Impact of Customer Service of Mexican Companies Based On Customer Care

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Abstract

The purpose of this research is to measure the level of customer service of Mexican companies in terms of customer service, considering that customer service is directly related to offer a good customer service. This research is analytical and descriptive, because it contains the main concepts about research, as well as the main authors and creators of the same and descriptive because in the research are tables and tables that help explain in a way Easier for the correct compression and differentiation of these concepts. With this research they will understand the importance and difference between a service and an attention, and once understood this will be able to better train their staff to obtain better and greaterresults in their companies and also reflected in theirprofits.

Keywords: *Customer service, Customer Support, Companies.*
JEL: *M12, M21, M31.*

Resumen

El propósito de esta investigación es medir el nivel de atención al cliente de las empresas mexicanas en función del servicio al cliente, considerando que el servicio al cliente está directamente relacionado para ofrecer una buena atención al cliente. Esta investigación es de tipo analítica y descriptiva, porque en ella se encuentran los conceptos principales sobre la investigación, así como los principales autores y creadores de los mismos, y descriptiva porque en la investigación se encuentran cuadros y tablas que ayudan a explicar de una manera más sencilla para la correcta compresión y diferenciación de estos conceptos. Con esta investigación comprenderán la importancia y la diferencia que hay entre un servicio y una atención, y una vez comprendido eso podrán capacitar mejor a su personal para obtener mejores y mayores resultados en sus empresas y también reflejándose en susganancias.

Palabras clave: Servicio al cliente, atención al cliente, empresas.

Introduction

The main purpose of organizations is to ensure that their main corporate activities create and add value over time, efficiently and effectively (Reyes, 2010, p.2). In this sense, good treatment towards clients can be the key to success to remain positioned in the market. Having stability allows the business to cultivate motivation for employees, helping us to have less turnover of staff. This is very important since it does not create demotivation among them.

This research is analytical and descriptive, because it contains the main concepts about the research, as well as the main authors and creators of the same. It is descriptive because in the research there are tables that help to explain in a certain and simpler way for the correct compression and differentiation of these concepts. In view of the results and recommendations of this scientific research, small and medium entrepreneurs in Mexico should urgently consider what is proposed here, since with it they will be able to provide a better service to their users, and a better service to their clients, which they found throughout this investigation

Background of the problem

Some users and consumers complain about customer service in companies that have the need to offer a face-to-face service

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with the user, such as supermarkets, automotive agencies or a bank branch, etc. The problem has always existed, but unfortunately Mexican companies do not care about providing quality customer service, if not all they are interested in is selling, without taking into account if that customer was satisfied with their product or with the attention offered by an advisor. This is where the problems arise, when the client complains but does not go beyond a simple complaint.

In this type of situation, one of the main problems of Mexicans is that they do not know how to complain or demand their rights when they are given bad service.Godoy (2011), mentions that today, customer service is an activity developed by organizations oriented to satisfy the needs of their customers; achieving thus increase their productivity and be competitive. The client is the main protagonist and the most important factor in the business game (page 4).

Delimitation of the problem

The present investigation will be applied to the Mexican companies that grant a direct service with the client, like a supermarket, automotive agency or some bank. The approach that is intended to provide this research has to do with the factors that are important for customer service such as: attention, empathy and service attitude.The main limitation is that sometimes employees give bad customer service due to several factors. The main one is the lack of constant training and the low salaries they receive. However, they are behaviors that must change immediately since modern consumers demand a change and a good service, since they are paying for it.

It is in this sense that González (2010) mentions that a common problem detected in all sectors is that, although there are high productivity equipment or new production processes in the market that use the most modern technologies, the small size of these companies prevents them from accessing them. On the one hand, the investment is too large and on the other, the production capacity of these equipment exceeds the needs of the company (page 2).

Taking into consideration the aforementioned problems, the following research questions are required:

a. What is the level of customer service of Mexican companies based on customer service?
b. What is the level of customer service of Mexican companies based on reliability?
c. What is the level of customer service of Mexican companies according to capacity?
d. What is the level of customer service of Mexican companies based on empathy?

Justification

It is clear that companies depend on their customers. The good treatment of customers is the key to success to remain positioned in the market. Having stability allows the business to cultivate motivation for employees, helping it to have less turnover of staff. This is very important since it does not create demotivation among them, encouraging them to do things right the first time, and therefore always providing a service or quality care.

Research variables and hypotheses

a. Independent variable (X) = Customer service

b. Dependent variable (Y) = Customer service

General hypothesis

The customer service is directly related to offer good customer service.

Specific hypotheses

H1 = X1 + X2 + X3 Y1
The company, the customer and the service attitude are directly related to reliability.

H2 = X1 + X2 + X3 Y2
The company, the client and the service attitude are directly related to the capacity.

H3 = X1 + X2 + X3 Y3
The company, the client and the service attitude are directly related to empathy.

Therefore, the hypothesis of this research is that customer service is directly related to offer good customer service. This data will be split to develop in a more in-depth way what is a service and care like as their differentiation between these concepts, considering that the objective is to measure the level of customer service of Mexican companies based on customer care.

Table 1: Description of research variables, dimensions and indicators

VARIABLE	DESCRIPTION	DIMENSIONS	INDICATORS
X0 Customer service	Activity of interrelation offered by a supplier for the purpose of a customer obtaining a product or service, both at the time and in the right place and where it ensures a correct use of it (Agudelo, 2013, pp. 17-22)	Company Client Service attitude	Customer retention Buyer satisfaction Customer loyalty Customer rating Accessible simple
Y0 Customer care	It is an activity developed by organizations oriented to satisfy the needs of their clients, thus increasing their productivity and being competitive (Godoy N., 2011, pgs. 23-35)	Reliability Capacity Empathy	Service ability Fulfill times Willingness to help Efficiency Goof treatment kindness

Source: Own elaboration.

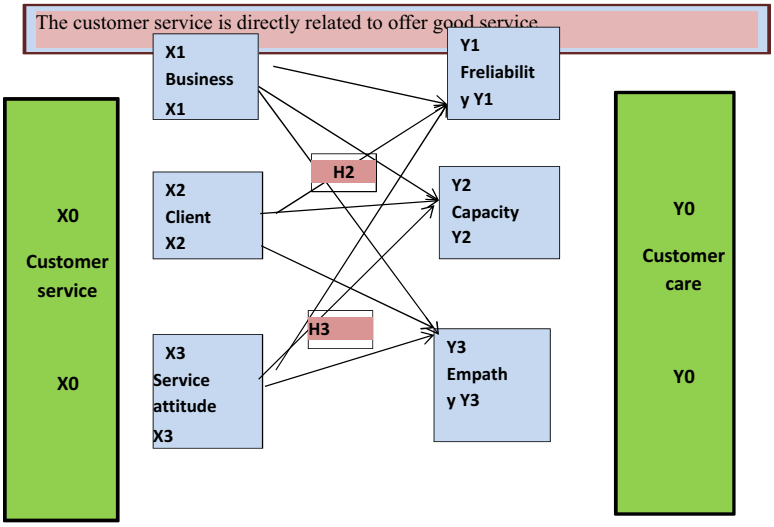

Figure 1. Deployment of variables, dimensions, and hypotheses.
Source: Own elaboration.

Research objectives

A. General objective

Measure the level of customer service of Mexican companies based on customer care.

B. Specific objectives

1) Measure the level of customer service of Mexican companies based on reliability.
2) Measure the level of customer service of Mexican companies according to capacity.
3) Measure the level of customer service of Mexican companies based on empathy.

Conceptual theoretical framework

A. Customer service

In order to define the variables of this research, it is first necessary to begin by defining certain concepts that are basic, but necessary to better understand what is being investigated. First of all, it begins by defining what is a service, followed by what is a customer, to later understand that it is "customer service". Stanton (2006) defines services as identifiable and intangible activities that are the main purpose of a transaction designed to provide customers with satisfaction of wants or needs (pp. 333-334). Services are activities, benefits or satisfactions that are offered for rent or sale, and which are essentially intangible and do not result in the ownership of something (Sandhusen, 2002, page 385).

Table 2. Congruence matrix

General questions	Specific questions	General objective	Specific objective
	What is the level of customer service of Mexican companies based on customer care?		Measure the level of customer service of Mexican companies in Reliability function
Is customer service directly related to providing good customer care?	What is the level of customer service of Mexican companies based on reliability? What is the level of customer service of Mexican companies according to capacity? ¿What is the level of customer service of Mexican companies based on the empathy?	Measure the level of customer service of Mexican companies in customer service function.	Measure the level of customer service of Mexican companies in customer service function. Measure the level of customer service of Mexican companies in function of empathy.

Source: Own elaboration.

A service is the result of the application of human or mechanical efforts to people or objects. Services refer to a fact, performance or effort that is not physically possible (Hair, 2002, page 344). The Association (2006) mentions that services (according to one of the two definitions they provide) are products, such as a bank loan or the security of a domicile, that are intangible or at least substantially, if they are totally intangible, they are exchanged directly from the producer to the user, cannot be transported or stored, and are almost immediately perishable.

Service products are often difficult to identify, because they come into existence at the same time they are purchased and consumed. They cover the intangible elements that are inseparability; which usually involve the participation of the client in a certain important way. They cannot be sold in the sense of the transfer of ownership; and they do not have any title. Today, however, most products are partly tangible and partly intangible, and the dominant form is used to classify them as goods or services (all are products). These common, hybrid forms may or may not have the qualities given for totally intangible services.

Kotler (2004) explains that

A service is a work, an accomplishment or an act that is essentially intangible and does not necessarily result in ownership of something. Its creation may or may not be related to a physical product. Complementing this definition, it should be noted that according to the mentioned authors, the services cover a wide range, ranging from renting a hotel room, depositing money in a bank, traveling by plane to visiting a psychiatrist, up to cut the hair, watch a movie or get advice from a lawyer. Many services are intangible, in the sense that they do not include almost any physical element, such as the task of the management consultant, but others may have a physical component, such as fast foods (page 9.10).

B. Client

The customer is the potential or actual buyer of the products or services. The customer is a person or company that acquires goods or services, not necessarily the final Consumer (Marketing, 2009)". According to the Marketing Dictionary (1999) the customer is a term that defines the person or organization that makes a purchase, may be buying on their behalf, and personally enjoy the acquired good, or buy for another, such as in the case of children's articles, it is the most important part of the company's population (page 54). Barquero (2007) mentions that the word client comes from ancient Greek and refers to the person who depends on. Customers are those people who have a certain need for a product or service that my company can satisfy.

Kotler (2003) mentions some recommendations about what is most valuable in any company.The products come and go. The challenge for companies is focused on making their customers last longer than their products. They have to consider more the concepts life cycle of the market and life cycle of the client instead of the product life cycle concept. Companies must consider their clients as an asset that must be managed like any other asset of the company. If they do not lend attention to their customers, some other company will do it (pages 8-9).

C. Customer service

Customer service considers it as all the activities that unite an organization with its clients (Inches, 1983, page 4). In this definition, it is emphasized that customer service is a range of activities that together create a relationship. It can also be considered as the secondary activities carried out by a company to optimize the satisfaction that the client receives from its main activities.

The customer service can be broken down into three phases: pre-sale, sale and after-sales. Studying and defining each one of them allows to identify the orientation that the activities should have at each moment of the consumer's buying cycle (Herrera, 2005, page 2). According to the author, the pre-sale customer service consists in offering the potential customer the products he wants, the best qualities, the most pleasant and clear presentation and the best possible price. The activity in the sale stage is based on providing all possible information about the product sold, way of use, medium for support and maintenance or other aspects such as the delivery mode of the product. In post-sales, itconcentrates on the application of actions to allow the customer to be satisfied with the product, even better proud of its purchase, motivated to buy back, enabled to make easily any guarantee, exchange by default and find the precise technical support.

D. Customer service

Let's start by defining what is the attention to easily understand what customer service is.

Attention: Kahmeman (1973) explains that the concept of attention implies the existence of a control by the organism, of the choice of the stimuli that, in turn, will control its conduit, being the attention something more than a mere selection, which is also related to quantity or intensity. The author considers that both the voluntary and the involuntary selection must take into account the intensive aspects of care (page 2). Prieto (2001) mentions that customer service is the set of activities developed by market-oriented organizations, aimed at identifying the needs of customers in the purchase to satisfy them, thus achieving to meet their expectations, and therefore, create or increase the satisfaction of our customers (page 168).

To carry out a successful customer service policy, the company must have sources of information about a target market and the behavior of its consumers. The fact of knowing the origins and needs of these expectations will, subsequently, convert them into demand. To determine this, periodic surveys should be conducted to identify the possible services that will be offered and determine the strategies and techniques that may be used. Customer service is the set of benefits that the customer expects as a result of the image, price and reputation of the product or service it receives (Prieto, 2007, page 232).

E. Theory of motivation-hygiene by Frederick Herzberg

The psychologist Frederick Herzberg proposed the theory of motivation-hygiene. In the belief that the relationship of an individual with his work is basic, and that his attitude towards this work may well determine the success or failure of the individual, Herzberg investigated the question What do people want from their position? He asked people to describe in detail situations where he felt exceptionally well and badly in his position.According to Herzberg, the factors that lead to job satisfaction are separate and distinct from those that lead to job dissatisfaction. Therefore, administrators who seek to eliminate factors that create dissatisfaction in the position can bring peace, but not necessarily motivation. They will be appeasing their work force, instead of motivating it.

As a result, Herzberg has indicated that characteristics such as company policies and administration, supervision, interpersonal relationships, working conditions and salaries can be conceptualized as hygiene factors. When they are adequate, people will not be dissatisfied; however, neither will be satisfied. If wanted to motivate people in their position, Herzberg suggests emphasizing achievements, recognition, work itself, responsibility and growth (Herzberg, 1968).

F. The classical theory of administration Henry Fayol

His studies covered all areas of the company, since it was very important for Fayol both to sell and produce, to finance himself and to secure the assets of a company. In short, the organization and its components were considered as a large interdependent system, as internal customers.Fayol, in his functional and systemic analysis of the organizations, found certain operations that were repeated in any type of companies, which were necessary for the achievement of their objectives.

Later, this study translated into a deeper analysis regarding the division of labor within current organizations. For Fayol, administration is a common activity for any type of business, for-profit and non-profit organizations, political, sports, religious or entertainment organizations, etc., and it plays a very important role in society. Every company needs to apply a methodology in its actions, and the administrative process is undoubtedly that methodology that is required for the solution of the problems that arise in any organization (Fayol, 1976).

G. The theory x and the theory and of Douglas Murray Mcgregor

The theory X is based on the old model of threats and the presumption of mediocrity of the masses. It is assumed that individuals have a natural tendency to leisure and that work is a form of punishment, which presents two urgent needs for the organization: supervision and motivation. (McGregor, 1960).The managers of Theory Y consider that their subordinates find in their employment a source of satisfaction and that they will always strive to achieve the best results for the organization, thus, companies must release the skills of their workers in favor of said results.

The theory that has relation with the investigation is the classic theory of the Administration Henry Fayol, since it deepened in the excellence of the companies generating utilities to the company, as well as the creation of tools or processes to carry out the correct function of the company (McGregor, 1960).

Table 3. Theories of customer service.

Theory	Author	Principles
Theory of Motivation Hygiene by Frederick Herzberg	Frederick Herzberg	In the belief that the relationship of an individual with his work is basic, and that his attitude towards this work may well determine the success or failure of the individual, Herzberg has indicated that characteristics such as the policies and the administration of the company, the supervision, the interpersonal relations, the working conditions and the salaries can be conceptualized as factors of hygiene. When they are adequate, people will not be dissatisfied; however, neither will be satisfied (Herzberg, 1968).
Classic Theory of Administration	Henry Fayol	For Fayol, it was very important to sell and produce, to finance and to secure the assets of a company. In short, the organization and its components were considered as a large interdependent system, as internal customers. Every company needs to apply a methodology in its actions, and the administrative process is undoubtedly that methodology that is required for the solution of the problems that arise in any organization (Fayol, 1976).
The theory x and the theory Y	Douglas M urray Mcgregor	Theory X: It is based on the old model of threats and the presumption of mediocrity of the masses. It is assumed that individuals have a natural tendency to leisure and that work is a form of punishment. (McGregor, 1960, pp. 133 -144), Theory Y: Conside rs that their subordinates find in their employment a source of satisfaction and that they will always strive to achieve the best results for the organization, thus, companies must release the skills of its workers in favor of these results (McGregor, 1960 , page 22).

Source: Own elaboration.

The theories pertaining to the variable customer care are described below.

H. Theory of Taylor administration

Before Taylor's proposals, workers were responsible for planning and executing their work. They were entrusted with production and were given the freedom to carry out their tasks in the way they believed was correct. The author describes it this way: managers and workshop leaders know better than anyone that their own knowledge and personal skills are far below the combined knowledge and skill of all the men under their command. Therefore, even managers with more experience leave their workers the problem of selecting the best and most economical way of doing the job. Hence, its principles seen in their historical perspective, represented a great advance and a new approach, a tremendous innovation in front of the system (Taylor, 1973).

I. The theory of the two factors of job satisfaction

The theory of the two factors was formulated by Herzberg in the field of job satisfaction. According to this well-known theory, there are factors that determine job satisfaction and other very different factors that determine job dissatisfaction. The hygienic factors, production, dissatisfaction if its level is insufficient, but will not produce satisfaction if its level is sufficient. On the contrary, the growth factors will generate satisfaction when their level is sufficient, but they do not generate dissatisfaction when their level is insufficient.

In this sense, satisfaction and dissatisfaction would not be polar opposites of the same continuum, as maintained by the traditional theory, according to which any factor can produce satisfaction or dissatisfaction depending on the level it reaches

and the importance it has for each person, but there would be a double continuum in which the opposite of dissatisfaction would not be satisfaction, but the absence of dissatisfaction, and the opposite of satisfaction would not be dissatisfaction, but the absence of satisfaction.

Table 4. Review of customer service theories

Theory	Author	Principles
Theory of Administration	Frederick Taylor	His main contribution was to demonstrate that the scientific Administration is not a group of efficiency techniques or incentives but a philos ophy by virtue of which the management recognizes that its objective is to scientifically seek the best methods of work through of entertainment and times and movements (Taylor, 1973).
Theory of the twofactors of the satisfaction in the job	Frederick Herzberg	There are some factors that determine thejob satisfaction and other factors very different that determine the labor dissatisfaction (Herzberg, 1968, p. 103 -106). The hygienic factors, production, dissatisfaction if your level is insufficient, but they will not produce satisfaction if their level is enough. On the contrary, growth factors will generate satisfaction when your level is enough, but they do not generate dissatisfaction when your level is insufficient (Herzberg, 1968).

Source: Own elaboration

Empirical literature review

Table 5. Empirical review of the service literature and customer service

Authors (Year)	Research tittle	Context	Method or instrument used	Results and findings
(Fonseca, 2008)	Improvement proposal for the custome r service of the Unipharm group in Bogotá.	It proposes the design of an improvement proposal in the customer service of the company Grupo Unipharm Bogotá based on a prior evaluation of the same. This evaluation is carried out in order to establish satisfaction levels, the quality of the service and the general perception of the current clients of the company.	A semi -structured survey whose purpose is to measure the satisfaction of the external client by means of closed questions that allow to establish the needs and expectations and satisfaction indexes.	The evaluation indicators related to the attitudes of employees at a general level are located at a good level of satisfaction, however they are perceived. Acceptable levels in the availability and qua lity of information.
(Pinzón, 2015)	Quality of service and value in intermodal freight transport.	The service environment in which this work focuses is the logistics sector, and more specifically freight transport services The interest in this doctoral thesis for the study of service variables in this specific sector has its origin in the same motivation from which the PREVITRANS project arose, project in which this research is framed	The questionnaire was designed and elaborated. First, a description of the structure is presented of the questionnaire that allows to identify which will be the main blocks. Second, the authors deepened the literature review of measurement scales and defined the sets of specific indicators for each of the constructs that should be evaluated.	The different approaches to the academic study of both the transport of goods by road and the maritime. From a marketing perspective, they converge in the interest to explain how the relationships between loader companies and providers of logistics services or specifically transport work, emphasizing the key elements that allow to succeed in said relations.

Source: Own elaboration

Contextual framework

The National Institute of Statistics and Geography (INEGI 2015) indicates the following within the framework of the presentation of the National Statistical Directory of Economic Units (DENUE), it announced that there are 4 million 926 1,161 of companies in Mexico. These economic units represent 87 percent of all those reported in the 2014 INEGI Economic Census. The institute indicated that 2 million 825 thousand 272 companies were already registered in the previous version of the DENUE, while 2 million 100 thousand 789 of remaining businesses were incorporated in this version.On the other hand, of the 4 million 410 thousand 199 economic units that were registered in the Interactive DENUE 10/2013, a total of one million 584 thousand 927 businesses were closed, which closed or suspended activities.

According to this report, the estimation, although preliminary, corresponds to an analysis of the general situation of all the companies, since the life expectancy of a business varies depending on the turn and its size. It is important to note that the report revealed that Mexican companies have an average life of 7.7 years, this according to INEGI estimates and their economic censuses taken every 5 years.

The new directory can be consulted through a mobile application, which shows all the information of the economic units registered on top of the geographic and demographic maps found on the agency's portal. Below is a graph in which it can be seen the life expectancy of companies in Mexico in its 100 main municipalities.

Life expectancy at birth of business in the 100 main municipalities

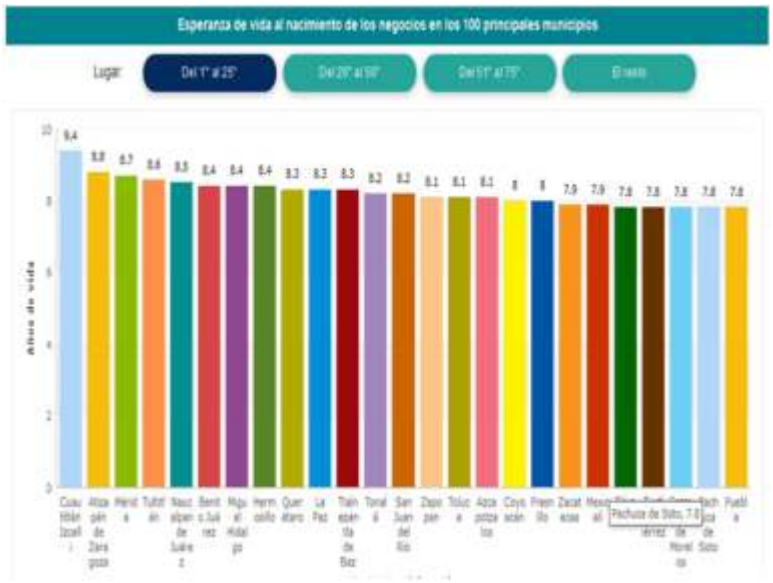

Figure 2. Life expectancy of companies in Mexico.
Source: INEGI. (2017) Economic Censuses 1989, 1994, 1999, 2004, 2009 and 2014.

To have a clearer idea of this research, the following tables are presented by sector.

Table 5. Food sector

Position	Business
1	Grupo Bimbo
2	Nestlé
3	Grupo Herdez
4	Kellogg's
5	Bachoco
6	La Costeña
7	Gruma
8	Mondélez
9	Ferrero de México
10	GrupoBafar

Source. Own elaboration.

Table 6. Insurance sector

Position	Business
1	Metlife
2	Mapfre
3	Allianz
4	Axa
5	Qualitas
6	Zurich

Source. Own elaboration.

Table 7: Automovil sector.

Position	Business
1	General Motors
2	BMW
3	Nissan
4	Ford Motor Company
5	Volkswagen
6	Honda
7	Toyota
8	FCA
9	Mercedes Benz
10	Mazda

Source: Own elaboration.

Table 8. Autoservices and departmental services

Position	Business
1	Liverpool
2	Walmart
3	Marti
4	Comercial Mexicana
5	Soriana
6	Coppel
7	Chedrahui
8	Grupo Famsa
9	Costco

Source: Own elaboration.

As shown above, the most important companies in Mexico in their different segments are listed.

Research method

A. Kind of investigation

This research is analytical and descriptive, because it contains the main concepts about the research, as well as the main authors and creators of the same. It is descriptive because in the research there are tables that help to explain in a certain simpler wayfor the correct compression and differentiation of these concepts.

B. Design of the investigation

Table 9. Description of the variables, dimensions, indicators, instrument operationalization of variables and statistical analysis of research.

Variables	Description	Dimensions	Indicators	Instrument	Operationalization of variables	Statistical analysis
X0	That activity of interrelation offered by a supplier with the purpose that a client get a product or service, both at the time and in the precise place and where it is ensured a correct use of it (Agudelo, 2013, p. 17 - 22).	Company Client Survive attitude	Customer retention Buyer satisfaction Customer loyalty Customer rating Accessible simple	Descriptive bibliographical analysis	Information is collected from expert authors, internationally recognized. To contrast with the variable.	Tables Bar graphs

Source: Own elaboration.

C. Analysis of data

This research is analytical and descriptive, because it contains the main concepts about research, as well as the main authors and creators of the same. It is descriptive because in the research there are tables thatthey help to explain in a simpler and simple way for their correct and easy understanding of these concepts, as well as the differentiation between them.

Analysis of results

A. Testing hypothesis and results

The hypothesis of this research is that customer service has an impact or direct relationship with customer care. At first glance, it could be said that the definition of both concepts is similar, but in this research it shows that this is not the case, since there is a small difference between these concepts. The main difference is that many times a service is provided by a system or a company, and attention is given by a human being, and when these are combined in an appropriate manner, the hypothesis of this work is verified, that customer service has an impact on customer care.

B. Contrasting of hypothesis

This research corroborates what Hair (2002) mentions that a service is the result of the application of human or mechanical efforts to people or objects. Services refer to a fact, performance or effort that is not physically possible (page 344). Being in this way that the service can be manipulated by the attention that a human being uses on the service rendered, giving it a "plus" making the service better than it already is, or simply improving it.

C. Findings

The findings of this research is that you can verify that there is a noticeable difference between the variables, and with this that employers can understand the difference of these two important concepts, so they can apply them correctly to obtain customer loyalty, since it is easier to retain a client than to attract a new one.

D. Contributions

This research provides small and medium entrepreneurs with knowledge of vital importance for their organizations, since this work understands the importance and difference between a service and attention, and once understood that can better train their staff to obtain better results in their companies.

E. Implications

This research is mainly aimed at small and medium-sized Mexican entrepreneurs. These are abundant in Mexico because they do not care much if their clients are satisfied with the services and attention provided by their part of their staff, and with this research it can be understood the importance and the difference that exists between both.

Conclusions and recommendations

Within this research it is important to point out that the personnel of each company must be prepared and psychologically trained to be able to perform the position in which they are working, since with that they will be able to perform their work better. Consequently, the employee unconsciously gives a good service, followed by good customer care, since today's companies must pay more attention to how they provide their services, using the marketing techniques and strategies necessary to implement these changes.

In addition to that, the business competitiveness of today is very big. That is why these entrepreneurs must implement new strategies, starting with better training their staff, and investing in marketing strategies that exist some very economic, such as having a presence on social networks, or have certain promotions to better retain their customers.

The recommendations of this research are that some service companies do not give due importance to the difference between both variables, and it should be noted that they take it as if they were the same, which was found in this research that there is a difference.

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Impact of Transportation Sector on Economic Development

Loveleen Gupta*

Abstract

Economic development in an economy usually defined as theadoption of new technologies, thetransition from agriculture-based to theindustry-based economy, and improvement in the living standard of people.Transport influence economic development through two channels-direct and indirect effects. The direct effect of transportation on economic development is its contribution to Gross Domestic Product (GDP) by granting easier access to inputs by economising their cost. The indirect effect of transportation works through additional inputs to other sectors. It contributes to economic development by increasing productivity and by providing amenities that enhance the quality of life, and the life wire of any society.

JEL Classification: *L9, O1*

Introduction

Introduction

Economic development in an economy usually defined as the adoption of new technologies, the transition from agriculture-based to the industry-based economy, and improvement in the living standard of people. It is broadly defined as improving the welfare of a society through appropriate political, social and economic conditions. The expected results are quantitative and qualitative improvements in human capital (e.g. income, health and education levels) as well as physical capital such as infrastructures (utilities, transport, telecommunications). In the previous decades, much of the focus of development policies were on physical capital but as time passes away there has been a better balance by including human capital.The physical and human capital is indispensable for development as infrastructure cannot remain effective without proper maintenance and economic activities would not materialize without an infrastructure base.

A well-coordinated system of transport plays an important role in the sustained economic development of a country because of intensive use of infrastructure. It is defined as a means of carrying goods and people from one place to another. It also refers to the activity that facilitates physical movement of goods as well as individuals from one location to another.Transport influence economic development through two channels-direct and indirect effects. The direct effect of transportation on economic development is its contribution to Gross Domestic Product(GDP) by granting easier access to inputs by economising their cost. The indirect effect of transportation works through additional inputs to other sectors. It contributes to economic development by increasing productivity and by providing amenities that enhance the quality of life, and the life wire of any society (Ellis et al, 2012; Somuyiwa, et al, 2011; Olukoju, 1996; Olanrewaju and Falola, 1986). On the other hand, it contributes to the concentration of production which results in economies of scale and access to specialized inputs. It also has a strong complementarity with physical and human capital.

India is a fastest growing economy in a world and an efficient transport system is indispensable for its development. A well-connected transport system helps in promoting national and global integration by removing distance barriers. It increases productivity on one hand and also enhances the competitiveness of the economy on the other hand. A proper and sustainable transportation sector would play a key role to fast-track India's development and economic growth (Railway Minister Suresh Prabhu).Transportation in India has recorded a substantial growth over the years both in thespread of network and in theoutput of the system. India's transport sector is large and diverse; it caters to the needs of 1.1 billion people. It contributes about 5% of India's GDP.The present transport system of India comprises several modes of transport including railway with functional railway lines, good road network, coastal shipping with awell-dredged water channel, air

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transport with standard aviation facilities, etc.The transport sector accounts for a share of 4.99 percent in India's Gross Value Added (GVA). The composition of various sub-sectors of the transport sector in terms of GVA is given in Table 1.

Table1: Percentage Share of Different Modes of Transport in Gross Value Added (GVA)

Sector/Year	2011-2012	2012-13	2013-14	2014-15
Transport Sector	**4.92**	**5.02**	**5.01**	**4.99**
of which:				
Railways	**0.75**	**0.81**	**0.80**	**0.81**
Road Transport	**3.24**	**3.30**	**3.30**	**3.28**
Water Transport	**0.09**	**0.08**	**0.08**	**0.08**
Air Transport	**0.05**	**0.05**	**0.05**	**0.05**
Services Incidental to Transport	**0.78**	**0.78**	**0.77**	**0.77**

Source: Central Statistical Organization

In table 1, we can see that the share of thetransport sector in GVA of India has increased from 4.92% in 2011-12 to 4.99% in 2014-15. However, road transport has emerged as the dominant contributor in India's transportation sector with a share of 3.28 percent in India's GVA in comparison to railways that has a mere 0.81 percent share of GVA in 2014-15 as per the revised data on National Accounts released by the Central Statistical Organisation (CSO). It may be noted that the entire increase in percentage share of transport in GVA since 2011-2012 has come from road transport sector only.While during this period the contribution of railways in GVA has shown a slight increase from 0.75% in 2011-12 to 0.81% in 2014-15.On the other hand, the contribution of airways in GVA is constant at 0.5% during 2011-12 to 2014-15.

Literature Review

Canning and Fay (1993) studied the effect of transportation network on economic growth using panel data. They have estimated the marginal product of transport infrastructure for 96 countries and also calculated rates of return to road building. The outcome shows that transportation infrastructure appears to have "normal" rates of return in developed countries, extraordinarily high rates of return in industrializing countries, and moderate rates of return in underdeveloped countries. In addition, the study revealed that the effect of infrastructure is slow to occur but long-lived. This implies that an increase in infrastructure has alittle short-run impact on output but leads to a higher growth rate and higher output in the long run.

Pradhan and Bagchi (2013) studied the effect of transportation (road and rail) infrastructure on economic growth in India spanning the period 1970-2010 using Vector Error Correction Model (VECM). The study revealed the bidirectional causality between road transportation and economic growth. In addition, it alsofinds bidirectionalcausality between road transportation and capital formation, bidirectional causality between thegrossdomestic capital formation and economic growth, unidirectional causality from rail transportation toeconomic growth and unidirectional causality from rail transportation to thegross capital formation. The outcome suggests that expansion of transport infrastructure (both road and rail) along with gross capitalformation will lead to substantial growth of the Indian economy. Therefore, within its stated scope, thisstudy suggests that a suitable transport policy should be retained to boost transportation infrastructureand hence sustainable economic growth in India.

Pradhan. Norman, Bele,andSamadha (2013) examined the long-run relationship between transport infrastructure (TRA), foreign direct investment (FD) and economic growth (GDP) in India using autoregressive distributed lag (ARDL) and vector error-correction model (VECM). The study revealed that transport infrastructure is cointegrated with foreign direct investment and economic growth, indicating the affirmed presence of long-run equilibrium relationships among them. The causality test further confirms the presence of bidirectional causality between TRA and FDI, TRA and GDP and FDI and GDP. This implies that if India needs to generate additional foreign direct investment and economic growth, fostering transport infrastructure development is urgently required as a condition

precedent to faster economic growth. In addition, bringing more FDI to the country can also foster transport infrastructure development and higher economic growth. Similarly, maintaining high economic growth can accelerate both FDI inflows and rapid transport infrastructure development in India.

Alder (2013) used a general equilibrium framework as in Eaton and Kortum (2002) to estimatethe contribution of transport infrastructure to regional development in India. The study analyzed the development effects of a recent Indian highway project that improved connections between the four largest economic centers. They estimated the effect of this new infrastructure on income across districts using satellite data on night lights. The results showed the aggregatenet gains from the Indian highway project, but unequal effects across regions. In addition, the study Chinahas followed a different highway construction strategy and has experienced more significant convergence across regions than India.

Egertet all (2009) empiricallyexamined the link between infrastructure and growth and the role of public policies using time series analysis. The study revealsa positive impact of infrastructure investment on growth which varies across countries and sectors and over time. In addition, the study also showed that infrastructure investment in telecommunications and the electricity sectors has a robust positive effect on long-term growth (but not in railways and road networks).

Keho (2011) examined the temporal relationship between transport infrastructure investment and output in Côte d'Ivoire using cointegration and causality tests within a multivariate framework over the period 1970-2002. The study reveals that the public investment in transport infrastructure, private investment,and economic output are cointegrated. In addition, the Granger causality tests reveal that public investment in transport does not have a causal impact on economic growth; conversely, economic growth has a causalimpact on transport investment.

Calderon and Serven (2003) empirically examined the impact of infrastructure development on economic growth and income distribution using a large panel data set encompassing over 100 countries and spanning the years 1960-2000. The study reveals that (i) growth is positively affected by the stock of infrastructure assets, and (ii) income inequality declines with higher infrastructure quantity and quality. A variety of specification tests suggest that these results do capture the causal impact of the exogenous component of infrastructure quantity and quality on growth and inequality.

Esfahaniand Ramirej (1999) developed a structural model of infrastructure and output growth that specifies the ways inwhich country characteristics and policies enter the infrastructure-GDP interactions and lead toheterogeneity of steady states and convergence rates across countries and over time. We show that themodel can be specified as an identifiable recursive system. Cross-country estimates of the model indicatethat the contribution of infrastructure services to GDP is substantial and in general exceeds the cost ofprovision of those services. By searching for the variables that account for the heterogeneity, we drawattention to the mechanisms through which various factors influence growth. The findings also shed lighton the factors that shape a country's response to its infrastructure needs and offer policy implications forfacilitating the removal of infrastructure inadequacies. Although lack of data limits the level of detail inwhich one can identify such variables, we find a number of relevant and important factors and show thatthe institutional context in which economic policies form plays an important role in infrastructuredevelopment.

Data Methodology

Transportation in India has recorded a substantial growth over the years both in thespread of network and in theoutput of the system. India's transport sector is large and diverse. The present transport system of India comprises several modes of transport including railway with functional railway lines, good road network, coastal shipping with awell-dredged water channel, air transport with standard aviation facilities, etc.

Roads

India has the second largest road network in the world with about 52.32 lakh km of road network comprising National Highways, State Highways,and other roads, The National Highways (NH) in the country covers a total length of 1,00,475 km and carry about 40 percent of the road traffic.

Table 2: Operations of Road Transport			
Items	**1950-51**	**2014-15**	**% Variation**
(1)	(2)	(3)	(4)
1. Length of Roads(000's Km.)			
Total	399.9	5472.1	1268.37%
Surfaced	157.0	3341	2028.03%
2. Length of National Highways (000's Km.)			
Total	22.2	98	341.44%
Surfaced	19.8	98	394.95%
3. No. of Registered Vehicles(Thousand)			
All vehicles	306	210023	68534.97%
Goods vehicles	82	9344	11295.12%
Buses	34	1971	5697.06%
4. Revenue realized from Road Transport (Rs. Crore)			
Central	34.8	109941	315822.41%
States	12.6	63064.9	500415.08%
Sources: Ministry of Road Transport & Highways			

As of May 2014, India had completed and placed in use over 22,600 kilometers of recently built 4 or 6-lane highways connecting most of its major manufacturing, commercial and cultural centers.India's road infrastructure carries 60% of freight and 87% of passenger traffic.

In the last 64 years while the length of roads has grown by 1268.37 %, national highways by 341.44, number of registered vehicles 68534.97%, revenue realized by road transport central315822.41% and revenue realized by road transport state by 500415.08%. The Road Transport Sector has grown significantly during the past five decades.It has deep linkages with the rest of the economy and a strong multiplier effect.

Railways

Indian Railways is the third largest rail network in the world with a track length of 114,500 kilometers, 7500 stations, 9549 locomotives, 55339 passenger coaches, 239,321 freight cars, 64600 route kilometers. It is fully owned by the government.

The Indian railway network carries an average of 23 million passengers a day and over a billion tonnes of freight a year. During 2015-16 (up to November) IR carried 720.17 million tonnes of revenue earning freight traffic, as against a budget target of 775.77 million tonnes. This was up from the 711.19 million tonnes of freight carried during 2014-15 (up to November) by 8.98 million tonnes or 1.26 percent.

Table 3: Operations of Indian Railways			
Items	**1950-51**	**2015-16**	**% Variation**
(1)	(2)	(3)	(4)
1. Route Kilometres (000's)			
Electrified	400	23600	5800%
Total	53600	66700	24.44%
2. Originating traffic (million tonnes)			
Revenue Earning	73.2	1101.5	1404.78%
Total Traffic	93.0	1108.6	1092.04%
3. Goods carried (billion tonne-km.)			
Revenue Earning	37.6	654.5	1640.69%
Total Traffic	44.1	655.6	1386.62%
4. Earnings from goods carried (Rs. Crores)	139.3	106940.6	76669.99%
5. Average Lead: all goods traffic (Km)	470	591	25.74%
6. Average rate/tonne km. (paise)	3.2	163.4	5006.25%
7. Passengers Originating (million)	1284	8107.3	531.41%
8. Passengers kilometres (billion)	66.5	1143	1618.80%
9. Passengers Earnings (Rs. Crores)	98.2	44283.3	44995.01%
10. Average lead : passenger traffic (km)	51.8	141	172.20%
11. Average rate per passenger - kilometre (paise)	1.5	38.7	2480%

In the last 64 years, while route kilometers has grown by 24.44%, goods carried1386.62%, passenger kilometers1618.80% and passenger earnings by 44995.01%.

Table 4: Trends in Rail-Road Modes in Freight & Passenger Traffic				
Year	Goods(BillionTonne KM)		Passenger(Billion Passenger KM)	
	Road	Railways**	Road	Railways**
1950-51	6.0*(13.8)	37.6(86.2)	23.0*(15.4)	66.5 (84.6)
1960-61	14.0(16.2)	72.3(83.8)	80.9(51.0)	77.7(49.0)
1970-71	47.7(30.1)	110.7(69.9)	210.0(64.0)	118.1(36.0)
1980-81	90.9(38.1)	147.7(61.9)	541.8(72.2)	208.6(27.8)
1990-91	145.1(38.1)	235.8(61.9)	767.7(72.2)	295.6(27.8)
1999-2000	467.0(60.5)	305.2(39.5)	1831.6(81.0)	430.7(19.0)
2000-01	494(61.3)	312.4(38.7)	2075.5(82.0)	457.0(18.0)
2001-02	515(60.7)	333.2(39.3)	2413.1(83.1)	490.9(16.9)
2002-03	545(60.7)	353.2(39.3)	2814.7(84.5)	515.0(15.5)
2003-04	595(61.0)	381.2(39.0)	3070.2(85.0)	541.2(15.0)
2004-05(P)	646(61.3)	407.4(38.7)	3469.3(87.1)	515.7(12.9)

Figures in parentheses indicate percentage of modal share (P) - Provisional

Note :

1. Figures for Road Transport from 1960-61 to 1990-91 are estimated based on percentage share of Road Transport and Railways gave in the Working Group Report on Road Transpo rt, Tenth Five Year Plan 2002-07

2. Figures for Road Transport from 1999 -2000 to 2000-01 have been estimated by Transport Research Wing, Ministry of Shipping, Road Transport & Highways, Government of India

3. Figures for Road Transport from 2001-02 to 2004-05 have been estimated by the Sub Group

*Source : * Tenth Plan Document*

*** Data on rail freight traffic from Ministry of Railways*

Rail and road dominate, carrying about 87 percent of the total freight traffic in the country in 2007-08.

Airways

Indian Airways is the ninth largest civil aviation market in the world. The airport infrastructure of India includes 125 airports, of which 66 airports are licensed to handle both passengers and logistics. The annual growth in domestic passenger traffic from 1960-61 to 1985-86 was around 10 percent per annum. The number of scheduled aircraft departures per day for domestic and international segments has increased from 503 and 79 respectively in 2001-02 to 1,538 and 236 in 2012. In 2001-02, there were only five Indian airlines in operation with 132 aircraft.

The similar expansion has been witnessed in airport infrastructure; the number of operational airports increased from 50 in 2000 to 84 in 2012.

Table 5: Growth of Civil Aviation								
	1960-61	1970-71	1980-81	1990-91	1999-00	2010-11	2015-16	2016-17(P)
1	2	3	4	5	6	7	8	9
1. Total fleet strenght (Number)	101	84	63	80	119	340	448	
2. Revenue tonne -Kilometers (Million)	191.8	477.3	1380.4	2040.3	2767.4	10764.1	272023	290709
3. Number of passengers carried (Lakh)	9.2	26.2	68.5	100.3	295.6	670	1038.2	1245.7
4. Passengers handled at Indian Airports(Lakh)			107.38	177.23	390.35	1434.3	2239.5	2649.6
5. Cargo handled at Indian Airports (Thousand Tonnes)	na	na	178.7	377.33	797.41	2348.9	2704.5	2978.3

The percentage of domestic passengers to the total passenger throughput has gone up from about 67 percent in 2000-01 to about 75 percent in 2011-12, implying faster growth of domestic compared to international passenger throughput.

Waterways

India is the sixteenth largest maritime country in the world with 12 major and 200 notified minor, intermediate ports and coastline of about 7,517 km. According to the Ministry of Shipping, around 95 percent of India's trading by volume and 70 percent by value is done through thesea.

Table 6: Growth of Indian Shipping

Items	1951	2014	% Variation
(1)	(2)	(3)	(4)
1. Coastal(000's GRT.)			
No. of Vessels	79	846	970.89
GRT	217	1218	461.29
Average GRT	2.7	1.4	48.15
2. Overseas(000's GRT.)			
No. of Vessels	24	358	1391.67
GRT	174	9090	5124.14
Average GRT	7.2	25	247.22
3. Total(000's GRT.)			
No. of Vessels	103	1204	1068.93
GRT	391	10309	2536.57
Average GRT	3.8	8.6	126.32

It has Cargo traffic, which recorded 1,052 Million Metric Tonnes (MMT) in 2015, is expected to reach 1,758 MMT by 2017. The Indian ports play a vital role in supporting growth in the country's trade and commerce. The government of India has played a vital role in supporting the ports and shipping sector. They have allowed Foreign Direct Investment (FDI) of up to 100 percent under the automatic route for port and harbor construction and maintenance projects. They have also facilitated a 10-year tax holiday to enterprises that develop, maintain and operate ports, inland waterways,and inland ports.

Conclusion

India is a fastest growing economy in a world and an efficient transport system is indispensable for its development. A well-connected transport system helps in promoting national and global integration by removing distance barriers. It increases productivity on one hand and also enhances the competitiveness of the economy on the other hand. A proper and sustainable transportation sector would play a key role to fast-track India's development and economic growth. Transport influence economic development through two channels-direct and indirect effects. The direct effect of transportation on economic development is its contribution to Gross Domestic Product (GDP) by granting easier access to inputs by economising their cost. The indirect effect of transportation works through additional inputs to other sectors. It contributes to economic development by increasing productivity and by providing amenities that enhance the quality of life, and the life wire of any society.

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Ethical Issues- Linkage With Economic Degradation

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Abstract

Human action is rarely straightforward at any point of time. It influences several altitudes and affect our behavior. Several ethical situations that we encounter each day that we should care and some unethical actions can violate law. Ethics is the practice of making principled or decent choices. It is the practice of making an honorable choice between right and wrong. English writer Joan Keets says "making a mistake is human but forgiving it is divine" Ethical principles are ideas of behavior that are commonly acceptable to society. Sanskirt Subhashita says "Food, sex and sleep is common to all animals but when you think beyond the three, you will become god". Ethical issue is concerned with other people's interests or with the economic interests of society. Vedaas says "maa himsaa sarva bhutaani, "which means "we should not disturb others and see god on all animals. "Treat others beyond they would treat you" is a fundamental principle of human ethics that can be found in many of the world's greatest religions. Once Swami Vivekaananda has said "Education without ethics and values is called rakshasas (giants'/ demons) and education with ethics and values is called sakshasas(gods/divines) Promote ecological ethics as integral to social ethics and vice-versa. Environmental ethics has too, long been focused solely on the ethics of human behavior toward the non-human world. Likewise, socio-economic ethics have rarely incorporated a consideration of human moral duties and responsibilities toward the natural world. Once Albert Einstein said : 'I do not know the effects of third world war, but in the fourth world war people fight with stones and arrows like a tradition society' which is the impact of Socio-Economic Degradation and some unethical educated society. Until and unless we remember the contributions of our ancestors or forebears, we cannot give anything to our next generations. In this connection Albert Einstein once said "when all human efforts ends philosophy begins, or science ends in philosophy." So let us all noble people support to save the earth for the next generation, and let us not give the room/scope to ask the revert questions.

Key words: *Socio-Economic Degradation, Environmental ethics, unethical actions etc*

Introduction

Human action is rarely straightforward at any point of time. It influences several altitudes and affect our behavior. Several ethical situations that we encounter each day that we should care and some unethical actions can violate law. Ethics is the practice of making principled or decent choices. It is the practice of making an honorable choice between right and wrong. English writer Joan Keets says "making a mistake is human but forgiving it is divine" Ethical principles are ideas of behavior that are commonly acceptable to society. Sanskirt Subhashita says "Food, sex and sleep is common to all animals but when you think beyond the three, you will become god". Ethical issue is concerned with other people's interests or with the economic interests of society. Vedaas says "maa himsaa sarva bhutaani, "which means "we should not disturb others and see god on all animals. When a law tells us neither to do nor not to do something, it implies that, a recognized authority has decided that the action is to benefit to society. So when a person 'thinks ethically' they are giving at least some thought to something beyond their limitations. "Treat others beyond they would treat you" is a fundamental principle of human ethics that can be found in many of the world's greatest religions. Values and ethics are inner-most/ vital to any organization/society. Both are extremely broad terms. We need to focus on Values and ethics for the strategic leaderships and for noble decisions in a healthy society and especially with special reference to socio-economic as well as environmental degradation. Once Swami Vivekaananda has said "Education without ethics and values is called rakshasas (giants'/ demons) and education with ethics and values is called sakshasas(gods/divines) Promote ecological ethics as integral to social ethics and vice-versa. Environmental ethics has too, long been focused solely on the ethics of human behavior toward the non-human world. Likewise, socio-

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economic ethics have rarely incorporated a consideration of human moral duties and responsibilities toward the natural world. These two domains need to be inter_connected, as it has become increasingly evident that the health and functioning of the environment affect the health and functioning of society, and vice versa. Socio-Economic Degradation as well as Environmental quality should be a human right. Once Albert Einstein said : 'I do not know the effects of third world war, but in the fourth world war people fight with stones and arrows like a tradition society' which is the impact of Socio-Economic Degradation and some unethical educated society.

What is Ethics? Oxford American dictionary defines the ethics as: it is concerned with the principles of what is right and wrong in conduct or behavior. A person who knows the difference between right and wrong and chooses right is moral. A person whose morality is reflected in his willingness to do the right thing – even if it is hard or dangerous – is ethical. Ethics are moral values in action. Being ethical id (eed) is an imperative, because morality protects life and respectful of others. Ethical value may be regarded as a study under ethics, which, in turn, may be grouped as philosophy. Similar to that ethics may be regarded as a sub-field of philosophy; ethical value may be regarded as a sub-group of the more broad (and vague) philosophic value. Ethics is about our actions and decisions. When one acts in ways which are consistent with our beliefs (whether secular or derived from a moral authority) we will characterize that as acting ethically. When one's actions are not congruent with our values - our sense of right, good and just - we will view that as acting unethically. Ethics tend to be codified into a formal system or set of rules which are explicitly adopted by a group of people. Thus you have medical ethics. Ethics are thus internally defined and adopted, whilst morals tend to be externally imposed on other people. Ethics describes a generally accepted set of moral principles: a moral describes the goodness or badness or right or wrong of actions: values describe individual or personal standards of what is valuable or important. Organizational behaviour thought asserts that values ultimately drive our behaviour. Loyalty to the Nation, to the Army, and to the unit is essential. The Army had the theme of "values," and listed four organizational values-loyalties, duty, selfless service, and integrity-and four individual values-commitment, competence, candor /honesty, and courage. Selfless service puts the welfare of the Nation and the accomplishment of the assigned mission before individual welfare. After all, Values, morals and ethics all provide behavioral rules.

Ethics and Values Drive Behaviour: - A well-used maxim (saying) In a nutshell, "values exert influence over our attitudes, and attitudes influence our behaviour". Values are integral to attitude formation and to how we respond to people and situations. Extensive literature exists, dealing with how values relate to effective managerial leadership. A prerequisite to doing the right thing when facing an ethical dilemma knows what to do, knowing the difference between right and wrong. Values influence ethical behaviour and appear to have universal appeal. The capacity to take the ethical path requires a commitment to the value of acting with temperance. Ethical people say "no" to "individual gain" if it is inconsistent with institutional benefit and goodwill. Without this value, one may tend toward egotism. Leaders who are motivated predominately by self-interest and the exercise of personal power have restricted effectiveness and authenticity. Driving ethical behaviour with values and attitudes requires that there be alignment among values, attitudes, and behaviour.

History

Aristotle was one of the first great philosophers to study the subject of ethics. Ethics have helped shape our society. One of the very first laws that were ever to be reported was the Code of Hammurabi, which made bribery as a crime. Ever since then, there have been laws made that have ethical content. Our ancestors realized that young people are the future assets. Another popular youth organization is the Future Farmers of America (FFA) or National FFA Organization. The FFA has been making positive differences in young peoples' lives for over 71 years. Future Farmers of America is educating the students through learning by doing approach is based on sound managerial and ethical practices. In the early 1900's, clubs were organized as boys and girls agricultural clubs, which taught scientific methods in agricultural production (Wessel & Wessel, 1982). Since then, the program has taken great strides towards educating the youth in its program about making ethical decisions and the skills necessary for lifelong learning. 4-H's mission is to develop youth to reach their fullest potential through developing life skills, learning by doing and utilizing the knowledge of the land-grant university system (National 4-H, 2000). 4-H is a youth outreach program by the cooperative extension service. Cooperative extension is an extension of land grant universities.

Following are the cases of Unethical business practices in marketing - Fake Client: It often occurs when a product is released on a website. Usually, people will be attracted by many clients. They can write a comment in the column. Unfortunately, nearly 90 percent are false. Clearly, they have created to assure that this product has been used by many people. If you have a new product, do not ever do this, if you do not want to get a bad reputation. Fake Promises: This is not marketing, but this could

be a scam when a company dealing with the individual. So, do not ever promise anything to the client if you cannot do that.

Propaganda: After all, business is business. However, you cannot do things in certain fraudulent activity. Propaganda is part of a smear campaign is being done to bring down other companies. Typically, this is done in advertising and commercial. **Unethical Practices in Financial Sector -Unsolved Loans:** There are many companies that borrow large amount of money. You need to know that there are some companies who do not want to pay for it. As a result, they are blacklisted by many parties. Bad Contracts: A company has signed a contract. Unfortunately, they do not do all of the deal. This is bad for business. You should be careful and always be alert to it. Unethical accounting practices occur when a company does not follow the rules of generally accepted accounting principles or GAAP. The rules of GAAP are established by the federal government. Examples of not following GAAP include recognizing revenue before a customer takes shipment, not recognizing expenses associated with revenue and not writing down bad inventory. A company can inflate its sales by recording revenue for inventory still in its possession. According to GAAP, a customer must take physical possession of the inventory. A company can still invoice the customer, but it cannot record it as a sale on its profit and loss statement. Similarly, GAAP has rules that pertain to expenses. A company that capitalizes expenses and places them on the balance sheet instead of listing them as an expense is "cooking the books." The telecommunications giant Microwave Communications, Inc. (MCI) unethically recorded its revenue and expenses between 1999 and 2002. The now-defunct public auditor, Arthur Andersen, signed off on MCI's financial statements and committed fraud in the process. A company can also understate its expenses by not writing down bad inventory. Bad inventory is inventory that is no longer saleable or in working condition. An unethical company could avoid writing down the expense to inflate net income and thus financial performance. Financial Planners charging flat value based fees for placing money in funds that have already have fees! If a planner is going to recommend a fund that has fees, they should charge by the hour and not by the value of the investment! Fund fees that rise despite what would be an Economy of Scale that presents itself as more people invest. Any savings related to a lower cost of managing the money goes directly to the fund manager and not shared among share holders of the funds. It hardly seems to be in the client's best interest to fund these lavish lifestyles! $300 billion in "added value" tacked on to the cost of investing by the advisers despite results that mirror the market. Paying penalties to unit is by raising customer's fees, instead of reducing bonuses to those who have caused the penalties. At some point, the Financial Service industry put their needs ahead of their clients. As long as everyone in the industry got rich, we do not care about the impact this "haircut" on the economy cost in terms of jobs, retirement, and the financial security of others in the society. There are many situations where you act without considering if it is ethical or not. For example, you would not think much of someone claiming personal travelling expenses as official travelling expenses to save tax. This was a clear example, where ethical and unethical conduct could be clearly demarcated. However, in practice, the line between ethical and unethical is quite thin.

Most large companies have a code of ethics—a set of general guidelines to encourage employees to behave ethically and responsibly. However, a code of ethics might do more harm than good especially if it lays stringent do's and don'ts. This might give the employees a false notion that anything if it is not specifically forbidden would be acceptable. **Professional's ethical codes of conducts -In addition to the company specific codes of ethics, companies and professionals are also bound by ethical codes of conducts of numerous professional organizations and institutions.** For example, most independent accountants are members of the American Institute of Certified Public Accountants (AICPA) and must abide by the AICPA Code of Professional Conduct. Accountants who are members of the Institute of Management Accountants are bound by the Standards of Ethical Conduct of Management Accountants. Health care industry and the IT industry are bound by industry specific codes of ethics. These codes set minimum standards of conduct for members. Unacceptable actions can result in an individual's expulsion from the organization. In the organizational context, the company found indulging in unethical behavior may be ostracized from the industry and might face loss of reputation. Recent scams, particularly in the accounting industry, might suggest that business and professions are resorting to more unethical conduct in today's age compared to previous decades. However, experts attribute this to new business situations and the resulting problems that are more complex. For example, companies are under tremendous pressure to show good results on a quarterly basis and this might lead to a situation where slight manipulations of financial numbers might seem justifiable.

Individual ethical behavior - Experts also agree that ethical behavior is governed more by the individual rather than the environment. There have been cases where whistleblowers have exposed unethical behavior or violations of the company's code of ethics and brought huge organizations down to their knees. But, these are rare instances. Research shows that whistleblowers are often sacked from their jobs and end in worse conditions than if they had kept quite. Such cases of violations of code of ethics breeds cynicism. It would appear that having no code is better than a written code of ethics. A

company code of ethics is useful only when the company's actions are consistent with it. Only then can it be followed consistently within the company.

Once a code of ethics consistent with the actions of the company is established, it needs to be communicated across the company. Open communication of values and state of company affairs gives employees the perspective they need to take a decision when faced with an ethical question. The code of ethics should be reviewed on a periodic basis to ensure that it deals with current issues facing the employees. Involving the employees in the renewal effort would make the code of ethics more pertinent and powerful.

Do we have a socio-economic welfare? We have enough money for the war/ battle, but do not have any amount for an ethical practice, like to combat hunger, food, shelter, cloth to the people of the world which can be discussed with some statistics:-

Financial Cost of World War II		
1 U.S.	$341 billion in 1945	would cost $3,582,143,803,399.78 in 2005.
2 Germany	$272 billion in 1945	would cost $2,857,311,186,289.56 in 2005.
3 Soviet Union	$192 billion in 1945	would cost $2,016,925,543,263.22 in 2005.
4 Britain	$120 billion in 1945	would cost $1,260,578,464,539.51 in 2005.
5 Italy	$94 billion in 1945	would cost $987,453,130,555.95 in 2005.
6 Japan	$56 billion in 1945	would cost $588,269,950,118.44 in 2005.
Total	$1.075 trillion in 1945	would cost $11,292,682,078,166.46 in 2005.

Economic effects of world war.: Many men went to fight – women did their work. This had a long-term effect upon women's lib, although any gains seemed to evaporate straight after the war, when the men came back and many women went back to the kitchen. However, many of the leaders of women's lib in the 1860s had begun their working careers during the war.

- There was a huge growth in munitions/ aircraft industries – other industries (eg. house building) were put on hold.
- There was a huge emphasis on food production – Dig for Victory
- Rationing – notably of petrol
- Shortages of workers – schedule of Protected Occupations prevented the call-up of key workers to the armed services, and the Essential Works Order (1941) allowed the government to conscript people to certain work. Of course, after the war, all the men came home and this created further employment disruption.
- The Government had to take control of the economy – eg. who worked where, trade, railways, shipping, banking etc.
- Massive government debts were accumulated, particularly to America(remember Lend-lease)
- Many men (including COs) were sent to work in the mines
- Huge losses of merchant shipping to submarines
- Destruction of factories/machines – in 1945 Britain lost 12% of her productive capacity
- Destruction by bombing created a need for massive house building after the war.
- Recruitment and training of workers was disrupted - there were long-term bad effects on the quality of British workmanship and management.
- There were many scientific advances, which were to have a GREAT effect in the years to come (eg the computer, mass-produced antibiotics, DDT, jet engines)
- Growth in Trade Unions and strikes - workers did NOT willingly put up with the appalling conditions, and rather used their indispensability to negotiate better conditions and wages.
- The government set up the Beverage Committee which brought in the Welfare State after the war. It also adopted a new way of running the economy (called Keynesian economics) which promised full employment (compare life during the Depression before the war).
- The Breton Woods Conference (1944) set up the International Monetary Fund to try to prevent another world economic depression.

	Years of War Spending	Peak Year of War Spending	
	Total Military Cost of War in Millions/Billions of Dollars	War Cost % GDP in Peak Year of War	Total Defense % GDP in Peak Year of War
World War I	1917-1921	1919	
Current Year $	20 billion	13.6%	14.1%
Constant FY2011$	334 billion		
World War II	1941-1945	1945	
Current Year $	296 billion	35.8%	37.5%
Constant FY2011$	4,104 billion		
Korea	1950-1953	1953	
Current Year $	30 billion	4.2%	13.2%
Constant FY2011$	341 billion		
Vietnam	1965-1975	1968	
Current Year $	111 billion	2.3%	9.5%
Constant FY2011$	738 billion		
Persian Gulf War[a]	1990-1991	1991	
Current Year $	61 billion	0.3%	4.6%
Constant FY2011$	102 billion		
Iraq[a]	2003-2010	2008	
Current Year $	715 billion	1.0%	4.3%
Constant FY2011$	784 billion		
Afghanistan/Other[a]	2001-2010	2010	
Current Year $	397 billion	0.7%	4.9%
Constant FY2011$	321 billion		

Economic Impact of SISI war : In a recently released World Bank working paper to quantify both the direct and indirect economic effects of The Syrian war and the subsequent emergence and spread of the Islamic State (ISIS) war on the countries in the greater Levant area—Turkey, Syria, Lebanon, Jordan, Iraq, and Egypt. The direct Economic effect comes from the decline in the size and skills of Syria's labor force due to loss of life and refugee outflows, infrastructure destruction and a decline in productivity. It put an end to plans for deepening intra-regional trade ties. These aggregate costs of war are equal to the size of Syria's GDP in 2007. In Lebanon, Jordan and Turkey Workers have lost because the arrival of Syrian refugees has increased local demand for goods and services, raising prices, and augmented the labor supply. Travel and tourism related

stocks were the biggest losers. A number of nations had already erected temporary border controls in the face of the unprecedented wave of migrants fleeing the Middle East and Africa. On November 13, the world watched in horror, as 129 mothers, fathers, brothers, sisters, husbands, wives, and children were senselessly murdered by a group of radical Islamic militants.

It is just a case study for unethical issue.

Unethical issues and Effects of Environmental Degradation: As indicated by the I=PAT equation, environmental impact (I) or degradation is caused by the combination of an already very large and increasing human population (P), continually increasing economic or per capita affluence (A), and the application of resource depleting and polluting technology (T). Impact on Human Health: **Loss of Biodiversity:** Ozone Layer Depletion: Loss for Tourism Industry. Economic Impact: In many countries in AFRICA, People are finding less nutritious food to eat, vulnerable to weather changes, water shortages, increasing the health and lives of thousands. As humans dump waste products, use chemicals, and over fish in the oceans and seas, areas of beauty such as coral reefs are damaged. We are killing our planet and the consequences are tremendous. Water and air pollution are unfortunately the common causes of environmental degradation. Pollution introduces contaminants into the environment that can maim or even kill plant and animal species. The two often go hand in hand. Within the coast lands of Thailand, marine and coastal resources are at risk. Vast areas of mangrove wetlands have been lost. Coral reefs /Islands continue to suffer degradation, and the total fish available for catching is declining. Fishermen suffer without income to support themselves and their families. The shores are eroding at a rate of one to five meters per year. This results in an annual loss of more than six billion baht ($150 million) in economic terms. Some wildlife species require large stretches of land in order to meet all of their needs for food, habitat, and other resources. These animals are called AREA SENSITIVE. When the environment is fragmented, the large patches of habitat no longer exist. It becomes more difficult for the wildlife to get the resources they to survive, possibly becoming threatened or endangered. The environment suffers without the animals that play their role in the food web. (Sweden)Acid rain occurs when sulfur dioxide from coal plant emissions combines with moisture present in the air. A chemical reaction creates this acid precipitation. Acid rain can acidify and pollute lakes and streams. It causes similar effects to the soil. According to the U.S. Environmental Protection Agency (EPA), if enough acid rain falls in a given environment, it can acidify the water or soil to a point where no life can be sustained. Plants die off. The animals that depend upon them disappear. The condition of the environment deteriorates. Surface water washes over the soil and into lakes and streams. When it does so, it carries the fertilizers and pesticides used on the farm lands into water resources. Introducing poisons into waterways will have dire consequences. Fertilizers, whether or not they are organic, carry equal risks. Mother Nature causes environmental problems, too: Things like landslides, earthquakes, tsunamis, hurricanes, and wildfires can completely decimate local plant and animal communities to the point where they can no longer function. This can either come about through physical destruction via natural disaster or by the long-term degradation of resources by the introduction of an invasive alien species to a new habitat. The latter often occurs after hurricanes, when lizards and insects are washed across small stretches of water to foreign environments. Humans are “eating away at our own life support systems” at a rate unseen in the past 10,000 years by degrading land and freshwater systems, emitting greenhouse gases and releasing vast amounts of agricultural chemicals into the environment, new research has found. Researchers found that the changes of the last 60 years are unprecedented in the previous 10,000 years, a period in which the world has had a relatively stable climate and human civilization has advanced significantly. Carbon dioxide levels, at 395.5 parts per million, are at historic highs, while loss of biosphere integrity is resulting in species becoming extinct at a rate more than 100 times faster than the previous norm. Land clearing is now concentrated in tropical areas, such as Indonesia and the Amazon, with the practice reversed in parts of Europe. But the overall picture is one of deterioration at a rapid rate. “Some people say we can adapt due to technology, but that’s a belief system, it’s not based on fact. There is no convincing evidence that a large mammal, with a core body temperature of 37C, will be able to evolve that quickly. Insects can, but humans can’t and that’s a problem.” “If the Earth is going to move to a warmer state, 5-6C warmer, with no ice caps, it will do so and that won’t be good for large mammals like us. People say the world is robust and that’s true, there will be life on Earth, but the Earth won’t be robust/ vigorous for us. “It is fairly safe to say that we haven’t seen conditions in the past similar to ones we see today and there is strong evidence that there are tipping points we don’t want to cross,” the research showed the economic system was “fundamentally flawed” as it ignored critically important life support systems.” Steffen said. “It is clear the economic system is driving us towards an unsustainable future and people of my daughter’s generation will find it increasingly hard to survive. Earth is just for one hundred years.” he said. “History has shown that civilizations have risen, stuck to their core values and then collapsed because they didn’t change. We do not have any answers to our grand children for certain questions. Most of the species that we had seen have disappeared due to chemical pesticides. Mahaatma ghandiji once said –“the nature has given everything for human needs, but not given anything for the human greed.” That’s where we are today.”

Suggestions

- The 1992 United Nations Conference on Environment and Development Recognizing the importance of these processes identified four fragile ecosystems: regions with severe deforestation, regions with severe desertification, low-lying coastal areas and "vanishing" islands in the Indian and Pacific oceans.
- Philosophy and ethics offer a range of perspectives that may benefit ecology. Scientists need to be aware of these just as they should be of their own leanings about how we treat nature.
- Scientists need to translate social concerns or demands about the environment into properly defined scientific questions, and then study them as a matter of urgency.
- Ecology needs to guide eco-philosophers and environmental ethicists as to how nature works, why we expect unpredictability in ecosystems, what are naturalness and other issues where a scientific understanding of nature has progressed beyond the point where these observers of ecology have so far taken inspiration.
- Support for human development would provide a sound ethical structure that would be inclusive of all populations rather than just limited age groups of reproductive age women.
- Codes of ethical conduct have received varying degrees of attention over the past three decades. They can be categorized into three types: Type 1: Inspirational-Idealistic codes of conduct specify global themes such as “Be honest,” “Show integrity in all matters,” “Practice wise decision making,” etc. Such themes are not anchored to specific behavior or situations. Type 2: Regulatory codes of conduct proscribe clearly delineated conduct. This type of code is designed to help as a jurisprudential tool when disputes occur. It is more of a “do and don’t” approach. Type 3: Educational/Learning-Oriented codes of conduct offer principles to guide decision making and behavioural reactions into likely situations. This approach is compatible with building a learning organizational culture. For example, the principle and value of fairness might be applied to allocating a bonus pool. Managerial leaders responsible for this process could be engaged in scenarios wherein they would be asked to take “fair action” in making these allocations. Such learning experiences can serve to enlighten and inform so as to foster ethical decision making.
- An active Religion and Ecology group has been in existence within the American Academy of Religion since 1991, and an increasing number of universities in North America and around the world are now offering courses on religion and the environment.
- Buddhism idealizes and emphasizes interconnection, thereby creating a mindset that creates a productive and cooperative relationship between humans and nature. Humans are intertwined with natural systems, damage done upon the Earth is also harm done to humans. This realization is quite modifying to a human race that historically steal the Earth for individual benefit. When rational humans minimize the split between humanity and nature and bridge the gaps, only then will a mutual respect emerge in which all entities coexist rather than fight. Habitual striving for harmony and friendship among all beings creates a more perfect relationship between humanity and nature.
- Christianity has a historic concern for nature and the natural world. At the same time, socio-economic and ecological concerns operate in anxiety with anthropocentric values, such as the Biblical notion of human dominion over the Earth. (Gen1:28) A broad range of Christian institutions are engaged in the environmental movement and contemporary environmental concerns.
- In Hinduism, practitioners and scholars find traditional approaches to the natural environment in such concepts as dharmic ethics or prakrti (material creation), the

development of ayurveda, and readings of Vedic literature. Hindu environmental activism also may be inspired by Gandhian philosophy and practical struggles, such as the Vishnu community in Rajasthan and Chipko resistance to forestry policies in Uttar Pradesh, India. Mahatma Gandhi played a major role in Indian environmentalism, and has been called the "father of Indian environmentalism". Gandhi's environmental thought parallels his social thoughts in that environmental sustainability and social inequalities should be managed in similar fashions. His non-violent teachings left a lasting impact, even agriculturally. Contemporary agrarian practices use the Bhagavad-Gita to establish practices that are deemed non-violent.

- Ethics and nature in India: under Indian philosophy Lord Rama is not just a god but he is "the embodiment of single wife style and life style, single house, single property, simplicity, contentment, ethics and discipline." a Sanskrit subhashita says and stressed by swamy vivekaananda that- "Education with ethics and discipline is called "Saakharas" and without ethics is called "Raksasaas" Ethically motivated people are god fearing less harmful to society and thereby earth is saved to a great extent. Once swamy vivekaananda said "If all noble people of the earth keep quit, the idiots or man eater's flourish." Similarly Adi Shankarachrya started to worship verity of stones in the name of jai jai Shiva Shankar and positioned stones from pace to place in the name of god Shiva to protect the stone in India. Banyan tree is worshiped during Deepavali festival to enhance the fruit baring trees and to support birds instead of generating fear through bursting crackers. Neem tree is worshiped during spring to avoid verity of future deceases during summer. Experts have made the celebration with religious touch. Divinity forests (forest garden) have been grown with the association of the village members which consists of all kinds of fruit growing trees. The victims who cut the trees within the areas are expected to punish and treated as sinners. Temples are positioned at the top of the excellent and beautiful mountains and the hills are saved under banner of religious sacredness. E.g. Chamundi hills at mysoru, Nandihills near bangaloru, mount Abu, Gowri-Shanker, Tirupati, Amranat, Mahadewara hills, Etc.
- In Islam, the concept of a hima or "inviolate zone" refers to a piece of land that has been set aside to prevent cultivation or any use other than spiritual purposes (divine forest or places). Many chapters in the Quran refer to the beauties of nature as well as the headings of many chapters indicating the importance of it, such as: "The Sun", "Dawn", and "Morning Hours". Thus man is God's representative on this planet, if he is not charged with sustaining it, then at least he must not destroy it. It is believed that God did not create the environment for a random reason, but rather a reflection of truth. One can gain profound knowledge from nature thus, human beings are to save it and look after it.
- Israel emphasized that a central belief in Judaism in Hebrew language According to this opinion, Judaism is clearly in line with the principles of environmental protection and sustainable development.
- In September 1986 the World Wide Fund for Nature (WWF) celebrated its 25th anniversary by bringing together authorities from five major world religions to declare how the teachings of their faith leads each of them to care for nature. The event was instigated by WWF International President HRH Prince Philip, the Duke of Edinburgh, and took place over two days in the Italian town of Assisi, chosen for its association with St Francis of Assisi the Catholic saint of ecology.
- What resulted from this unprecedented project were the Assisi Declarations: separate calls from Buddhist, Christian, Hindu, Jewish and Islamic leaders to their own faithful concerning their spiritual relationship with nature and sacred duty to care for it. The event also launched the Green Pilgrimage Network, in recognition of the environmental impact caused by the estimated 150 million spiritual journeys undertaken by faith followers every year. Starting with 12 sites representing different faith traditions in Asia, Africa and Europe the commitment is to develop attitudes, resources and practices to minimize negative environmental impact and even, if possible, harness the efforts of pilgrims to generate a positive impact instead. Papers from the conferences were published in a series of ten books (The Religions of the World and Ecology Book Series), one for each of the world's major religious traditions. Some scholars fear environmental degradation will produce "waves of environmental refugees" with destabilizing effects at home and abroad.
- Every animal is treated as god in India because they do their duties but not rights, but it is the human beings do the reverse.

Conclusion

Ethics is an examination of these 'ought's' or norms of behaviour. What it seeks to provide are justifications for the 'oughts' that we use to guide us through life. It is a good idea to try to get clear a few of the terms used in this area of philosophy, particularly morals and ethics. Broadly speaking, ethics relates to the theory of what is right and wrong, morals with the practice. Deforestation is a serious threat in the environment. Unless this problem is addressed with the immediate Ethical concern it would prove detrimental to the very existence of the life on earth. The Kyoto Protocol on greenhouse gas emissions was ratified by 192 countries, although not by United States and

others. The Convention on Biodiversity was ratified by 193 countries, again excluding the United States, but has failed to arrest the decline in biodiversity. Forest is the source that make earth climate in a balanced mode as it is ethically called forest god. Deforestation will cause the imbalanced climate behavior in our earth. The Second World War, the political decisions and attitudes taken by aggressor states differed significantly and No apologies were submitted to nature by any countries like China, Korea, Japan, Indonesia, or the Philippines. Even today, bilateral relationships are still stressed by the lack of a frank and official admission of past failures. Twenty years ago, the United Nations Conference on Environment and Development (UNCED) – also known as the Earth Summit or Rio 92 – recognised the environmental challenges of climate change and the loss of biodiversity (species, ecological systems, genetic resources). Strategies and commitments to tackle those changes and their consequences were adopted. Detailed commitments were subsequently fine-tuned and ratified by most countries and we still doubt in it, unless it happens to coincide with ethical atmosphere/ environment. Until and unless we remember the contributions of our ancestors or forebears, we cannot give anything to our next generations. In this connection Albert Einstein once said "when all human efforts ends philosophy begins, or science ends in philosophy." So let us all noble people support to save the earth for the next generation, and let us not give the room/scope to ask the revert questions.

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A Panel Study on Fiscal Policy Effectiveness and Inequality: Efficacy of Gender Budgeting in Asia Pacific Countries

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Abstract

Gender budgeting is a fiscal approach that seeks to use a country's national and/or local budget(s) to reduce inequality and promote economic growth and equitable development. While literature has explored the connection between reducing gender inequality and achieving growth and equitable development, more empirical analysis is needed to determine whether gender budgeting really curbs gender inequality. This study follows the methodology of Stotsky and Zaman (2016) to investigate across Asia Pacific countries the impact of gender budgeting on promoting gender equality, and also increasing fiscal spending on health and education. The study classifies Asia Pacific countries as 'gender budgeting' or 'non-gender budgeting' according to whether they have formalized gender budgeting initiatives in laws and/or budget call circulars. To measure the effect of gender budgeting on reducing inequality, we measure the correlation between gender budgeting and the Gender Development Index (GDI) and Gender Inequality Index (GII) scores in each country. The data for gender inequality variables are mainly drawn from the IMF Database on gender indicators and the World Development Indicators database, over 1990-2013. Result shows that gender budgeting has significant effect on increasing GDI and small but significant potential to reduce GII. These results strengthen the rationale for employing gender budgeting to promote inclusive development. However, study results show no prioritization for gender budgeting in the fiscal space of health and education sectors in the region.

Keywords: *Gender budgeting, fiscal policy, gender equality, Asia Pacific*
JEL codes: *H00, I3, J1*

Introduction

Gender budgeting is an approach to fiscal policy that seeks to use a country's national and/ or local budget(s) as a tool to resolve societal gender inequality and promote inclusive development. Gender budgeting does not involve the creation of separate budgets for men and women. Instead, it involves studying a budget's differing impacts on men and women so as to set new allocations and revenue policies to promote greater efficiency and equity as regards gender equality (Chinkin, 2001; Stotsky, 2016). Ideally, gender budgeting is an approach to fiscal policies and administration that translates gender-related commitments into fiscal commitments through identified processes, resources, and institutional mechanisms, impacting both the spending and revenue sides of the budget (Chakraborty, 2014).

More than 90 governments around the world, a quarter of which are in Asia, are pursuing gender budgeting (Budlender, 2015). The literature outlines two overarching primary motivations for gender budgeting: its perceived positive impacts on economic efficiency, growth, and productivity, as well as its positive impacts on equity in terms of both inclusive development and equal realization of human rights. The basic argument underlying both the efficiency/growth motivation and the equity motivation for gender budgeting is that, first, gender budgeting reduces gender inequality, which, sec-ond, causes growth, more equitable development of women and society generally, and equal achieve-ment of human rights.

The co-relations in the second part of the argument, between reducing gender inequality and promoting growth and women's advancement, have been explored extensively in the literature. The exact causal relationship between gender inequality and growth is a bit unclear, with evidence at once suggesting that reducing inequality is the precursor to growth, that growth is in fact the precursor to reducing inequality, and even, concerningly, that maintaining inequality can yield growth (Cuberes and Teignier, 2014). However, there is certainly strong evidence that gender budgeting can indirectly raise equitable growth through its impact on fiscal policies (Stotsky, 2016; Kabeer and Natali, 2013). It is more assuredly found that

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reducing gender inequality promotes inclusive and equitable development, advancement of women and societies, and achievement of human rights (World Bank, 2011).

The co-relation in the first part of the argument, however – that gender budgeting actually reduces gender inequality – has been less clearly affirmed. As Stotsky (2016) has observed, there have been few efforts to assess the results of gender budgeting in a quantitative manner. Stotsky asks whether the practice of gender budgeting has yielded greater gender equality in school enrolment (as a proxy for gender equality) and increased spending on social services, education, health, welfare, and infra-structure, in Indian states. Yet most other studies evaluating the success of gender budgeting initiatives tend to focus on the success of their implementation; that is, whether governments are following the steps of gender budgeting, rather than their impact in achieving their goals of equality, growth, inclusive development, and human rights (e.g. Nakray, 2009; Mushi and Edward, 2010).

This study seeks to extend work taken up by Stotsky in India, to evaluate across a data set of Asia-Pacific countries the impact of gender budgeting on gender equality and fiscal spending. We use the Gender Development Index and Gender Inequality Index as proxies for gender equality. We also measure the impact of fiscal spending on gender development on the assumption that higher spend-ing in these areas yields better outcomes for inclusive development (Lahiri et al., 2002). We show that gender budgeting matters for improving gender development indices.

In addition to the core analysis on the impact of gender budgeting on gender equality and fiscal spending in Asian countries, we also briefly observe differences between the covered countries in terms of both the formality of their approach to gender budgeting, and their legal climate as regards gender equality more broadly. Gender budgeting may be undertaken at an impermanent policy level, or it may be formalized into the budget process through incorporation into budget circulars and gender budgeting statements, or even into law. This study notes differences in the degree or method of formalization of the gender budgeting initiative in each country studied. The authors are also pre-paring a further study on whether formalization of budgeting, and in what form, is linked to better outcomes in equality and spending. This study, similarly, identifies in the Appendix, key economic and social laws advancing gender equality that have, or have not, been enacted across the countries studied. The authors' study will additionally explore what, if any, is the nexus between these laws and gender budgeting, to elucidate whether, how, and why a country's legal climate for gender equality impacts its decision to pursue gender budgeting, its gender budgeting implementation method, and the results of its gender budgeting program.

The remainder of the paper is organized in the following manner. Section II surveys literature exploring the relationship between gender inequality and a) efficiency, productivity, and growth, b) equity in terms of inclusive development, and c) equity in terms of equal realization of human rights. This section also surveys literature on public fiscal policies, and assesses gaps in the literature evaluating the link between gender budgeting and outcomes in equality and spending. Section III provides an overview of which Asian countries are pursuing gender budgeting, and through what means. Section IV identifies additional considerations on the method of formalization of gender budgeting, and the broader gender legal climate, in the studied countries. Section V discusses the empirical approach and provides our econometric model and results. And Section VI offers concluding remarks and implications for policy on gender budgeting.

Literature Review

Our analysis of the effectiveness of gender budgeting in Asia begins with a survey of the literature outlining what exactly, do we mean by gender budgeting approach. Scholars and governments alike typically name two overarching primary motivations for gender budgeting: its perceived positive impacts on economic efficiency, growth, and productivity, as well as its positive impacts on equity in terms of both inclusive development and equal realization of human rights. The arguments encouraging gender budgeting tend to proceed in two steps: first, that gender budgeting reduces gender in-equality; and second, that reduction in gender inequality in turn leads to positive outcomes in efficiency and equity.

One primary motivation for gender budgeting is its perceived impact on growth. Growth is often cited as an outcome of reducing gender inequality, which serves to close inefficient gender gaps in workforce participation, education, and health (Berik et al., 2009; Hill and King, 1995; Dollar and Gatti, 1999; Klasen, 2002; Knowles et al., 2002; Esteve-Volart, 2004). However, as many scholars point out, pinning the direction of causality between growth and reduction of gender inequality is tricky, and indeed inequality itself (and not its reduction) has been found to cause growth (Stotsky, 2016; Cuberes and Teignier, 2014).

As per (IMF, 2015), fiscal reform policies influence growth by increasing workforce participation, encouraging personal and state investment, strengthening human capital, and raising total factor productivity. The study argues that reducing gender

inequality sparks growth, typically focuses on the first three IMF growth factors. Discussing labour force participation, for example, Aguirre et al. (2012) posit that raising female labour force participation to match country-specific male levels could raise GDP by percentage points ranging from 5% in the United States to 34% in Egypt. Cuberes and Teignier (2012) suggest that GDP per capita losses resulting from gender gaps in the labour market may be as high as 27% for some regions. The World Bank (2011) posits that "[e]specifically in countries with a comparative advantage in female goods, gender differences in access to market work and persistent employment segregation by gender could severely undermine the country's capacity to compete internationally and ultimately hamper economic growth." Considering the second factor of personal investment, ensuring women equal property rights, for example, is seen as an important tool to help women receive credit to fund new small businesses (World Bank, 2011). Strengthening women's property rights can also increase households' agricultural production through causing more efficient sharing of resources between men to women (Udry, 1996). Finally, considering the factor of human capital, Klasen (1999) argues that a failure to provide women equal access to education and to utilize their talents equally is a form of market distortion or restriction on the human capital productivity of an economy. Kabeer and Natali (2013) also note that the demonstrated propensity of women to invest more, comparative to men, in the human capital of their children has a long-term positive impact on growth.

But Bandiera and Natraj (2013) assert that the empirical research has yet to identify the causal link from inequality to growth, and Cuberes and Teignier (2014) survey theoretical and empirical studies that assert a causal chain going either one way, or the other way, or indeed both ways between gender inequality and growth. Indeed, Berik (2009) says that the "contradictory" evidence gives "rise to an important debate on whether the net effect of gender inequality is a stimulus or a drag on growth." For example, Seguino's research (2008) on semi-industrialized nations has shown that women's comparatively low wages in low-skilled export industries such as textiles have been a leading factor in helping governments attract foreign direct investment and build their export economy. This inequality has been an impetus for trade and growth. Berik (2009) also observes that women's seasonal and daily wage labour in agricultural industries has in some economies helped keep food production costs low and exports high, to positively impact GDP.

What seems most likely is that the causality, in fact, run in both directions, yielding the practical wisdom that it is worth pursuing efforts geared towards both growth and inequality reduction. To the extent that inequality itself yields growth, that is a reminder to policy makers that there are other reasons than growth, namely equity, to pursue inequality reduction.

A second primary motivation for gender budgeting is its perceived potential to promote equitable development, distinct from economic growth. There are two facets to this motivation: at a basic level, since women and girls tend to suffer greater disadvantage across a range of social and economic indicators, therefore alleviating these development disparities through gender budgeting programmes is a valid development end in itself. Secondly, policy makers and academics have long highlighted the value of gender equality as a precursor to, or tool for promoting, economic development more broadly (World Bank, 2011).

Women and girls face significant social and economic disadvantage vis-à-vis men and boys, including higher mortality rates than men in low and middle-income countries, segregation into lower-paid and lower-skilled employment sectors, greater responsibilities in the care economy, lower levels of education, political participation, land ownership, and credit, and less power in household as well as community and national decision-making (World Bank 2011). Recognizing these gendered development disparities, the international community has, in 2000 with the adoption of the Millennium Development Goals (MDGs) and again in 2015, with the adoption of the Sustainable Development Goals (SDGs), identified promotion of gender equality and empowerment of women and girls as a development goal in and of itself. Literature on gender budgeting often posits advancement of gender equality and women's and girl's development as a motivation for gender budgeting (Stotsky, 2016; Sharp and Elson, 2008). Moreover, governments adopting gender budgeting also highlight amelioration of gender disparities and empowerment of women as the key motivation. For example, in Asia, the Indian, South Korean, and Afghan gender budgeting initiatives all posit women's advancement as the motivator for their programmes (Chakraborty 2016; Kolovich and Shibuya, 2016).

In addition to pursuing gender equality and development of women and girls for their own sake, these goals are also discussed as a means to development overall (Stotsky, 2016). In 2005, the UN Department of Economic and Social Affairs called gender equality and women's empowerment a "prerequisite" to achieving the other MDGs, and in 2011, the World Bank asserted that "[g]ender equality matters also as an instrument for development" (United Nations, 2005; World Bank 2011).

As discussed under the section on growth, a primary aspect of this argument is that the development of women yields both immediate and long-term benefits for their children and for society. The World Bank (2011) identifies several studies discussing these linkages. For example, in China, increasing women's income by 10% of the average household income correspondingly increased by one percent the survival of girl children and increased years of schooling for girls and boys (Qian, 2008). In Pakistan, a study found that children whose mothers attended even one year of school spend an hour more on educating themselves each day, and have higher test scores (Andrabi et al., 2011). Greater land rights of mothers in Nepal have been linked to stronger health of children (Allendorf, 2007). Greater representation of women in local government in India has yielded increased provision of public goods desired by both men and women (Chattopadhyay et al. 2004). In India and Nepal, giving women a greater role in management of forests has led to significantly stronger conservation results (Agarwal, 2010; Agarwal, 2010). To the extent then that gender budgeting promotes women's advancement, it is argued to have a second trickle-down effect in advancing children, households, and society at large.

The third primary motivation for gender budgeting, also grounded in equity, is the achievement of women's equality and human rights. Scholars of gender budgeting argue that gender budgeting advances human rights in a few ways. First, the practice of gender budgeting helps governments to fulfil their international legal obligations to seek gender equality and equal realization of human rights within their states. Second, by helping states promote women's development and equal rights, gender budgeting can help women actually achieve those rights. And third, the process of gender budgeting, including the collection and evaluation of sex-disaggregated social and economic data and the study of challenges facing women, can encourage countries to promote the rights of women through new internal laws.

Several international human rights conventions establish equality between men and women including with respect to the enjoyment of numerous human rights. The International Covenant on Civil and Political Rights (ICCPR) and the International Covenant on Economic, Social and Cultural Rights (ICESCR), which both entered into force in 1976, assert that the right of men and women to benefit equally from the civil, political, economic, social, and cultural human rights outlined in the conventions. In 1979, the United Nations General Assembly adopted the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), which focuses specifically on ensuring equal human rights for women and relies on the first two conventions for its definitions of basic human rights.

Elson (2006) has taken the lead in demonstrating how gender budgeting can help governments meet their treaty obligations to ensure gender equality. Elson provides a helpful overview of how human rights are relevant to budgets, focusing on CEDAW. She notes that CEDAW does not include provisions on budgeting, but requires states, party to the convention, to ensure equal rights (including both political and economic/social rights) for women. Key principles championed by CEDAW and highlighted by Elson are formal and substantive equality between men and women, non-discrimination against women, equal right of women to participation in public and political life, and modification of social and cultural patterns of conduct to eliminate discrimination against women. By pursuing gender budgeting to rectify inequality between the sexes particularly under the government's own fiscal policy, governments can turn their legal obligations into practical action.

By the same token, gender budgeting employed by a government can help women actually achieve their internationally recognized human rights. Human rights in the ICESCR are particularly relevant for gender budgeting, including the rights to work, to just and fair conditions of work especially for women, to social security, to an adequate standard of living including food, clothing and housing, to the highest attainable standard of physical and mental health, and to education. As Elson (2006) notes, the budget regulates programmes related to all of these rights, and thus can have direct bearing on women's ability to achieve these rights equally to men.

Finally, the process of gender budgeting, as an element of gender mainstreaming, can have the positive externality of encouraging passage of domestic laws creating or enforcing rights for women. One base element of gender budgeting is the collection of sex-disaggregated statistics, and several countries have begun their gender budgeting efforts with a mandate for greater disaggregation of sector-specific statistics (Chakraborty, 2016; Kolovich and Shubuya, 2016). This sex-disaggregated data can be used to justify passage of laws addressing gender disparities, such as laws promoting women's health and safety, access to education, equal rights to work, etc.

The literature surveyed above links gender inequality to arguments of efficiency and equity. It is still necessary to link gender budgeting to reduction in gender inequality. As Stotsky (2016) and Chakraborty (2016) observe, further research is needed to test empirically this first link in the chain. Some analysis has been done of gender budgeting's tangible impact on gender equality. For example, Chakraborty (2016) observes

that the Indian government decided to transition from a method of earmarking funds for women to a more macro level of gender budgeting, because it found that the earmark approach did not in fact result in the full amount of funds earmarked reaching women. In the same study, Chakraborty also notes that provision of sex-disaggregated data in Pakistan has helped to increase hiring of women in the government sector, decrease the gender wage gap, and spearhead pub-lic funding of day care centers to lighten women's home care responsibilities. Stotsky (2016) analyzed whether the practice of gender budgeting has yielded greater gender equality in school enrollment (as a proxy for gender equality) and increased spending on social services, education, health, welfare, and infrastructure, in Indian states. She finds that gender equality in school enrollment at least at the primary level is improved significantly in Indian states practicing gender budgeting, while impact on spending is more ambiguous, with greatest evidence of impact appearing in connection with infra-structure spending.

Nevertheless, the majority of studies evaluating the success of gender budgeting initiatives tend to focus on the success of their implementation; that is, whether governments are holding internal trainings on gender, undertaking analyses of the gendered impacts of the budget, seeking and analyzing sex disaggregated data, and designing programmes and setting targets based on gender (e.g. Nakray, 2009, evaluating whether gender budgeting works in India by assessing its implementation; Mushi and Edward, 2010, judging the success of gender budgeting initiatives in Tanzania by studying the success of programmatic implementation). Further study is needed to discern whether successful implementation of such programmes helps countries achieve equality.

In addition to exploring the impact of gender budgeting on achieving gender equality, this paper also seeks to evaluate the impact of gender budgeting on spending, which is expected to produce better outcomes for inclusive development (Stotsky, 2016). Lahiri et al. (2002), using a fixed effects model of pooled least squares for the early 1990s, found that a one percent increase in spending on health and education resulted in a 0.33 percentage increase in the UNDP's Human Development Index and only a 0.06 increase in the Gender Development Index for a period between 1993-05. This demonstrates that public expenditure on human capital formation positively impacts gender development indicators. It is important to note that the effectiveness of public expenditures on health and education may vary across regions according to asymmetric scales of socioeconomic development (Chakraborty, 2016). This paper seeks to shed light on the nexus between spending and equitable development.

Gender Budgeting in Asia-Pacific Countries

More than a quarter of the 90-odd countries pursuing gender budgeting are located in the Asia Pacific (Budlender, 2015). Chakraborty in 2016 conducted a survey of 26 Asian countries' activities in gender budgeting, finding that many (including Brunei, China, Hong Kong, Japan, Myanmar, New Zealand, Papua New Guinea, Singapore, and Taiwan) have not implemented gender budgeting. Among Asian countries that are pursuing gender responsive budgeting, several are doing so by use of a budget circular: Afghanistan, Bangladesh, Bhutan, India, Indonesia, Malaysia, Nepal, and Pakistan. Korea, the Philippines, Timor Leste, Vietnam, the Lao People's Democratic Republic, and Mongolia have embodied gender budgeting in law. Cambodia and Sri Lanka are pursuing gender budgeting but have not incorporated the initiative into a budget circular document or law.

A typical budget may be composed of three primary elements – expenditures, revenues, and intergovernmental fiscal transfers – all three of which may be adapted through gender budgeting to advance gender equality. Government expenditures comprise the regular fiscal allocations for various departments and programmes. When public expenditures are designed according to gender priorities, they are often grouped by the percentage of the expenditure that will impact women. When measuring expenditures through a gender lens, it is especially critical to consider "fiscal marksmanship," or the difference between the authorized and actually allocated funds (Chakraborty, 2016). Although government revenues have received less focus than expenditures as a means to advance gender equality goals, tax policies also can and should be designed with gendered priorities (Stotsky, 2016). Too lenient concessions to high-earning individuals or corporations, taxation of certain household necessities, and ensuring payment of certain tax credits to caregivers as opposed to the primary earner have all been shown to negatively or positively impact women (Sharp and Elson, 2008; Elson, 2006; St. Hill, 2002). Finally, intergovernmental fiscal transfers from the national government to lower-tier governments can also be modified to achieve gender-based priorities under a gender budgeting regime. Anand and Chakraborty (2016), for example, observed that climate change variables were factored into transfer formulas in India. Having suggested that climate change appeared in the transfer formulas, could similarly be based upon "gender-related indicators", such as to reward lower-tier governments for success in promoting gender parity in education enrollment.

Gender budgeting is most effective when it involves changes to both policy-making processes – such as determining budgeting

allocations and designing programmes – and administrative systems – such as tracking expenditures and monitoring programme outcomes (Stotsky, 2016). Changes may be made at a policy level through executive branch decision-making, and/or formalized in budget circulars, the national budget law, or a separate law on gender budgeting. Almost all countries use a budget call circular or equivalent document that serves as an official notice from the finance ministry instructing government agencies how to submit their annual budget bids (Budlender, 2015). The budget circular may set the annual ceiling for each agency, identify priorities, and/or provide templates on how each ministry should submit its allocation bid. Some budget circulars are internal government documents, while others are open to the public. In practice, the form of budget circulars varies widely across countries. Critically, budget circulars may be used to set gender-related priority requirements or seek sex-disaggregated data from each ministry. A budget circular may also require each covered agency to submit a gender budget statement, most often a document showing what each agency is doing with respect to gender equality. A gender budgeting statement tends to look backwards at what an agency has done; it therefore, does not form a part of the current years' policy prioritization and allocation determination. Budlender (2016) observes, however, that not all circulars require attention to gendered impacts, and similarly not all countries that incorporate gender into their budget circular require gender budget statements. Formalization of the gender budgeting initiative through budget circular has been termed gender budgeting by "fiscal fiat" (Chakraborty, 2016).

Additional Considerations on Legal Formalization

In this paper, we compare outcomes between countries employing or not employing gender budgeting, without distinction as to whether and how gender budgeting initiatives are formalized in each country. We have noted, however, the differences in the approach to gender budgeting – mere policy approach, or fiscal fiat, or legal fiat – taken by these countries. The 2016 UN Women review of budget circulars found little positive or negative evidence that "engendered" budget circulars had effected changes in the allocations and expenditures of those countries budgets, or achieved a difference in the lives of women and girls (Budlender, 2015). However, that review focused specifically on those countries definitely engendering their budget circulars. Future broader comparative analysis may indicate that vis-à-vis countries not utilizing circulars at all for their gender budgeting initiative, coun-tries with pursuing gender budgeting by fiscal fiat may achieve better outcomes. We do not make this claim in the paper, but note that further research into the potential benefits of formalization of gender budgeting is underway.

We have not sought to assess whether countries like Korea and the Philippines, which go an arguable step further to cement their gender initiative by legal fiat, are yet more successful. At a theoretical level, a legislated gender budgeting initiative evidences buy-in from the legislative branch, which may suggest that a more participative and democratic process has been undertaken to generate the gender budgeting initiative. An initiative having broader-based popular support may be more successful and enduring. Additionally, in non-parliamentary democracies where the party of the legislature may differ from the party of the executive, a gender budgeting initiative formalized in legislation may be more immune to shifts in political power and thus more difficult to reverse. Yet counter-arguments also exist. Clearly, not all legislation has a public buy-in, legislation may be passed for all sorts of political reasons including to appease foreign donors. Where actual popular support is lacking, legislation may prove very weak. Further, if gender budgeting legislation is passed without strong support of the implementing ministries, its chances of success are practically low. Moreover, legislation without adequate funding and enforcement will be ineffectual regardless of its popular sup-port. As described above, Mongolia is an example of a country whose law on gender budgeting has, for unexplored reasons, gone unimplemented for over five years. Again, we would note that a future study could drill more usefully into the comparative benefits of fiscal or legal fiat. Given the low numbers of countries globally that have pursued gender budgeting through law, such a study might need to cross a wider geographic range than the Asia-Pacific alone, and must control for other variables bearing on the success or not of legislative initiatives.

In addition to or instead of gender budgeting, many countries drive for gender equity and women's advancement through constitutional provisions and laws. For example, countries may include a nondiscrimination and/or an equal rights provision in their constitution. They may also pass legislation to address discrimination or violence against women in both economic and social settings, such as legislation requiring equal remuneration for equal work, setting quotas for women on company boards, invalidating child marriage, or ensuring equal property and inheritance rights. Countries may also ratify international conventions with bearing on gender equality issues, such as the conventions of the International Labour Organization on equal remuneration and nondiscrimination in the work-place. "Economic enactments" include, for examples, whether the country has a law mandating pay for equal work, or a law setting a quota for representation of women on corporate

boards. "Social enactments" include whether the country has a law prohibiting or invalidating child or early marriage, or a quota for women's participation in parliament or local government. The international commitments

For some of the reasons, it is difficult to use countries' legal climate on gender equality to meaningful evaluate their actual success in promoting gender equality. A range of factors can cause legislation to be enacted: a groundswell of popular support; the for-ward-thinking of politicians; leadership in the executive branch; encouragement from civil society; or international pressure. A combination of these factors may be at play in any particular case. Addition-ally, a range of factors impact whether legislation will be implemented once enacted: the legislation's clarity; the level of funding for the legislation; the level of executive branch support; the level of public awareness of the legislation; and the level of popular support, including among enforcement officials such as police officers and regulators. The possible combinations among all these variables are myriad, and yield diverse legislative landscapes and levels of enforcement across different countries and cultures. Further study to evaluate the relation between such laws and the existence or success of a country's gender budgeting initiative could be enlightening. However, given the complexities of assessing the legal climate of even one country, such analysis is reserved for consideration in a future paper. Instead, we have categorized countries simply to their use of gender budgeting as per the fiscal fiat of budget call circular.

Measuring Gender Equality, Econometric Model and Study Findings

This section establishes an econometric estimation of the determinants of gender equality, by using the Gender Development Index and Gender Inequality Index as proxies for gender equality. As a precursor to our results, the following sections discuss complexities and challenges in measuring gender sensitive human development, drawing considerably from a similar discussion in Agarwal and Chakraborty (2016).

The Gender Development Index (GDI): Human development can be understood as a process of enlarging people's choices and raising their level of well-being. The United Nations Development Programme (UNDP) has identified three elements of choice and well-being that are the most socially critical: the ability to lead a long and healthy life; the ability to acquire knowledge and be educated; and the ability to access the resources (often synonymous with income) necessary for a decent level of living (UNDP Human Development Reports, various years). A gender-neutral geometric mean of these three development dimensions was created, called the Human Development Index (HDI). Later in 1995, the UNDP constructed the Gender Development Index (GDI) as an offshoot from the HDI. The GDI has been used to measure global gender development since then. The GDI uses the same variables as the HDI, but adjusts them according to a country's degree of disparity in achievement across genders. Under the GDI, the average value of each of the component variables is substituted with "equally distributed equivalent achievements". The equally distributed equivalent achievement (Xede) represents the level of achievement that would, if attained equally by women and men, be considered exactly as valuable to society as the actually observed disparate achievements. Lahiri et al. found in 2003 that taking an additively separable, symmetric, and constant elasticity marginal valuation function with elasticity 2, the equally distributed equivalent achievement Xede for any variable X is the following:

$$X_{ede} = [\, n_f\,(1/X_f\,) + n_m\,(1/X_m)]^{-1}$$

where, X f and Xm are the values of the variable for females and males, and nf and nm are the population shares of females and males. Xede is a 'gender-equity-sensitive indicator' (GESI). Under this calculation, for a chosen value of 2 for constant elasticity marginal valuation function, GDI is computed as follows:

$$GDI = \{L_{ede} + (2/3 \text{ x } A_{ede} + 1/3 \text{ x } E_{ede}) + Y_{ede}\}/3$$

xThe Gender Inequality Index (GII): The Gender Inequality Index (GII) replaced the GDI in 2010, serving as a measure of the disparities between the genders across three dimensions: (i) reproductive health, represented by the maternal mortality ratio (MMR) and the adolescent fertility rate (AFR); (ii) women's empowerment, represented by the proportion of parliamentary seats held by each sex (PR) and the sexes' rates of attainment of secondary education (SE); and (iii) economic activity, represented by the labour market participation rate (LFPR) of men and women in the market economy. The GII shows the loss in development resulting from gender inequality, where a score of 0 represents complete equality and a score of 1 implies complete inequality. GII is calculated by assessing the geometric mean across the dimensions. Because a mean can-not be calculated for zero values, a minimum of 0.1 percent is set for all "outlying" extreme values. For the MMR, a

maximum rate is taken as 1000 deaths per 100,000 births and a minimum rate is taken as 10 per 100,000 births.

To calculate the geometric means for reproductive health, the aggregation formula for men and women must be different. For females (Gf):Rescaling by 0.1 helps quantify the truncation of the maternal mortality ratio minimum at 10. For males (Gm), the formula is as follows:

After the geometric mean of the three is calculated, the harmonic mean is used to aggregate across gender. Use of the harmonic mean has been criticised (Hawken and Munck, 2012),

$$Gf = \sqrt[3]{\left(\sqrt{\left(\frac{10}{MMR}.\frac{1}{AFR}\right)}.\sqrt{(PRf.SEf)}.LFRPf\right)}$$

however, the rationale for its use is that it captures the inequality between women and men and further adjusts for association between dimensions. The HARM index is as follows:

$$Gm = \sqrt[3]{\left(1.\sqrt{(PRm.SEm)}.LFRPm\right)}$$

Before calculating the final index, a composite index is calculated using the geometric means of the arithmetic means. This ensures that equal weight is given to both the genders and then aggregated across the various dimensions, i.e. health, empowerment, and economic activity. The composite index is as follows:

$$HARM(Gf,Gm) = \left(\frac{\left((Gf)^{-1}+(Gm)^{-1}\right)}{2}\right)^{-1}$$

The higher the value of GII, the higher is the corresponding gender gap and loss in potential of human development. By highlighting this gendered loss in development potential, the GII helps identify where gender gaps could productively be closed.

$$G(\overline{f},\overline{m}) = \sqrt[3]{(\overline{Health}.\overline{Empowerment}.\overline{LFPR})}$$

Where,

$$\overline{Health} = \frac{\left(\sqrt{\left(\frac{10}{MMR}.\frac{1}{AFR}\right)}+1\right)}{2}$$

$$\overline{Empowerment} = \frac{\left(\sqrt{(PRf.SEf)}+\sqrt{(PRm.SEm)}\right)}{2}$$

$$\overline{LFPR} = \frac{(LFPRf+LFPRm)}{2}$$

Symbolically, the GII is finally represented as follows:

$$\mathbf{GII} = 1 - \frac{HARM(Gf,Gm)}{G(\overline{f},\overline{m})}$$

Econometric Investigation: This section evaluates the relationship between gender budgeting and gender equality. The hypothesis we try to test is whether gender budgeting has positive impact on gender equality in Asia Pacific region. The scores on GDI and GII for each country are used as measures of gender equality or inequality. For both types of equality measures, the econometric analysis estimates the determinants of gender equality, and includes gender budgeting among those determinates. The dynamic panel estimation is used in the paper in an effort to correct any endogeneity issues occurring in the static (fixed and random effects) models. The dynamic panel estimates methodology by Arellano and Bond (1991) is based on the instrumental variables approach. We can generate better – more efficient – estimates of the dynamic panel data model by applying an instrumental variable method in a Generalized Method of Moments (GMM) context. As the dynamic panel estimators are instrumental variable methods, it is particularly important to evaluate the Sargan–Hansen test results when they are applied.

The estimates are checked for diagnostics statistics using AR test for autocorrelation of the residuals. In Arenello Bond methodology, the residuals of the differenced equation may possess serial correlation. The difference GMM approach used by Arenello and Bond is to tackle the endogeneity. The Arenello Bond methodology deals with endogeneity by transforming the data to remove the fixed effects. However, any first difference (FD) transformation removes the fixed effect at the cost of initiating a correlation between $\Delta y_{i,t-1}$ and Δv_{it} , both of which have a term dated (t − 1). The disadvantage of the first difference transformation is that it widens the gaps in unbalanced panels. If some value of yit is missing, then both Δy_{it} and $\Delta y_{i,t-1}$ will be missing in the transformed data. However, the panel we used for the analysis is highly balanced and therefore it will not affect our Arenello-Bond dynamic models.

The model we consider for analysis is as follows, where we test whether gender budgeting (GB) is a significant determinant of gender equality (GE) in Asia Pacific region, along with control variables (X).

$$GE_{it} = a + b_1 GB_{it} + b_2 X_{it} + \quad _{it}$$

The control variables we use in our models are log of public spending on health and education, GDP per capita and female labour force participation. The gender equality is proxied by two variables, Gender Development Index (GDI) and Gender Inequality Index (GII).

The dynamic panel estimates in Table 1 shows that gender budgeting is significantly and positively related to GDI in Asia Pacific countries. In the dynamic panel model, public spending on health and education, as well as growth, are found insignificant in determining GDI.

Note: lags(i), vce robust estimates and artests(2). The figures in the bracket refers to standard error.

Source: (Basic Data), UN Human Development Reports, IMF Gender Database and World Development Indicators

The results also show that GII is significantly determined by gender budgeting initiatives, public spending on health and female labour force participation. Spending on education and economic growth variables are found insignificant in reducing the GII. The estimates showed that a one per cent increase in public health spending in Asia Pacific can reduce GII by 0.0045 percentage points, while rise in female labour force participation can reduce GII by 0.0041 percentage points.

Impact of Gender Budgeting on Fiscal Space: Against a backdrop of fiscal consolidation and rule-based fiscal policy, countries in the region are increasingly adhering to a three per cent ratio of fiscal deficit to GDP. In India, the Fiscal Responsibility and Management Review committee has recommended the national and subnational governments to adhere to a debt-GDP ratio of 60%. In determining fiscal space, could gender budgeting be a determinant? To analyse this, we have examined sectoral patterns in public spending in education and health, and examined whether gender budgeting has any impact on public spending on these sectors. The dynamic panel estimates in Table 2 reveal that gender budgeting is found insignificant in increasing fiscal spending on health. We proxied Maternal Mortality Rate (MMR) as the gender-related health indicator, which was found significant in determining fiscal spending in health. Public spending on health increases with increase in economic growth.

Note: lags(i), vce robust estimates and artests(2)

Source: (Basic Data), UN Human Development Reports, IMF Gender Database and World Development Indicators

The dynamic panel estimates in Table 3 show that gender budgeting does not have an impact on fiscal space in the education sector. Moreover, the impact of gender budgeting on aggregate fiscal space has not been attempted, as the sectoral

inferences are insignificant. Overall GDP and the sectoral outcome indicators are found to be the determinants of sectoral fiscal space.

Note: lags(i), vce robust estimates and artests(2). The figures in the bracket refers to standard errors.

Source: (Basic Data), UN Human Development Reports, IMF Gender Database and World Development Indicators

Conclusion

Following the methodology of Stotsky and Zaman (2016), this study has analysed the impact of gender budgeting on gender equality indicators in gender budgeting and non-gender budgeting countries, at the aggregate level and disaggregated levels. Study has used the GDI based on equally distributed equivalent methodology to arrive at gender equality sensitive indicators on three dimensions – education, health and income

Table 2: Effect of Gender Budgeting on Fiscal Space (Dynamic Panel Estimates for Health Sector in Asia Pacific)

Variables	Coefficients
Lagged (health spending)	0.6795*
	(.0447)
Log of GDP per capita	0.0001*
	(0.0000)
Gender Budgeting in Call Circular	-0.0068
	(0.0167)
Maternal Mortality Rate	0.0017*
	(0.0007)
constant	6.3525
	(14.4790)

– as gender a combined equality outcome measure. Study has also used the Gender Inequality Index (GII) to capture the gender disparities in health, women's empowerment, and labor force participation. Study has categorized the countries into gender budgeting and non-gender budgeting based on whether countries have integrating gender budgeting processes in a formalized manner. Using dynamic GMM estimation for the panel data, the study has found that gender budgeting efforts have significant impact on gender equality sensitive indices as compared to economic growth. Public policy variables like public spending on health and education were also found relevant for the progress in gender equality in the region. Finally, study evaluated the impact of gender budgeting on increasing fiscal spending in health and education, using MMR

Table 3: Effect of Gender Budgeting on Fiscal Space (Dynamic Panel Estimates for Education)

Variables	Coefficients
Lagged education spending	0.7065
	(0.5473)
Log of public spending on health	0.8933
	(0.5774)
Log of GDP per capita	0.0020*
	(0.0010)
Gender Budgeting in Call Circular	0.1982
	(0.3511)
Female Literacy rate	-0.1893*
	(0.0991)
Constant	-172.6384
	(297.4006)

rates as a proxy for health and the gender disparity ratio in education enrolment (ratio of female to male students enrolled at the relevant schooling divided by the cohort of that age group) as a proxy variable for education outcomes. The implications of gender budgeting in these areas were insignificant. This has public policy implications as the countries in the region have not yet incorporated gender budgeting as a prioritization in their spending decisions in education and health sectors.

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The Study of Generational Effect on Work Psychology

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Abstract

The purpose of this paper is to study various work psychology parameters of multiple generational workforce, more specifically, the work behavior of generation X, generation Y, generation Z.

Reviewing research papers and article in human resource magazine, newspaper, analyzing academic texts, the paper examines difference in various parameters related to work psychology among three generation

The litrerartue review founds that three generations exist in the business world in present scenario – Generation X, Generation Y, Generation Z. Each possess unique attributes as they born in different environmental social and political factors. The different background, life experiences result in different work psychology for each generation.

Introduction

The present business environment is increasingly witnessing diverse and dynamic workplace due to mix of employees from different generations and intellectual orientation. (Singh, 2017). This multigenerational workforce is influencing the workplace with different psychology of behavior.

People from same generational cohort develop certain shared "generational characteristics", which effect their outlook on life and work. (Kupperschmidst, 2000; Glass, 2007; Dries et al. 2008). It is believed that their characteristics affect their work style, work ethics, communication preferences, leadership style preferences, perception of organization hierarchy, how they manage change, inclination toward team work, career expectation, motivational drives etc. (e.g. Kupperschmidst ,2000; Domeyer, 2006; Durkin,2007a; Glass,2007; Cater,2010;Venus,2011; Pita, 2012). Therefore by exploring each generation of employees, organization can understand the work psychology of all of them separately and this help organizations to customize human resource policies to satisfy and retain each of them. Thus, the main objective of this study is to uncover the various parameters of work psychology related to different generational cohort and reveal whether significant difference related to sixteen parametersof work psychology such as Personality characteristics, technical skills and abilities, change acceptance, training and development needs, engagement policies, emotional intelligence, leadership styles, motivational drives, organizational culture, preferences for communication style, learning styles, recruitment sources and selection process, work ethics, career expectation, perception about organization hierarchy, office design has been found among multiple generations in past researches. The paper there by intend to elaborate study of generational influence on parameters of work psychology.

Work Psychology

Work psychology is relatively recent term used by European psychologist to encompass business, industrial, occupational, organizational and vocational psychology. It studies the science of people at work. Patterson (2001) propose it as the discipline related to the well-being of employees at work. After Second World War, work psychology conceived in terms of two simple and memorable epithets "fitting the person to the job and fitting the job to the person."

Generations

Generation refers to people born in the same general time span who share key historical or social life experiences (Kupperschmidst, 2000; Smola and Sutton, 2002). The effect of those key life experiences tend to be relatively stable over the course of their lives (Smola and Sutton, 2002). Due to these distinct life experiences, each generation develops a uniquepersonality that determines its feelings toward authority and organization (Kupperschmidst,2000; Smola and

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Sutton,2002). Researchers have revealed that the different generations vary in terms of behavioral characteristics and work related values (e.g. Gursory et al. , 2013; Gursoy et al. 2008; Lancaster and Stillman, 2002). The generational personality determine what individual expect from work, what kind of workplace environment they want and how they put efforts to satisfy their wants and expectations. Due to generational differences, the wants and expectations vary from generation to generation. Therefore, people from different generations may have distinct work psychology. The three generation that comprises today's workforce are as follows-

Generation X includes people born between 1965-1979.
Generation Y includes people born between 1980-1994.
Generation Z includes people born between 1995 – 2009.

Generational effect and Work Psychology

Various studies has been reviewed in chronological order to examine generational effect on work psychology parameters such as Ralston et al. (1999)examined how the new generation of china differ from old generations in aspect of three values - individualism, collectivism, and Confucianism and it has found that the new generation managers are more individualistic, less collectivistic and less committed to Confucian philosophy as compared to old generations. The study has also mentioned that the change in values of new generation is due to the fact that they grew in the social reform era of openness and freedom. Another study had done to find the generation gap between baby boomers and generation X in Taiwanese workplaces. The research had done in manufacturing and education sectors and found that the significant difference between baby boomers and generation X in all aspect of work characteristics (Work values, work attitude and work expectations) in Taiwan manufacturing industry. However, the research had also found no difference between baby boomers and generation X in the education sector in Taiwan. The reason for the difference between employees with regard to work characteristics in the education and manufacturing sector was may be due to the varied nature of industries. Thus, the research indicated that the people who work in different industries show different work characteristics. Moreover, According to Greet Hofstede (1980), the Taiwanese culture is categorized as high power distance and collectivism. But the study concluded that the Taiwanese culture is changing towards individualistic approach and lower in power distance for generation X. Chun & Miller(2003). In a similar way, Yu & Miller (2005) in their study, has explored differences with regard to work characteristics and preferred leadership style between baby boomers and generation X in manufacturing industry and education sector of Taiwan. The research has found that there is generation difference in respect of work characteristics in Taiwan's manufacturing industry but no difference has found in education sector in this regard. The research has also found difference in terms of preferred leadership style between baby boomer and generation X as baby boomer likes to have task oriented leadership style and generation X wants to have relationship oriented style. However, no difference has been found in education sector in this regard too. The research has also explored that Twainese culture is changing from collectivism to individualism specifically for generation X, due to influence of foreign culture. Then, The study of Johnson &Romanello (2005)done on nursing students who represent multiple generations – Baby boomers, generation X, generation Y, have explained that the learning styles of each generation are different and suggested that faculty members should use the teaching methods according to the learning needs of multigenerational students and try to have balance generational learning styles for all the students from the multi-generations. In aspect of multigenerational and work environment,Westerman& Yamamura (2006)proposed differences among baby boomers and generation X and generation Y regarding three variables of work environment – system maintenance, goal orientation, and relationship dimensions. The result of the study indicated that the generation X and Y were more satisfied and engaged with the organization that are systematically organized and provides opportunity for goal accomplishment and success whereas baby boomers has given more importance to social interaction and cohesion at the workplace. But the study has combined generation X and Y into a single sample for analysis. Thus, left the scope to examine Generation Y separately in aspect of their unique workplace needs and demands. In another study related to work environment, Amy Glass (2007) had found that the main areas where generations differ at work place are work ethic, managing change, and the way the each generation perceive about organization hierarchy and also recommended that human resource departments should incorporate human resource policies, effective communication, collaborative decision making and training programs to overcome conflicts and to ensure smooth survival of diverse workforce. Moreover, the study has also mentioned about future generation group called generation Z or generation me and shown the scope for research on this generation group.

One study has done on multigenerational working population of public sector organizations where Dwyer (2008) had given views on impact of four generations (veteran, baby boomers, Generation X, Generation Y).The author had studied that the each generation has different characteristics, competencies and the major differences had been found between baby boomers and generation Y. Moreover the paper has also mentioned the fact that employees are face of the organization and it is good for the business of organization to have

employees who reflect the age composition of their customers. The author has also suggest in the paper the organization should implement those strategies and techniques that help organization to satisfy each generation and keep them connect and create integration between various generation in the work place. Gursoy et.al (2008) has done study with the objective to examine generational differences and similarities among hospitality employees and managers through focus group discussions and the findings of the study were that baby boomers, generation X and generation Y are different in many aspects like baby boomers are workaholics, they are loyal and have patience to wait for their turn for promotion and rewards, Whereas generation X has found to be fun loving employees, want to live life in an enjoyable manner as well as wants immediate acknowledgement, promotions for their efforts. Generation Y has found to be optimistic and enthusiastic generation who also believe in teamwork. Both generation X and generation Y found to be technology savvy as compare to baby boomers. The study has also examined the perception of generations for one another and found that younger generation respect older generation and also older generation can be mentor to them. Moreover the study has suggested that the understanding of generational differences provide companies to lower down generational conflicts. Thus different generations have different work values, has also been proved by the study of (Chen& Choi) 2008, in which the authors have explored hospitality industry and examined the differences among three generations of managers and supervisors with regard to work values. In the study, fifteen work values have identified – Achievement, Way of life, Altruism, Intellectual simulation, Supervisory relationship, Creativity, Independence, Security, Economic return, Prestige, Variety, Surrounding, Management, Associates, Aesthetic and then given them ranking for each of the generation as per the importance given to them by each generation group and revealed that all generations have shown similar importance to that way of life and achievement out of these fifteen work values. The study has also mentioned differences of work values among three generation groups of hospitality managerial workforce asgeneration Y hospitality manager gives more preference to economic return as compare to older generation who were more concerned forintellectual simulations.

Thus, the above studies proposed that each generation has certain set of values,and organizations also possess and deliver values (Millerand Yu, 2003). This concept refers as Person-organization value fit. The fit is assume to happen when the values supplied by organizations satisfy an employee's value. But in the era of generational diversity, this seems to be difficult task. On this regard, Cennamo& Gardner (2008) had examined generational differences among three groups-Baby boomers, Generation X and Generation Y. The study has found that all three generations are different with regard to person-organization value fit.Baby boomer were satisfied with extrinsic values (good pay and benefits) provided by the organization while younger organization gives importance to intrinsic values (status and progress). It's important for the success of organization that person values must match with the values of organization, otherwise organizations would not be able to satisfy and retain their employees.

The few studies have also been done to find different career expectations of employees belongs to different generational cohort like Dries et al. (2008) in their study have examined that the four generations (Silent generation, Baby boomers, Generation X, Generation Y) have different belief about career, career type, career success evaluation, importance gives to organization security. In a similar manner,Hess &Jepsen (2009)havefound small difference in perception about psychological contract among employees belong to different generation cohort and career stages. Moreover, the study has also explored that due to technological changes, downsizing, restructuring, stability of employees have reduced and they look for portean career which ensure their employability in change work place context.

Thus the studies have also indicated that the multigenerational workforce has been continue to prevail for long years as young workforce will continue to arrive and old workforce is also not going to leave any time soon as their experience and expertise are very much imperative for organizations. Thus, organizations need to embrace and respect differences of each generation to get higher productivity, employee satisfaction, and to be an inevitable part of changing world (Dwyer, 2009; Wilson, 2009).
Since 2010, the studies have been focused on generation Y, also called as millennial generation, as this cohort became an emerging workforce in organization during this period. Hershatter& Epstein(2010) in their study had described characteristic of generation Y for whom technology is an integral part of life. The paper had explored that members of generation Y use technology as medium for communication, they are early adaptors of new techniques and tools for their work. This is the more confident generation as compare to older generations. They want to work for organization that provides clarity in goals and support in accomplishing them. Moreover, the paper had also mentioned expectations of generation Y from their work place like flexible working hours, good relationship with older generation and non-hierarchical structure. Generation Y also expects ample opportunities for growth and development, which can be full filled by providing training, coaching and mentoring. The study had also revealed, generation Y as the loyal generation and wants to be

responsible citizen of the society. At last, the study defined this generation also as change agent, who with technology and collaborative nature wants to move forward and create next workforce. Another study had found significant differences among generations with regard the four work attitude variables- overall company and job satisfaction, job security, career development & advancement and recognition and revealed that millennial have been more satisfied with the job and their company, feel more secure, look for better growth opportunity and enjoy recognition as compared to old generations. Kowske et al. (2010)

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The few studies have stated that different generation groups have different expectations of their physical working environment.Haynes (2011) had mentioned the findings of OXYGENZ research project that offers insight into the expectations of generation Y workers with regard to workplaceand also examined the findings of The Welcoming Workplace research project that explored the workplace expectation of older generations. After analyzing both projects, the paper has revealed that workplaces are going to be multigenerational in the future and each generation has unique characteristic and different expectations from working environment. Thus, employers need to create an environment in which each generation can adjust and accommodate satisfactorily. Moreover, the paper has also suggested the scope for future research, to examine how different generations interact with each other and how the workplace can be a catalyst in facilitating these interactions. (Joy & Haynes)2011 had also done case study analysis of Leeds City Council workplace in the UK regarding different office designs for multigenerational knowledge workforce and found that there are some key variations between the preferences of three generation regarding formal and informal meeting spaces, as younger generation like to have informal meeting space, on the other hand older generation wants to have private space for meetings, but are happy to use informal space for casual discussion. However, generation X has appeared to be neutral. Another analysis was that, all the three generations agreed that mentoring and team based environment is essential for knowledge sharing among them.

Due to generational diversity, conflicts may emerge at the workplaces and for the smooth functioning of organizations its profusely important to manage inter-conflict of multi generations, and regarding this Bennett et al. (2012) has examined differences among traditionalists, baby boomers, generation X and generation Y, and presented strategies for how to manage inter- generational conflicts, to transit knowledge from generation to generation, and how to attract and retain new generations. The study has also recommended collaborative and virtual work place, mentoring, flexible work style as key essentials to provide satisfied working environment, which also helps to satisfy the demands and expectations of new generations. Moreover, the study also mentioned about generation Z, who would become future employees, also indicated that with longer life expectancy of older generations and acquisition of new generations, in the less than ten years, organizations would have to manage fivefold multi-generational workforce.

Now in twenty first century, the multi-generational workforce has become important component to be discussed and researched. Thus many studies have been undertaken on distinguish parameters such as - (Eastman & Liu) 2012 has found significant differences in the level of status consumption between baby boomers and generation Y. The study has also examined that the relationship between generational cohort and status consumption is only due to generation, there is no influence of demographic variables like age, income and education. The paper has also interpret that generation Y has more inclination towards social status.

Helyer& Lee (2012) had explored that workplaces have dominated by multigenerational workforce. They have both older and younger generations, the aged workforce is comprised of immense experience and skills to work whereas younger generation has energy, enthusiasm, flexibility, high qualification but lack of experience to work. The study stated that employees are valuable asset for the organization as well as high qualification, knowledge of new technology etc., are also important at the workplace. Thus author concluded that having mixed generation at work place raises challenges but also brings opportunities by mutual learning, sharing, mentoring and creating balance of experience and fresh ideas.

Kian &Yusoff (2012) had found significant differences in extents of satisfaction for both intrinsic and extrinsic factors based on Fredrick Herzberg two factor theory on Generation X and Generation Y in electric and electronic industry in Malaysia. The findings of the study presented that generation Y respondents are having less satisfaction on Intrinsic and Extrinsic motivational factor as compare to generation X. The study had also revealed that working environment, working conditions, company policy and administration have match with generation X work preferences but fail to satisfy generation Y.

Another study conducted byHernaus&Vokic (2014) revealed significant difference for job characteristics across three generations (baby boomers, generation X, and generation). The study has categorized job characteristics into two parts, one is task job characteristics, it comprises of work autonomy, task variety, task significance, task identity, and another is social job

characteristic, it comprises of interaction with others, initiated interdependence, received interdependence and teamwork. The results indicated that four out of eight characteristic differ significantly across generations, like work autonomy is significantly higher for baby boomers than for generation X and Generation Y, in a similar way, interaction with others is significantly lower for generation Y, and initiated interdependence is significantly higher for boomers, and teamwork is significantly higher for generation X as compare to generation Y.

The analysis also shown that task variety, task significance, task identity and received interdependence are not significantly different job characteristics across three generations. Moreover the study has also indicated the scope of future research on generation Z

Similar kind of study had explored generational differences for Job involvement, organizational commitment, professional commitment, and team commitment and findings of the study indicated that difference exist among generations for above variables and also revealed that younger generations are more committed to their profession and are less committed to organization. Singh & Gupta (2014)

Glass (2014) had reviewed many studies and revealed that the three generations exist in the organizations are different in terms of work ethics and relationships, the way they perceive change, the perception about organization hierarchy, the way they adapt technology. Thus organizations need to understand the unique characteristics and working style of all generations, so that conflict among all could be minimized. The paper also recommend need for future research to understand the motivators of all generations to ensure high productivity.

The youngest generation called generation Z or digital generation or post millennial generation is now entering the organizations. The generation is identifies as different on various aspects of pace of life and value orientation, which distinguish them from previous generations.Torocsik et.al. (2014)

Yigit&Akasy (2015) had examined the differences between generation X and generation Y with regards to individual innovativeness. The study was conducted on working individuals belongs to generation X and Generation Y in health industry.

The authors of the paper assumed that the generation Y would be more innovative as compare to generation X, because the generation Y is characterized as very creative, technological advanced and new. Surprisingly, the findings of the study were different, as the study founds, Generation X is more innovative than Generation Y.

The reason behind this result is described as, most of the population of generation X in health industry was physicians and they are highly educated professional group within their society and institution. The study had explained that people who reached at higher level in their professional life and got experience are more innovative than the people who are new and less experienced in the profession. Hence, the results of study has proved, in the health industry Generation X has high innovative level than generation X.

The study was confined to health industry, the same kind of study could be done in other sectors to understand the innovations of generation X and Y.

Rani & Samuel (2016) had proposed that generation Y's retention level is low as the generation has shown higher discrepancy between personal values and organization values as compared to older generations, due to this, generation Y's intention to leave the organization goes up.

Conclusion

One of the major challenge that organizations face in twenty first century is how to manage multi-generational workforce that depict diverse work behavior. After reviewing various researches mentioned above, the epitome of the study is that each generation is different from another in various aspects such as competitiveness, work values, work ethics, career expectations, job characteristics, organizational commitment, working style etc... However, most of these studies have been done in different countries. Dearth of studies have been found in Indian context. And also most of studies have taken one or two parameters related to work psychology to prove the difference among generations. No study has taken wider aspect of work psychology. Moreover, the studies have grouped the generations intothree or four categories following the economic,political and social event that have occurred in the country in which studies belong to. In Indian context, the same events cannot be applied to segregate the generations. According to Robbin et al. (2011) the Indian generation can be classify namely as socialist, Liberals, Generation X and Generation Y. Singh &Bindu (2011) in their study explained this classification as the people who grew up and joined workforce in socialist environment in the post-independence period have been classified as socialist. Government of India initiated the process of liberalization in 1991 and employees who entered the workforce during this period are called Liberals. Generation X are those whose life has been shaped by globalization, two career parents, MTV, AIDS, and Computers. Generation Y grew

up during prosperous times. This is the first generation to take technology for granted. Thus, further research is required to study generations as per Indian context.

Another important aspect of future research is generation Z. The youngest generation Glass (2007); Bennett et al. 2012; Hernaus&Vokic (2014) of the present scenario who has been started entering the workforce.

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Forensic Accounting: An Investigative Technique for Digital Environment

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Abstract

The modern digital environment is providing new opportunities for both perpetrators and investigators of fraud. It has changed the way examiners conduct fraud investigations, the methods internal auditors use to plan and complete work, and the approaches external auditors take to assess risk and perform audits. With financial frauds prevailing in digital environment, accountants are considered to be the most helpful people for investigating them. Indeed, investigating frauds in a digital environment involves plethora of different technologies, methodologies, and goals. However, it is required that forensic accountants in digital environment must be specially trained to investigate and report digital evidences in the courtroom. The present study presents techniques and methodology in helping accountants' ability to investigate the financial irregularities in the current accounting environment and in developing accountants' skills in both critical thinking and effective writing which in turn enable them to cope with the accounting changing environment and services. This paper reviews the different aspects of fraud detection in digital environment. In particular, it describes each topical area, its research to date, and needed research for both professionals and academics

Keywords: *Fraud, Digital Environment, Forensic Accounting, Investigators, Forensic Accoutants*

Introduction

The accounting profession is witnessing major changes due to updation and reforms in technology. In addition to traditional accounting services, accountants are involved in services like attestation reviews, forensic accounting, and fraud examinations. It is required that today accountants must possess the knowledge of remaining updated and the skills to critically analyze various problems. Listening effectively and understanding opposing views are critical skills required for accountants. Often, accountants must present and defend their own views through formal and informal communications. Professional research and communication skills are essential in this environment. In response to these changes, understanding how to perform accounting research/investigation is becoming of utmost importance.

Cracking down on fraud is important for a country that is developing and needs investment. According to KPMG Fraud Survey white-collar crime in corporate India has witnessed a major increase over the last two years. It has adverse impact on international investors and entrepreneurial spirit in India. Corruption in Indian business is endemic and greasing the palms of business associates is almost like a custom.

Forensic accounting is the field which is called upon for addressing the issues of prevention and investigation of white collar crimes. Needless, to mention the case of Harshad Mehta, Hiten Dalal, Batliwala & Karani, M/s V.B. Desai, N.K. Aggarwal & Co., Mukesh Babu, Ketan Parekh and Ramalingam Raju's Satyam etc. which have put question mark on the efficacy of the existing regulation regime of Indian financial market. In spite of so called regulatory mechanism, the significance of Forensic investigation of accounts has come to limelight due to rapid increase in financial frauds and white collar crimes.

This study argues that accountants need to apply the knowledge of research to problems for developing effective skills in research and analysis by focusing on today's professional accountants who use online databases for finding justifiable authoritative solution's to accounting, and fraud investigations of problems. Therefore, varied skills are needed in for enhancing awareness the accountant's critical thinking and effective writing skills for future practice and of technological advancements and business databases (Resnick, 1987; Boostrom, 1992).

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History & Threads of Forensic Accounting

The main individual to come up with this concept was likely Maurice E. Peloubet in 1946. Kenneth W. Robinson proposed that there is collaboration to be completed by legal advisors and accountants. In the next year, George B. Pearson, Jr., gave 10 notices to the bookkeeper who intended to benefit an occupation on the testimony box. Max Lourie, a legal advisor utilized in the New York Supreme Court distributed an article in which it was proposed that he most likely designed the term Forensic accounting, despite the fact that his article seemed seven years after Maurice E. Peloubet had evidently instituted the term.

As a summary, Economics as a field of study was the first to say Forensic accounting a few centuries back. Forensic accountants have been around for about 200 years. The latest reference was found in 1824 in bookkeeper's publicizing round in Glasgow, Scotland. These accountants gave declaration in court and in assertion procedures. One of the basic foundations was to utilize the administrations of such investigative accountants was the IRS. The tale of Al Capone the popular mobster being gotten on a duty avoidance plan is notable. As a call, forensic accounting kept on developing amid the last 50% of the century, as GAAP and expense laws got to be across the board and compulsory.

Forensic accounting can be followed as far back as 1817 to a Canadian court choice of Meyer v. Sefton. Therefore, the site of the Association of Certified Forensic Investigators of Canada keeps up that the field of Forensic and investigative accounting had its beginning in Canada. Seven years after the Canadian case, on March 12, 1824, a bookkeeper by the name of James McClelland began his business in Glasgow, Scotland, and issued a round that publicized the different classes of measurable sort work he was set up to embrace.

The following are some major milestones in forensic accounting:–

- 1942: Maurice E. Peloubet distributed "Forensic Accounting: its place in today's economy."
- 1982: Francis C. Dykman composed "Forensic Accounting: The Accountant as an Expert Witness."
- 1986: The AICPA issued Practice Aid # 7, delineating six zones of case administrations – harms, antitrust examination, accounting, valuation, general counselling and investigations.
- 1988: Association of Certified Fraud Examiners set up
- 1988: another class of criminologist books where the Forensic bookkeeper was the star.
- 1992: The American College of Forensic Examiners was established.
- 1997: The American Board of Forensic Accountants was established
- 2000: The Journal of Forensic Accounting, Auditing, Fraud and Taxation were established.

Theoretical Background

Dramatic changes are occurring in the accounting environment: new technologies have an impact on many financial statement filings, and the need for specialized online database research skills continues to expand. In the accounting profession, research points to what the accounting practitioner does as an everyday normal part of his or her job. In today's environment, to become proficient in accounting, accountants must also possess the skills to use various professional databases, which are increasingly available on the Web. Using professional databases for research is even required on the computerized CPA exam.

Inquisitiveness is required while gathering the required facts for obtaining a clear picture of the research problem. Proper problem definition or issue identification is most important aspect of research. An improperly stated issue usually leads to the wrong conclusion, no matter how the research process carefully is implemented. The accountant must carefully examine the facts, obtain and review authoritative literature, evaluate alternatives, and then draw conclusions based on research evidence. The implementation of an efficient research project requires thoroughness and patience. This is emphasized in both the planning stage, where all relevant facts are identified, and the research stage, where all extraneous information is controlled. Finally, the accountant must work persistently in order to finish the research on a timely basis.

Furthermore, the connection between accounting and fraud in digital environment is both straightforward and important (Bagranoff et al., 2010). Managers, accountants, and investors all use computerized financial accounting information for controlling valuable resources, authenticate accounting transactions. But effectiveness of these activities can be lost if underlying information is wrong, incomplete, or seriously compromised. This is why digital information in itself is a valuable asset that must be protected. Although the terms "computer crime" and "computer abuse" seem to describe the same issue, there is a delicate difference between them. The type of computer crime with which most professional accountants are familiar is financial fraud.

Review of some known financial fraud and forensic accounting approaches In general, the categorization of fraud can be complex as it can be performed in many ways and appeared in different forms like crime, corporate fraud, management and

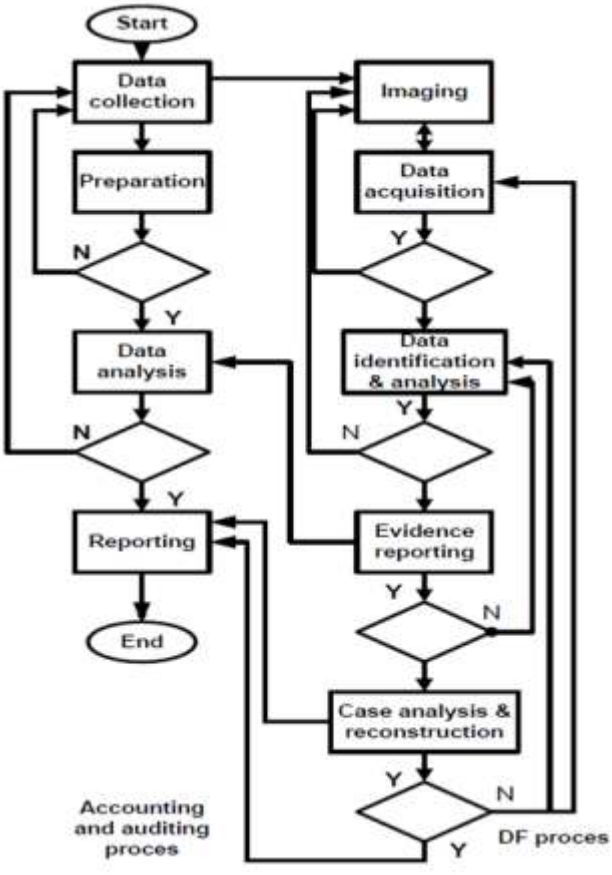
occupational fraud, person's dishonesty, intentional deception, etc. Therefore, fraud, theft, irregularities, white-collar crime and embezzlement are almost synonyms. The main factors that could initiate someone to commit fraud include opportunity, rationalization (or personal justification for doing it) and any kind of financial pressure against someone. The financial pressure is certainly a motive for the fraudster to steal. The rationalization describes how fraudsters justify their criminal actions? The opportunity can emerge when the perpetrator is in a trusted position somewhere followed by weakness in, or absence of internal controls that provide the circumstances for the fraudster to commit a crime. Tools like CAATs (Computer Assisted Auditing Tools) 9 , are currently used to deal with big financial data sets, process complex transactions and help accountant with implementing auditing procedures, such as :

a) Testing details of transactions and balances;
b) Identifying inconsistencies and transaction's fluctuations;
c) Sampling programs to extract data for audit testing;
d) Testing general and application control of computer, and
e) Redoing calculations performed by the accounting systems.

The forensic accounting process differs from regular financial auditing, searching only for suspicious transactions, and using a strict digital forensic process. This process consists of many steps such as identifying, recording, settling, extracting, sorting and reporting exceptions, oddities, irregularities and suspicious transactions, and verifying digital financial data and other accounting activities, with the purpose of making a firm evidence for legal process. Unfortunately, there is no standard procedure to discover all kinds of the frauds yet, as each fraud is a specific case.

Integrated Forensic Accounting Investigative Process Model

As most frauds involve complex financial matters, most logical people to investigate them are accountants. However, fraud can be complicated and a digital forensic analyst (DFA) has to be involved in financial fraud investigation process. As financial fraud involves deliberately overstating assets, revenues and profits or understating liabilities, expenses, and losses, in such a way that the DFA cannot understand properly, expertise of the professional accountant is inevitable. Otherwise, for avoiding the DFA service, the accountants have to be specially trained for digital forensic investigation and analysis. Therefore, employing forensic, accounting and auditing investigative skills into an integrated investigative process model (Figure 1) seems to be very effective in practice.



This process model is a dual processing one. Both accountant and digital forensic analyst (DFA) work together on the same financial fraud case. First, the accountant collects all the available physical and electronic data and information regarding the current fraud case and prepares resources for their analysis. At the beginning of digital forensic investigative process, the DFA takes forensic image of the suspected computer hard disks and/or of financial applications (e.g. MS Excel financial reporting file) and all the other forensically pertinent information. Thereafter, they work separately, but interactively, literally at each decision making point. While the accountant and internal accounting auditor analyzes all of the collected written and accessible electronic documents, data and information and the other important evidence, DFA extracts relevant forensic data from the image in acquisition phase, identifying leading data and analyzing them in the next investigative step. After building firm digital evidence regarding the case, the DFA gives it over to the accountant prior to the final reporting phase. Actually, they together reconstruct the case and make final report to the sponsor (e.g. owner, court or any other stakeholder).

Techniques & Tools Used By Forensic Accountant To Detect Frauds

Technology is too complex to understand and if there is an element of fraud it becomes even more complicated. Misuse of data and losing the data is the biggest concern. There is no physical intervention can be identified whereas manipulation is concern hence forensic accountant techniques are utilize d to detect and prevent frauds in the organization. The top management executives should be trained on these tools so that they can identify the frauds timely. Nowadays different software's are available generating various reports on the basis of techniques and tools inbuilt in them. They generate exceptional report which is very useful for them to cover both occupational as well as technological fraud. Banking, Insurance and other financial institution are at greater risk especially dealing with so many customer located outside the office connected through internet. Hence therefore to build confidence in them and to safeguards the resources it is highly important that expert assistance to be taken who are well trained in the tools and techniques of forensic accounting.

The following techniques are effective in detecting fraud:
i. Benford"s Law :

This theory was discovered by Frank Benford and theory came in to place in the year 1920. He practices this law on various observations like on stock market, density of population. He used a formula based on the probability (P (n)= log (1+1/n). From so many years this theory is used for selecting the transaction for the scrunity.Audit has the limitation and hence there is always a sampling risk associated with it. From this pattern of data it highlighted the transaction that can be fraudulent. However these laws are not applicable to personal information of customer, debtors or client. Even customer's mobile number or pin codes are excluded from it. There are various software that helps in performing this law. The law defines range of number and if that number is beyond the range given in these law than there may be a chance of fraud. Indeed this law has provided guidance to select the transaction. Such selection becomes the bench mark for the selection criteria. Hence using this law auditor can derived his judgment and can reduce his sampling risk.

Theory of relative size factor (RSF) :

One of the specialized techniques that helps the examiner in identifying uncommon transaction from the system. This can be done by comparing other transactions over the time period. For example if travelling expenses shown say Rs 45000 for financial year 2016-17 , Rs 15000 for the financial year 2015-16 and for the year 2014-2015 it showed Rs 18,000 than in such case travelling expenses are increased by three times. This information becomes useful for the examiner to go and drill down further. Only expectation may be due to expansion or increase in number of employee the expenses have gone up. Therefore just because the numbers are high as compared to last few years does not classify it as fraud but creates an opportunity to look the details in depth. It becomes easy for the examiner to select the items from the list.

Genogram & Timelines Analysis:

The theory was developed by Monica MC Goldricks and Randy Gerson to understand the family history of the person. It is advance level of family trees. In family trees only name of the family members are shown and are one of the drawback. However this theory creates an image in the form of pictures which can show the family relationship, organization structure and financial information connected to them. This is a great help in the martial dispute or family disputes pertaining to property rights. There are various software such as genopro genome analytics and I-Genogram for the Ipad are available in the market which can creates this kind of charts in different color and codes. These software helps the users to feed their details in it and then the individual can see flow of financial transaction in the family history. This software is used generally by the medical practitioner to understand the genetic related disease. Different models are created through which the investigator identified the unearth information. Thus as the

image is created and with the help of flowcharts the jobs of investigator becomes pretty ease to understand the case.

Trending:

Trending is one of the important techniques to identify frauds. The examiner has lot of data on that even he may have documentary evidence to check on this data. He has to really focus on the transaction which is exceptional in nature. It is difficult for him to identify this transaction from the current date. If he compares the current data with the previous year data he can easily identify the fraud. For example if we compare the sales data over the year and also the same with the Bad debts taking place in the organization than it becomes easy to understand that if sales are increasing and bad debts are also increasing at the same level than this could be concluded that such bad debts are nothing but the fake sales bill entered in the system. Such fraud could not be identified unless this are compared over the period. It may sound correct for that financial year but may not be the same case for the over the period years. This technique is useful even to see the movement of inventories. This also helps top management in decision making.

Data mining:

In an organization data is of prime important. Data can be understood as meaningful information and can be on customer related, vendor list, bank details, survey reports and even financial transactions. Banking industries data are available on the public domain which again is at great risk to them. Hence data mining concept is important to understand that how a company should handle their data, retrieve their data and also how to understand and creates the pattern of the data. There are basically four steps in mining the data they are i) Classification, ii) Clustering iii) Regression and iv) Association rule learning.

Computer Forensic Tools:

This is an extended version of the analysis to understand the process as well as the storage of the data. Auditors are only concerned with financial transaction on the other hand expert not only analysis the transaction but also are involved in to understand the blueprint of the software and hardware part of the concern. They want to understand the inner system of computer hardware so that they can be sure that the system is fool proof from any fraud and damage. Therefore they are interested in knowing the cache memory, disabled of floppy disk and pen drive. Policies regarding the backup plan of the organization, antivirus for protecting the software and they assess more toward protection of the data of the organization. Their role is very important especially in industries like banking where almost all transaction is done at public server. They are accessible through internet and therefore at higher risk.

Computer Assisted Auditing Tools (CAATs):

CAATs are PC programs that the reviewer use as a major aspect of the review methods to process information of review criticalness contained in a customer's data frameworks, without relying upon him. CAAT helps reviewers to perform different evaluating methodology, for example, (a) Testing points of interest of exchanges and adjusts, (b) distinguishing irregularities or huge changes, (c)Testing general and application control of PC frameworks. (d) Sampling projects to concentrate information for review testing, and (e) Redoing figuring performed by bookkeeping frameworks. Smith (2005).

Advanced Statistical Techniques:

As the fraud has been increased in the organization, simple techniques could not be helpful to identify such fraud and hence statistical tools should be used to analysis such data. Nowadays data are large in number and cannot be controlled for example in bigger organization there may be large number of employee and hence their payroll data and other relevant data to analyses becomes difficult therefore with the help of computers this statistical tools becomes easy to analyse.

Reports and Survey on Frauds Related To India

Following reports helps us to understand that the upward trend in increase in frauds in India. Government has appointed Serious Fraud Investigation Office to identify fraud. Some of the important reports published on Fraud in India are as follows:

53rd Reports issued by the ministry of Corporate Affairs (March 31, 2009) The report issued by Ministry of Corporate Affairs Government Of India there were So far, 68 cases including Satyam Computer Services Ltd, have been referred to investigation officer

54th Annual Report issued by the Ministry of Corporate Affairs (March 31, 2010) The highlights of the reports were appointments of Investigative officer Serious Fraud Investigation Office (SFIO) as the fraud in the Indian companies were increasing. Bench mark were fixed to control like value of fraud, share capital contribution etc.

KPMG Survey (2011): Survey was conducted on the bribery and corruption in India reflecting that there has been an increase in the cases of bribery and corruption because of unequal growth in the development of the country. Further there is no equal

increase in the income of an individual. Keen competition among the competitor of the goods and services has been also a strong reason of the increase. Nearly 50% of the survey agreed that there would be no change in the corruption. Survey identified that weak internal control and the unrealistic target to be achieved were some of the main reason.

Deloitte India Fraud Survey Edition I (December 2014): Purpose of the frauds survey was to make organization aware of fraud risk. Focus of the report was detecting and preventing the fraud. The report covers all area of frauds including ecommerce, cloud computing, social media, technology fraud and occupational fraud. The highlights of findings of the survey were that 56% of the responded believed that incidents of fraud will rise in the next two years. Financial Services, Real Estate, Infrastructure including Social Government Sector were most susceptible to fraud.

Deloitte India Banking Fraud Survey Edition II (April 2015) helps in understanding how banks functions with a high risk of technological fraud.

Steps Taken By Government for preventing and controlling fraud:

The Government's role is critical in the global environment that is why the Government has made changes on cyber-crime time to time for increasing the scope of frauds in ecommerce activity. The Information Technology 2000 and the I.T. Amendment Act 2008 have dealt with the cases on Cyber –crime and had really played an important role in dealing with internet related frauds.

Reserve Bank of India: It was decided that local area banks and selected Financial Institutions were made aware regarding Fraud Reporting and Monitoring Policy. A Central Fraud Registry has been created with effect from January 20th 2016.

Companies Act, 2013 Fraud & Compliance:

Companies Act, 1956 provides punishment for fraud in various sections, however it was required to make changes due to increase in fraud and to regulate them. Some of the provisions are as follows of Companies Act 2013:

a. Introduction of new section 447 provides: provide any act, omission, concealment of any fact or abuse of positions with an objective to deceive, to gain undue advantage from, or injuring the interests of the company or its shareholders or its creditors or any other person, whether or not there is any —wrongful gain or —wrongful loss.
b. Strict Penalty provision that includes imprisonment (from 6 months to 10years) and three times of the amount in certain cases. Even some of the penalty are considered to be so severe that culprit is not likely to get the bail.
c. Strict provision on independent director u/s 149(12) where even they resigned , will be liable for any frauds occurred in their periods.
e. Actions in pursuance of inspector's report on disgorgement of assets, properties or cash generated as a result of fraudulent activity.
f. Prohibition and penalty for insider trading u/s 195. Imprisonment up to five years or a fine up to INR 250 million or three times the profits made, whichever is higher.

Circular Issued By Securities And Exchange Boards Of India On :

a. **SEBI /HO/MIRSD/MIRD4/CIR/P/2016/119** dated November 1, 2016: on Enhanced Standards for Credit Rating Agencies:
SEBI constituted a committee on Strengthening the Guidelines and Raising Industry Standards for Credit Rating Agencies (CRAs), that included representatives from all the CRAs with an objective to cautiously measure upon and rules for bringing about greater transparency in the policies of the CRAs, improving the ethics followed by the industry and, thereby, helping in easing out understanding of the ratings by the investors.
b. CIR/CFD/CMD/4/2015 September 09, 2015 :
In order to protect interested investors SEBI has instructed the company to inform their investment decision on regular basis and some information that is required on real time basis. However they should report on the common format and they should take this steps on a positive note.

Forensic Accounting Applications around the World

United Kingdom

Over 160 cases of serious fraud with charges of above £100,000 came to UK courts in the first half of this year, which is the highest number of cases in a 6-month period in the 21-year history of its Fraud Barometer as per KPMG. The cases had a total value of £636 million which, if replicated in the second half of the year, would also lead to the highest value of fraud in the Barometer's history (currently £1.2 billion in 1995). Professional gangs were the most active perpetrators of fraud, with 70 cases worth some £450 million, and their main victims were investors, who suffered to the tune of £320 million. Much

of this stemmed from a £200 million investment fraud case involving the attempted fraudulent sale of the Ritz Hotel in London. Company managers were also active participants, responsible for £150 million of fraud against their own employers in 32 cases. Government suffered £150 million of fraud, mostly in form of tax and duty evasion and fraudulent benefit claims. The main sufferers in terms of number of cases was the financial sector.

Canada

In Canada, forensic accounting is a profession. However, the Certified General Accountants Association of Canada comments that recognizing the profession of fraud investigation is relatively new and such duplication of effort by the CICA in developing standards for its IFA specialty is inefficient and may be confusing to the public and to fraud examiners designated by the ACFE. As such, CGA Canada supports efforts at establishing a national or international joint effort which promotes inclusion. Above all, the exposure draft process of the CICA should not be a vehicle for by which to embody these CA-IFA standards in the CICA Handbook. Choosing such an administrative method to approve these CAIFA standards as part of the handbook circumvents the authority of the Accounting Standards Board and the Auditing and Assurance Standards Board to consider and approve applicable standards.

Australia

The forensic accountant works within an environment that also includes government, industry, and professional regulators. The forensic accountant's work may be in conjunction with these entities or with consideration to the rules, regulations, and guidelines enforced by them. The regulator depends on the nature of the engagement. Some of the most relevant and commonly encountered regulatory bodies in Australia include the following (Dellaportas and Gibson 2005):Australian Securities and Investments Commission (ASIC),Australian Tax Office (ATO), Financial Action Task Force (FATF),The work of Australian Federal Police (AFP), state and specialist police.
In addition, Australia is one of the most important countries which have educational program in forensic accounting in graduate degree. The master of forensic accounting emphasizes a forensic rather than a control-based or risk management approach to the analysis of corporate governance and the possibility of fraud, other forms of misconduct, abuse, and corruption. Both courses build on the expertise acquired in undergraduate and postgraduate studies and/or business experience in the areas of corporate regulation, corporate governance and ethics, financial accounting and audit, and finance and banking and management.

The United States of America

On 30 July 2002, landmark legislation known as the Sarbanes-Oxley Act (SOX Law) was enacted into the United States Law which seeks to restore investor confidence in the US financial markets, corporate governance, and financial reporting. The Sarbanes-Oxley Act was passed by the US legislature due to various accounting scandals that took place like Enron, WorldCom, and Xerox, all of which seriously undermined investor confidence. Through strictly United States legislation and its impact is far reaching on the accounting and financial markets. The Act applies to all Securities and Exchange Commission (SEC)-listed companies, and so extends to subsidiary and associated entities of SEC-listed companies outside the USA.

The Enron and WorldCom scandals highlighted the role of auditor in ensuring the integrity of financial reporting, and in particular, the auditor, as an independent and objective professional. The Act prohibits professional accounting firms from providing non-audit services to audit clients, with exception of tax services and specialist management advice. Non-audit services specifically include appraisal or valuation services, and fairness opinions that are traditionally the work of the forensic accountant. Investigation services, often related to audit issues, are not prohibited unless there is a requirement to provide court testimony.

In USA, forensic accountants have been employed by set ups like the Federal Bureau of Investigation (FBI), Central Intelligence Agency (CIA), Internal Revenue Service (IRS), Federal Trade Commission (FTC), Homeland Security, Bureau of Alcohol, Tobacco and Firearms, Governmental Accountability Office (GAO), and other government agencies. Main focus is on what is referred to as white-collar crime, notably fraud. Outside government employment, big employers of forensic accountants include financial intermediaries like banks and insurance organizations plus divorce attorneys. Forensic accountants often testify in civil and criminal court hearings and serve as expert witness. They do not testify as to whether fraud has occurred. This is the court's decision. The expert witness presents evidence.

Forensic accountants have number of organizations that support their work. The US Government Accountability Office (GAO) is encouraging people to use its FraudNet system to report waste, fraud, abuse, or mismanagement related to funds distributed under American Recovery and Reinvestment Act of 2009. The $787 billion stimulus act was signed by President Obama on 17 February. FraudNet is an e-mail, phone, and fax hotline that processes allegations about federal agencies and federally funded programs. Tips may be provided anonymously,

and the GAO keeps all inquiries confidential. The GAO may refer allegations for follow-up to its own investigative units, appropriate inspector general offices, or to the Justice Department.

Conclusion

As world is reforming due to information and communication technology, the pattern of frauds has also changed. There has been an increase in technological frauds which is mostly done through employee of the company i.e. occupational frauds. As per surveys done by the various agencies and reports frauds are affecting economy as a whole, hence increasing the role of forensic accountant is very important in such digital environment. Techniques discussed above can be useful in identifying and avoiding fraud and hence internal auditor; lawyers should use such techniques to identify frauds. Even government is taking necessary steps to safeguards the economy from frauds.

Detection and prevention of corruption have given rise to forensic accounting. Forensic accounting, which has been growing rapidly as a profession in the world and has been accepted as a profession in countries such as Canada, Australia, the USA, and the UK, is beginning to gain the importance that it deserves.

As world is reforming due to information and communication technology, the pattern of frauds have also changed. There has been increased in technological frauds and such frauds are mostly done through employee of the company i.e. occupational frauds. Role of forensic accountant is important in such digital environment. Techniques discussed above can be useful in identifying and avoiding fraud and hence should be used by internal auditor. Even government is taking required steps in safeguarding the economy from frauds. Occupational frauds can be prevented by effective Corporate Governance as most of the frauds are done with the help of senior management. As frauds has change it face, similarly frauds detection and prevention can be done with the help of forensic accountant who not only possess skill in accounting but also has vast skills in the field of legal and technology. These techniques can be more effective when they are supported by the government policy for eradicating frauds.

The scandalous tricks of Harshad Mehta, Ketan Parekh, Sanjay Seth , India bulls and off late Neerav Modi trick is still new in our minds. Whether it is securities exchange extortion or bank fraud or digital fraud, scientific accounting has turned into an imperative instrument for examination. With India being positioned as the 88th most degenerate country, the requirement for measurable accountant turns all more significant. As it were, scientific accountant. are considered as experienced evaluators, accountant and reviewers of lawful and money related records who are utilized to explore false movement and avoid it.

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Determinants of Long-Run and Short-Run Cotton Lint Export Performance of Africa

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Abstract

The present research empirically determined the drivers of African cotton export using annual dated data series spanning from 1991 to 2017 sourced from FAO and UNCTAD databanks. The collected data series were analyzed using descriptive and inferential statistics. Empirically evidenced showed that cotton export performance is affected by low quality of the cotton product, thus hindering the continent from maximizing benefits from cotton export. In addition, it affects the continent performance in the international cotton make as its share contribution is very marginal. Furthermore, collusive effect of oligopolistic intermediaries and monopolistic buyers in price fixation on the auction floor also hinders cotton export performance. Therefore, study recommended quality improved so that Africa can advance its market position and price stabilization policies to curtail the exploitative market conduct of the middlemen in the cotton value chain.

Keywords: *Export; Cotton; Determinants; Performance; Africa*

Introduction

Cotton is one of the most important agricultural cash crop commodities in Africa as the production is widespread across the continent with 37 of the 54 African countries produce the crop, out of which 30 are exporters. Cotton is an important product in the world economy as it is widely used as a textile raw material. However, the black continent accounted for approximately 16% of the vast global textiles market, valued at $1.6 trillion in 2015- a 32.5% increase from 2010 while Asia-Pacific accounted for approximately 60% of the global textiles market.

During the colonial period, the continent cotton production trend grew steadily but has failed to transform the economies that now depend on it as a source of valuable foreign exchange earnings. Consequently, the potential of cotton as a vehicle for poverty reduction is no longer certain as it has failed to provide a sustainable means for poverty alleviation, especially in West Africa where the top cotton producers find themselves at the bottom of development indexes (UNDP, 2017).

Critics point to the growing marginalization of Africa's cotton smallholders in the international supply chains. Cotton sub-sector represents one of the most important export sectors in the Africa's region, providing means of livelihood for millions of farmers (Nimakorh, 2015). But its accrued revenue is plummeting continuously, as investment dwindles and global prices remain non-remunerative. Without a significant turnaround in the terms of trade for Africa's cotton exports, low global prices for cotton will continue to impoverish this vast number of cotton farmers who are unable to make a fair market return.

Therefore, a reform of Africa's terms of trade is being strongly advocated by cotton producing countries, especially West Africa, where millions of smallholder farmers depend on the crop for their livelihood. It is against this background that the present research aimed at determining empirically the drawback(s) to the cotton export drive or performance of Africa in the global cotton market. However, literature showed studies on cotton export drive in Africa but the scope of the studies (e.g Magombo et al., 2017; Yousif, 2015; Kenamu and Phiri, 2014; Bonansi, 2014; Boansi et al., 2014; Kingu and Sukhadia, 2014; Alston et al., 2007; Baffes, 2007; Alston and Brunke, 2006; Gillson, 2005; Gillson et al., 2004) were limited to individual exporting economy.

Research Methodology

The study used annual dated data spanning from 1991 to 2017, sourced from the FAO and UNCTAD databases. The macroeconomic indicators used were cotton export and import in physical and monetary terms, CPI, Direct Foreign Investment

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(DFI) inflow, Exchange rate, GDP of major importing countries (China and Indonesia), Producer and World prices of cotton. The analytical techniques used to achieve this research were descriptive statistics, growth model, instability index, unit root tests and the Engel-Granger two-step procedures.

Empirical model:

Growth rate: The compound annual growth rate calculated using the exponential model is given below:

$\gamma=\alpha\beta^t$ ..... (1)
$\ln\gamma=\ln\alpha+t\ln\beta$ ..... (2)
CAGR=[Antilogβ-1]×100 ..... (3)

Where, CAGR is the Compound growth rate; t is time period in year; γ is export quantity/value; α is intercept; and, β is the estimated parameter coefficient.

Instability index: The simple coefficient of variation (CV) over-estimates the level of instability in time series data characterized by long-term trends, whereas the Cuddy-Della Valle Index corrects the coefficient of variation by instability index which is given below:

II = CV*(1-R2)0.5 ..... (4)
Where, II is the Instability index; CV is the Coefficient of variation; and, R2 is the Coefficient of multiple determination. The instability index was classified as low instability (15%) and high instability (> 15%).

Augmented Dickey-Fuller Test

Following Blay et al. (2015); Singh, et al.(2016); and, Sadiq et al.(2016) the Augmented Dickey-Fuller test (ADF) used is given below:

$\Delta P\_t=\alpha+P\_(t-1)+\sum\_(j=2)^{it}\ \beta\_i\ \Delta P\_(it-j+t)+\varepsilon$ ..... (5)
Where, P_it is the ith variable at the time t, ΔP_it (P_it-P_(t-1)) and α is the intercept or trend term.

The ADF-GLS test

Elliott, Rothenberg and Stock (1996) proposed a variant of the ADF test which involves an alternative method of handling the parameters pertaining to the deterministic term Ut : these are estimated first via Generalized Least Squares, and in a second stage an ADF regression is performed using the GLS residuals. This variant offers greater power than the regular ADF test for the cases Ut = U0 and Ut = U0 + U1t. ..... (6)

Engel-Granger two step procedure model

Long-run dynamic model

CEXPQt = β0 + β1TOPt + β2CPQt + β3EXRt + β4INFt + β5CGDPt + β6IGDPt + β7WPt + β8PPt + β9ERRt + β10WPRt + β11PPRt + β12ACt + β13DFIt + ε_i ..... (7)

Short-run dynamic model

ΔCEXPQt = β0 + β1ΔTOPt + β2ΔCPQt + β3ΔEXRt + β4ΔINFt + β5ΔCGDPt + β6ΔIGDPt + β7ΔWPt + β8ΔPPt + β9ΔERRt + β10ΔWPRt + β11ΔPPRt + β12ΔACt + β13ΔDFIt + ECT _(t-1) ..... (8)

Where, CEXPQ is the Export quantity of cotton; TOP is the Trade Openness; CPQ is the cotton production quantity; EXR is the Exchange rate; INF is the Inflation rate; CGDP is China GDP; IGDP is Indonesia GDP; WP is the World price of cotton; PP is the Producer's price; EXRR is Exchange rate risk measured by standard deviation of two preceding years; WPR is World price risk of cotton measured by standard deviation of two preceding years; PPR is the cotton Producer's price measured by standard deviation of two preceding years; AC is the Agriculture credit; DFI is the Direct foreign investment; ε_i is the error term; t is the current time; β_0 is the intercept; β_(1-n) are the parameter estimates; and, Δ is the first difference operator.

RESULTS AND DISCUSSION

Export Trend and Growth Rate

A perusal of the results showed an oscillating trend pattern for quantity of export, export value, unit export price and production quantity (Table 1a). It was observed that all the measuring parameters were at their peak in the year 2005. However, the peak in cotton quantity export was attributed to increase export quantity and not the unit price of the exported quantity. The exporters have not been receiving remunerative prices due to poor quality of African cotton product. Therefore, onus lies on the stakeholders to improve on the quality of African cotton to the required marketing standard in the global cotton market in order to maximize foreign returns in the marketing of African cotton.

Furthermore, the results showed that the export quantity and the export value during the study period recorded an annual increase of 8509.30 MT representing 0.99% of the average

Year	Production (MT)		Export (MT)		Export value ($1000)		$ per ton	
	Qty	Index	Qty	Index	$	Index	$	Index
1991	1389182	100	677079	100	1086661	100	1604.925	100
1992	1304043	93.87129	709733	104.8228	984486	90.59734	1387.122	86.42906
1993	1330552	95.77953	715826	105.7227	845335	77.79197	1180.922	73.58116
1994	1247552	89.80479	810609	119.7215	1173383	107.9806	1447.533	90.19317
1995	1357010	97.6841	799053	118.0147	1313875	120.9094	1644.29	102.4528
1996	1731006	124.6061	810358	119.6844	1356002	124.7861	1673.337	104.2626
1997	1810893	130.3568	914941	135.1306	1413814	130.1063	1545.252	96.28186
1998	1646926	118.5537	1025576	151.4707	1496166	137.6847	1458.854	90.8986
1999	1640406	118.0843	1019739	150.6086	1336665	123.0066	1310.791	81.67306
2000	1533183	110.3659	1044086	154.2045	1105946	101.7747	1059.248	65.99984
2001	1833279	131.9682	1018188	150.3795	1189890	109.4997	1168.635	72.81554
2002	1747780	125.8136	1205138	177.9908	1264535	116.3689	1049.286	65.37916
2003	1693025	121.8721	1400413	206.8316	1880549	173.0576	1342.853	83.67077
2004	1861603	134.0071	1491608	220.3004	2344091	215.715	1571.519	97.91856
2005	1822965	131.2258	1403690	207.3155	1560385	143.5945	1111.631	69.26372
2006	1647949	118.6273	1157878	171.0108	1443798	132.8655	1246.934	77.69425
2007	1394731	100.3994	1182457	174.6409	1451376	133.5629	1227.424	76.47859
2008	1395705	100.4696	975363	144.0545	1471743	135.4372	1508.918	94.01799
2009	1139297	82.01208	825354	121.8992	1103892	101.5857	1337.477	83.3358
2010	1211274	87.19333	757074	111.8147	1192286	109.7201	1574.861	98.12674
2011	1246953	89.76167	870499	128.5668	2042791	187.9879	2346.69	146.218
2012	1562047	112.4437	1049151	154.9525	1969783	181.2693	1877.502	116.9838
2013	1507061	108.4855	1271039	187.7239	2164868	199.222	1703.227	106.125
2014	1546095	111.2954	1372289	202.6778	1998566	183.9181	1722.708	107.3388
2015	1580147	113.7466	1325241	195.7292	1921125	176.7916	1741.081	108.4836
2016	1610182	115.9086	1375729	203.1859	1890784	173.9994	1758.578	109.5738
2017	1636977	117.8375	1362068	201.1683	1885407	173.5046	1775.383	110.621
2018	1661161	119.5784	1390597	205.3818	1893261	174.2274	1791.643	111.634
Average	**1321029**		**856109.9**		**1162097**		**1372.018**	

quantity exported and $2.19 million representing 1.89% of the average export value generated respectively. Also, the production quantity and the unit export price recorded an annual increase of 12001.10 MT representing 0.91% of the average production quantity and $12360 representing 0.90% of the average annual unit price respectively (Table 1b and Figure 1).

Table 1b: Growth rate of cotton export from 1991-2017

Variable	Production (ton)	Export (ton)	Export ($1000)	$ per ton
Intercept	996999	626357	569123	1038.42
Slope	12001.10	8509.36	21962.00	12.3555
Average	1321029	856109.90	1162097	1372.02
Annual change (%)	0.91	0.99	1.89	0.90
R^2	0.513	0.353	0.669	0.231
t-statistic	7.325	5.279	10.15	3.910

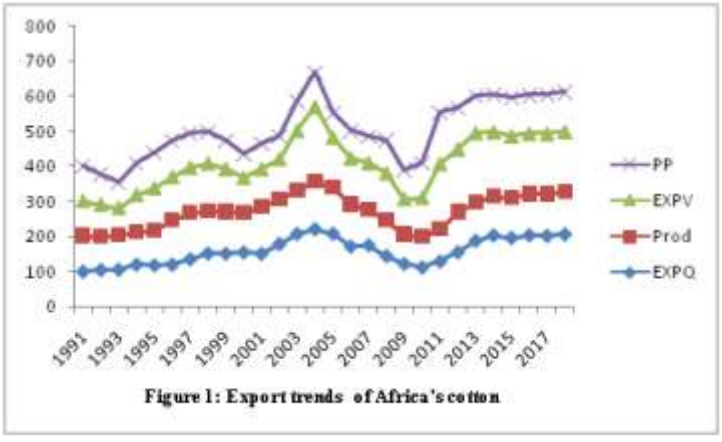

Figure 1: Export trends of Africa's cotton

Degree of Stability of African Cotton Export

A cursory review of the results showed only the production to be stable due to the nature of cultivation of the cash crop which is based on contract farming. However, the export quantity, export value and the unit export price were unstable due to low quality of the cotton product exported from Africa which makes it less competitive in the cotton international markets (Table 2).

Table 2: Stability index of African cotton export

Variable	Index (%)
Production (ton)	13.30
Export (ton)	22.57
Export ($)	21.26
$ per ton	24.57

Unit Root Test

The ADF-GLS unit test results applied at level showed all the variables to contain unit root as indicated by their respective absolute tau-statistics which were less than the t-critical value at 5% probability level. Further ADF-GLS unit root test applied to the variables at first difference showed all the variables not to contain unit root as evidenced by their respective absolute tau-statistics which were greater than the t-critical value at 5% probability level. Furthermore, ADF unit root test applied to the co-integrating residual variable at level revealed that the variable is stationary at level as indicated by the t-statistic which is greater than the Engel-Granger critical value at 5% probability level. Therefore, the integration of the macroeconomic indicators at order one [I(1)] and the integration of the residual variable at order one minus one implies that macroeconomic indicators shared one stochastic trend i.e. they have long-run association. Fulfilling the two aforementioned criteria justified the application of Engel-Granger two-step procedures to examine whether the macroeconomic indicators established long-run equilibrium (Table 3).

Table 3: Stationarity Test

Items	Stage	ADF-GLS		Decision
		tau-stat	t-critical at 5%	
CEXPQ	**Level**	-1.733	0.07875	Non-stationary I(0)
	Δ	-2.453**	0.0137	Stationary I(1)
TOP	**Level**	-1.408	-3.19	Non-stationary I(0)
	Δ	-7.545**	-3.19	Stationary I(1)
CPQ	**Level**	-1.872	-3.19	Non-stationary I(0)
	Δ	-4.477**	-3.19	Stationary I(1)
EXR	**Level**	-0.155	0.630	Non-stationary I(0)
	Δ	-1.998**	0.044	Stationary I(1)
INF	**Level**	-2.739	-3.19	Non-stationary I(0)
	Δ	-4.170**	-3.19	Stationary I(1)
CGDP	**Level**	-1.318	-3.19	Non-stationary I(0)
	Δ	-5.268**	-3.19	Stationary I(1)
IGDP	**Level**	-1.719	-3.19	Non-stationary I(0)
	Δ	-5.123**	-3.19	Stationary I(1)
WP	**Level**	-2.345	-3.19	Non-stationary I(0)
	Δ	-4.818**	-3.19	Stationary I(1)
PP	**Level**	-2.609	-3.19	Non-stationary I(0)
	Δ	-5.341**	-3.19	Stationary I(1)
EXRR	**Level**	-2.375	-3.19	Non-stationary I(0)
	Δ	-3.213**	-3.19	Stationary I(1)
WPR	**Level**	-1.965	-3.19	Non-stationary I(0)
	Δ	-4.952**	-3.19	Stationary I(1)
PPR	**Level**	-3.293	0.0934	Non-stationary I(0)
	Δ	-4.877**	0.0003	Stationary I(1)
AC	**Level**	-2.316	-3.19	Non-stationary I(0)
	Δ	-4.315**	-3.19	Stationary I(1)
DFI	**Level**	-1.283	-3.19	Non-stationary I(0)
	Δ	-11.86**	-3.19	Stationary I(1)
ECT	**Level**	-6.248**	-3.34	Stationary I(0)

*Note: ** indicate that unit root at level or 1st difference was rejected at 5% significant level*

Impact of Macroeconomic Indicators on Cotton Export

A perusal of the results in the Table showed variables viz. EXR, DFI, AC, EXRR, CPQ and PR to have impact on the export of Africa cotton as indicated by their estimated coefficients which were different from zero at 10% probability level. The macroeconomic indicators which positively and negatively impacted on the cotton export are EXR, AC, CPQ and PR; and, DFI and EXRR respectively (Table 4a).

The positive impact of EXR revealed that Africa benefit from economies of scale as depreciation in the local currencies of exporting countries makes export cheaper in the cotton international markets, thus increased demand for export. The elasticity implication of a percent increase in the EXR will increase the cotton export quantity of Africa by 0.51%. The positive impact of AC vividly revealed the synergy of the productiveness and productivity of the credit advanced to private contractors who go into contract farming with the producers and inturn in most cases the private contractors are the exporter of the product. In addition, this proved that credit yielded a desirable result given that it is advanced to agribusiness firm and contractors who inturn advanced it to the small-holders in kind i.e. inputs and technical services. Therefore, the semi-elasticity implication of a percent increase in the amount of AC granted to the exporter will increase African cotton export by 0.35%.

The positive impact of CPQ showed how high level of current production at a non-remunerative price increases stock or inventory accumulation in the international market which helped to minimize the adverse effects of adding-up or glut in the global market which dampens the world price of the product. This proved that cotton is not only a notable cash crop and principal export commodity for Africa economy but also a critical import commodity for exporting countries with high industrial demand due to mismatch between their domestic demand and supply (e.g China), resource endowment challenges and unfavourable climatic condition for the cultivation of the crop. Consequently, major consuming and processing economies have to import the commodity as postulated by trade theories. The semi-elasticity implication of a percent increase in the cotton production will increase the quantum of cotton export by 0.75%.

The negative impact of DFI on cotton export revealed a tariff-jumping type of investment with the motive to capture the domestic market, thus not contributing positively to export since the investment is not export-oriented due to poor comparative advantage of African cotton in the global market. The semi-elasticity implication of a percent increase in DFI will decrease the cotton export by 0.24%.

The negative linkage between EXRR and cotton export quantity means that African exporters react negatively to exchange rate volatility by reducing their export to the importing economies in the long-run. The fear of current losses due to exchange rate volatility persuaded the cotton economic agents to produce less. The semi-elasticity implication of a percent increase in the EXRR will decrease the export quantity of Africa cotton by 0.13%.

The insignificant impact of the producer price elasticity showed the collusive effect on price fixation by the oligopolistic intermediaries and monopolistic buyers on the auction floor, thus making price irrelevant in influencing the direction of demand and supply. In addition, the insignificant impact of the WP revealed that African cotton share (11% of world export) in the global market is marginal as the production level is relatively low and also of low quality. Therefore, importing millers used African cotton when it is available and usually in a mix with cotton of other origins so as to maintain the same quality standard over the year. Thus, unless Africa is a able to produce more cotton of required standard, it will not be able to capture more market share or play a more important role in the international cotton trade.

Effect of Macroeconomic Indicators on Cotton Export

A cursory review of the results which captured both the long-run and short-run dynamics showed that cotton export established long-run equilibrium with the macroeconomic indicators as evidenced by the significance of the attractor coefficient at 1% probability level. The implication of the significant attractor coefficient of 1.33 imply that the export parameter corrects its previous disequilibrium which is caused or due to shock/innovation/bad-news which originate from the short-run equilibrium at the speed of 133% whose time equivalent is 13.4 years to re-establish equilibrium. The speed of recovery is very slow as the required time length is very long which may be attributed to policy inconsistencies which slow down the efficiency and effectiveness of macroeconomic measures thus affecting international trade of Africa's cotton.
It is worth to note that an innovation that induced cotton export to deviate from the equilibrium level would induce the exporters to respond to the shock in a way that cotton export would converge toward its equilibrium value.

Furthermore, the results showed that export performance of cotton in the short-run is been driven by EXR, DFI, AC, INF, EXRR, CPQ, CGDP, WP and PR as indicated by their respective

coefficients which were different from zero at 10% degree of freedom. The results showed EXR, AC, CPQ and PR to have positive effect on export performance of Africa's cotton while the hosts of DFI, INF, EXRR and CGDP exert negative effect on cotton export.

The positive effect of exchange rate (EXR) on export implies that currency devaluation of the exporting economies increase supply as exportation of the product becomes cheaper at the international market. Therefore, the semi-elasticity implication of currency devaluation vis-à-vis a percent increase in the EXR will increase cotton export by 0.52%. The positive effect of agricultural credit (AC) on cotton export vividly indicates efficient utilization of credit for the purpose it was meant for. This was made possible as cotton production in Africa is on contract basis with the credit been advanced in the form of kind and technical support to the producers rather than in cash which in most cases is been channeled into consumption. Also, the private contractors have established market links which enhance the productiveness of credit. The semi-elasticity implication of a percent increase in the AC will increase the export of cotton by 0.33%. The non-significant effect of the WP showed that Africa has a limited effect on the international cotton prices because it is a relatively small player in the world market and Asia its major importing economy often perceived African cotton to be of inferior quality which prevents producers from applying any premium on their product. The marginal implication of a percent increase in the WP will increase cotton export by 0.15%.

The positive effect of CPQ on export showed how high-cost implication of long storage periods which do not pay-off for small quantities that Africa's producers can provide triggered exportation of Africa's cotton in the international market. In contrast to a closed economy where increasing production is deemed bad due to the price-decreasing implications thereof, in an open economy, increasing production is regarded as an opportunity for export expansion. The semi-elasticity implication of a percent increase in the CPQ will increase cotton export by 0.61%.

The inferior quality of Africa's cotton makes the oligopolistic intermediaries and monopolistic buyers to collude on price fixation on auction floor which is non-remunerative to the producers. However, sudden fluctuation (rise) in the price serve as an incentive for the producers to increase their supply in order to smoothen-out the income lost that will likely occur in the future due to glut. Therefore, the marginal implication of a percent increase in the producer's price risk will increase cotton export by 0.06%.

The negative effect of DFI on cotton export implies that the investment motive of direct foreign inflow (DFI) is to capture the domestic market and not export-oriented, thus not contributing to cotton export growth of the continent. The marginal implication of a percent increase in DFI will decrease export performance of African's cotton by 19%. The negative effect of inflation (INF) on cotton export indicated that cost-push inflation decreases cotton quantity exported from Africa. Therefore, the marginal implication of a percent increase in INF will decrease the export performance of cotton by 0.06%. The negative effect of exchange rate volatility on cotton export revealed how fear of income loss discourage economic agents to export more to shore-up for the expected decline in their current incomes. In addition, the poor quality of the cotton product makes the economic agents not to base their decisions on the basis of worst scenario.

The inverse relationship of CGDP with the cotton export revealed that China look inward in developing their cotton sub-sector to shore-up their industrial demand short-fall if there is increase in their GDP, thus affecting Africa's cotton export performance. Thus, the implication of a percent increase in the China GDP (CGDP) will decrease the cotton export quantity of Africa by 0.51% (Table 4a).

The positive coefficients of the intercept for the long-run and short-run equations confirm strong reliance of the continent on export of cotton. This showed that inspite of the gloomy nature of cotton export trade; Africa will continue to export cotton.

The diagnostic test results showed that the residual of the ECM is devoid of serial correlation, auto-covariance, normally skewed, homoscedasticity as indicated by the Langrage multiplier F test (LMF), Arch LM test, Chi-square test and Breusch-Pagan test which were not different from zero at 10% degree of freedom. Furthermore, the estimated parameters were stable i.e. there is no structural break in the equation as indicated by the CUSUM test which is not different from zero at 10% degree of freedom. The explanatory variables were found to be devoid of collinearity as evidenced by the variance inflation factors (VIF) which were less than 10.0 (Table 4b). The significance of the F-statistics in both the long and short-run models indicated that the variables captured in the models are different from zero, thus important in determining the direction of cotton export (Table 4a).

Causal Linkage between African Cotton Exports with Macroeconomic Indicators

A perusal of the Table showed that bidirectional causality hold between the pair of CEXP-TOP; unidirectional causality between pairs of CEXP-AC, CEXP-INF, CEXP-CPQ, CEXP-IGDP and

Table 4b: Multicollinearity test

Variable	VIF
$\Delta LNTOP_t$	3.110
$\Delta LNCPQ_t$	1.666
$\Delta LNEXR_t$	4.156
$\Delta LNINF_t$	2.079
$\Delta lnCGDP_t$	1.368
$\Delta lnIGDP_t$	2.018
$\Delta lnWP_t$	3.339
$\Delta lnPP_t$	2.796
$\Delta lnEXRR_t$	3.436
$\Delta lnWPR_t$	2.500
$\Delta lnPPR_t$	1.970
$\Delta lnAC_t$	4.999
$\Delta lnDFI_t$	2.539
ECT_{t-1}	1.856

Note: VIF > 10.0 may indicate collinearity problem

PPR-CEXP; and, non-causality between pairs of CEXP-EXR, CEXP-DFI, CEXP-EXRR, CEXP-CGDP, CEXP-WP, CEXP-WPR and CEXP-PP as indicated by the F-statistics at 5% degree of freedom (Table 5). For the bidirectional causality it means two-way drive in favour of both; for the unidirectional causality it means one-way drive in favour of the former; and, for the non-causality it means external factor outside the system influence the drive. In other words, there is evidence of strong endogeneity for the bidirectional causality; weak exogeneity for the unidirectional causality and strong exogeneity for the non-causality indicators. Therefore, it can be inferred that African cotton export has effect in determining the flow of fund, production, income accumulation of Indonesia and price risk of the low quality cotton product.

Conclusion and Recommendation

From the empirical findings it was found that the major driving forces behind export performance of Africa's cotton were local currency devaluation, internal credit supply, domestic

Table 5: Granger causality test results

Null hypothesis	F-stat	P < 0.10	Granger cause	Direction
CEXPQ ↔ TOP	6.3256**	0.0456	Yes	Bidirectional
	21.051**	0.0037	Yes	
CEXPQ ↔ CPQ	17.548**	0.0058	Yes	Unidirectional
	3.5291	0.1094	No	
CEXPQ ↔ EXR	0.04735	0.8350	No	None
	0.92829	0.3725	No	
CEXPQ ↔ INF	10.272**	0.0185	Yes	Unidirectional
	0.46213	0.5220	No	
CEXPQ ↔ CGDP	1.1457	0.3256	No	None
	2.2469	0.1845	No	
CEXPQ ↔ IGDP	8.4355**	0.0272	Yes	Unidirectional
	1.7716	0.2315	No	
CEXPQ ↔ WP	2.0034	0.2067	No	None
	1.8899	0.2183	No	
CEXPQ ↔ PP	3.1232	0.1276	No	None
	0.20432	0.6671	No	
CEXPQ ↔ EXRR	1.2534	0.3057	No	None
	2.8697	0.1412	No	
CEXPQ ↔ WPR	3.7456	0.1011	No	None
	3.7047	0.1026	No	
CEXPQ ↔ PPR	4.1267	0.0885	No	Unidirectional
	32.231**	0.0013	Yes	
CEXPQ ↔ AC	10.024**	0.0194	Yes	Unidirectional
	0.00048	0.9832	No	
CEXPQ ↔ DFI	0.0521	0.8270	No	None
	0.53736	0.4912	No	

*Note: ** denotes rejection of the H0 at 5% level of significance*
NS: Non-significant
→ ←means forward and backward directions respectively

production, currency risk and income of the major importing economy. Unfortunately, evidence showed that the continent is not integrated into the global trade market of cotton owing to low quality of Africa cotton as indicated by neutrality of the trade openness variable both in the long-run and short-run. In lieu of the above, recommendations were made for those macroeconomic indicators that are within the control of the continent:

- As the reputation of a given origin and the efforts to improve quality have an important effect on cotton prices, Africa needs to improve its quality image to advance its market position.
- Caution needs to be exercised in terms of currency devaluation in order not to endanger home-grown cotton industries, food security due to shift from food crop to cash crop and biodiversity due to high mechanization all at the expense of temptation for profit.
- Price stabilization mechanism should be established so that farmers can get remunerative prices for their product, thus reducing smuggling through black market.

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Table 4a: Long-run and short-run predictions for cotton EXPQ

Long-run dynamic model (LNEXPQ)				Short-run dynamic model (ΔLNEXPQ)			
Variable	**Coefficient**	**SE**	**t-ratio**	**Variable**	**Coefficient**	**SE**	**t-ratio**
Constant	6.0510	2.9406	2.058*	Constant	0.0044	0.0491	0.091^{NS}
$lnTOP_t$	−0.2061	0.2002	1.030^{NS}	$\Delta lnTOP_t$	−0.0368	0.1076	0.341^{NS}
$lnCPQ_t$	0.7490	0.1705	4.392***	$\Delta lnCPQ_t$	0.6060	0.1212	4.999***
$lnEXR_t$	0.5109	0.0451	11.32***	$\Delta lnEXR_t$	0.5205	0.1236	4.211***
$lnINF_t$	−0.0414	0.0386	1.072^{NS}	$\Delta lnINF_t$	−0.0455	0.0232	1.959*
$lnCGDP_t$	−0.3870	0.2733	1.416^{NS}	$\Delta lnCGDP_t$	−0.5122	0.1373	3.729***
$lnIGDP_t$	−0.0169	0.0917	0.184^{NS}	$\Delta lnIGDP_t$	−0.0691	0.0664	1.041^{NS}
$lnWP_t$	0.0395	0.1537	0.257^{NS}	$\Delta lnWP_t$	0.1463	0.0583	2.510**
$lnPP_t$	−0.1201	0.1897	0.632^{NS}	$\Delta lnPP_t$	−0.1054	0.1222	0.862^{NS}
$lnEXRR_t$	−0.1314	0.0353	3.714***	$\Delta lnEXRR_t$	−0.1341	0.0406	3.297**
$lnWPR_t$	0.0869	0.0656	1.324^{NS}	$\Delta lnWPR_t$	0.0681	0.0375	1.819^{NS}
$lnPPR_t$	0.0860	0.0355	2.421**	$\Delta lnPPR_t$	0.0613	0.0314	1.953*
$lnAC_t$	0.3466	0.1184	2.928**	$\Delta lnAC_t$	0.3247	0.0818	3.967***
$lnDFI_t$	−0.2403	0.1119	2.146*	$\Delta lnDFI_t$	−0.1892	0.0459	4.116***
-				ECT_{t-1}	−1.3399	0.2717	4.931***
R^2	0.898			**R^2**	0.754		
R^2Adjusted	0.751			**R^2adjusted**	0.261		
Durbin-Watson	2.456			**Durbin-Watson**	1.492		
F-statistic	90.28(0.00)***			**F-statistic**	28.8 (0.00)***		
				Autocorrelation	$2.86(0.14)^{NS}$		
				Arch effect	$1.88(0.17)^{NS}$		
				Heteroscedasticity test	$12.6(0.55)^{NS}$		
				Normality test	$1.95(0.37)^{NS}$		
				CUSUM test	$0.717(0.50)^{NS}$		

Diversification of Nigerian Agricultural Economy: Myth or Reality?

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Abstract

The present research empirically investigated whether agriculture sector diversification of Nigeria is a myth or reality. Yearly time series data sourced from NBS, CBN database, UNCTAD, FAO database spanning from 1970 to 2016 were used. Data analyses were performed using descriptive statistics, diversification index, unit root tests, ordinary least square multiple regression model, single equation symmetric price mechanism (Engel-Granger model), and Granger causality test. The present findings contradict the chasm that the sector is well diversified as the agriculture sector depicted a paradigm shift towards specialization. Based on these findings, the study recommended that the sector should be re-oriented towards specialization (crop sub-sector) to maximize the benefits of comparative advantage among the comity of nations and productivity of agriculture credit should be enhanced by providing consumption credit alongside production credit for the farm economy.

Keywords: *Agricultural sector; Diversification; Long and short runs; Prediction; Nigeria.*

JEL Codes: *E60, E61, E62, E65*

Introduction

In the present day, every industrialized nation passed through the agrarian era with sister sector (industrial sector) taken its roots from the agricultural sector. Prior to the attainment of independence, the colonial administration identified agriculture as a potential factor capable of catapulting Nigeria's economic development and in view of this, marketing boards for the major cash crops were established. Inspite of agriculture sector contribution to the economy development of Nigeria viz. product, factor, market and foreign exchange contributions, the economic performance of the sector has been poor which is due largely to stagnation in the sector vis-à-vis the fact that rising agricultural productivity has been the most important concomitant of successful industrialization (Iganiga & Unemhilin, 2011).

Despite the cliché of the slogan of agriculture been the mainstay of the Nigerian economy, nevertheless does it underscores the emphasis placed on agriculture as the engine of growth of the country economy because it is not an overstatement to assert that the growth and development of any country depend to a large extent on the development of its agriculture.

In realization of this, the past and present governments have embarked on various policies and programmes aimed at strengthening the sector in order to enable it to continue to perform its roles, as well as the mechanisms for fighting the menace of pervasive poverty.

Notwithstanding the enviable position of the oil sector in the Nigerian economy over the past three decades, the agricultural sector is arguably the most important sector of the economy.

Over the past three decades, statistics show that agriculture's contribution to the Gross Domestic Product (GDP) has been hovering between 21 and 38percent, and account for 65 to 70 percent of the country labour force in Nigeria (National Bureau of Statistics, 2017). Furthermore, the NBS statistics showed the share contribution of crop-sector to agriculture GDP for the past over three decades to have remained stable between 89 to 91percent, almost nine times greater than the joint contribution of the remaining agriculture sub-sectors (National Bureau of Statistics, 2017).

Inspite of the above overview, Nigeria policymakers continue to posit that there is a paradigm shift in Nigerian agriculture sector towards perfect diversification, thus, casting a "chasm" which motivated the present research to conceptualize "Nigerian

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agricultural sector diversification - a myth or reality? This research was borne out of the passion that this ailing sector still holds abundant potential capable of enhancing and sustaining the country's economy in the light of the drastic decline in the country revenue base mainly due to the present sharp decline in the international oil prices as its present share contribution to the non-oil foreign exchange earnings is the largest. Sequels to this, the following research questions were formulated (i) what are the share contributions of agriculture sub-sectors to agriculture GDP vis-à-vis reform periods and overall period? (ii) What is the level and degree of diversification of the sector vis-à-vis reform periods and the overall period? (iii) How do diversification and other macroeconomic indicators determine agriculture GDP?

The broad objective of the study was to investigate whether Nigerian agricultural sector diversification is a myth or reality. The specific objectives were: to determine the share contribution of each agriculture sub-sectors to the agriculture GDP vis-à-vis reform eras and the overall period; to determine the level and degree of agriculture diversification vis-à-vis reform eras and the overall period; and, to determine the effect and impact of diversification and macroeconomic indicators on agriculture GDP.

Research Methodology

The study made use of yearly time series data spanning from 1970 to 2016 and the data were sourced from NBS, CBN, UNCTAD and FAO databases. Data analyses were performed using descriptive statistics, diversification index, unit root tests, ordinary least square multiple regression model, single equation symmetric price mechanism (Engel-Granger model), and Granger causality test. Objective I and II were achieved using descriptive statistics and diversification index respectively; while objective III was achieved using unit root tests in conjunction with multiple regression model (OLS), Engel-Granger error correction model and Granger causality test.

Model Specification

Diversification index

However, literature has shown various methods used to measure level and degree of diversification but for the present empirical examination, Berry's index and Theil's Entropy index were used.

$$Berry's\ Index\ of\ Diversification\ (BID) = 1 - \sum_{i=1}^{n} P_{it}^2 \quad \ldots\ldots (1)$$

$$P_{it} = \frac{A_{it}}{\sum_{i=1}^{n} A_{it}} \quad \ldots\ldots (2)$$

Where:

P_{it} = Share contribution of i^{th} agriculture sub-sector to Agriculture GDP at time 't'

A_{it} = i^{th} revenue of agriculture sub-sector at time 't'

$\sum_{i=1}^{n} A_{it}$ = Agriculture GDP at time 't'

The value of Berry's index varies between zero and one. It is one (1) in case of perfect diversification and zero in case of perfect specialization.

$$Entropy\ Index\ of\ Diversification\ (EID) = \sum_{i=1}^{n} P_{it} \log\left(\frac{1}{P_{it}}\right) \quad \ldots\ldots (3)$$

The value of Entropy index (E) varies from zero to log n. 'EID' takes the value of zero in case of perfect specialization and log n when there is perfect diversification.

The actual degree of diversification to maximum diversification for a given sector can be measured through Berry's index as given below:

Degree of diversification by Berry's Index=(Berry's Index)/((1-1/n)) ..... (4)

Where;

n= number of sub-sectors in the agriculture sector

Degree of diversification by Entropy Measure =(Entropy Index)/logn..... (5)

Rule of Thumb:

= specialization
0.01-0.19 = Very low diversification
0.20- 0.39 = Low diversification
0.40-0.59 = Moderate diversification
0.60-0.79 = High diversification
0.80-0.99 = Very high diversification
1.00 = Perfect diversification

Augmented Dickey-Fuller Test

Blay et al.(2015); Singh, et al.(2016); and, Sadiq et al. (2016) as cited by Sadiq et al. (2017) posited Augmented Dickey-Fuller test (ADF) to be unit root test for a time series sample. The autoregressive formulation of the ADF test with a trend term as cited by Mahalle et al. (2015); Blay et al.(2015); Singh, et al.(2016); Sadiq et al. (2016); and, Sadiq et al. (2017) is given below:

$$\bullet P_t = \alpha + P_{t-1} + \sum_{j=2}^{it} \beta_t \bullet P_{it-j+t} + \varepsilon_i \ldots\ldots (6)$$

Where, P_itis the price of the variable i at the time t, ΔP_it (P_it-P_(t-1)) and αis the intercept or trend term.

Simple Regression and Engel-Granger ECM model

Consider a multivariate cointegration model as follows:

$$AGDP = \beta_0 + \beta_1\ FDI + \beta_2\ EXR + \beta_3\ TOP + \beta_4\ TAC + \beta_5\ FCS + \beta_6\ PMS + \beta_7 BDI + \varepsilon_t \ldots\ldots (7)$$

$$BDI = \beta_0 + \beta_1 FDI + \beta_2 EXR + \beta_3 TOP + \beta_4 TAC + \beta_5 FCS + \beta_6 PMS + \beta_7 AGDP + \epsilon_t \quad \ldots\ldots (8)$$

Where;
AGDP = Agriculture Gross Domestic Product
BDI = Barry's Diversification Index
FDI = Foreign Direct Investment
EXR = Exchange Rate
TOP = Trade Openness been proxy for ratio of balance of trade to AGDP
TAC = Total credit supply to Agriculture
FCS = Fixed Capital Stocks
PMS = Premium Motor Spirit
β_0 = Intercept
β_(1-7) = coefficient of estimated parameters
ε_t = pure random walk

Co-integration of the multiple variables can be tested if all the variables display the same order of integration. The error adjustment mechanism included in the short run was generated from Ordinary Least Squares (OLS) approach. ADF unit root test was applied to the residuals of the co-integrating estimation. The residual variables are said to be co-integrated if they are stationary, indicating a long-run association between the multivariate series. In addition, short-term integration tests check whether responses on the variables are instantaneous. The short-term relationship is derived from the Granger (1981) representation theorem in the form of an Engel-Granger Error-Correction Model (ECM) and is presented as follow:

$\Delta AGDP = \delta_0 + \delta_1 \Delta FDI + \delta_2 \Delta EXR + \delta_3 \Delta TOP + \delta_4 \Delta TAC + \delta_5 \Delta FCS + \delta_6 \Delta PMS + \delta_7 \Delta BDI + \delta_8 Dummy + \delta_9 \varepsilon\_(t-1) + \epsilon\_t$ ..... (9)

$\Delta BDI = \delta_0 + \delta 1 \Delta FDI + \delta_2 \Delta EXR + \delta_3 \Delta TOP + \delta_4 \Delta TAC + \delta_5 \Delta FCS + \delta_6 \Delta PMS + \delta_7 \Delta AGDP + \delta_8 Dummy + \delta_9 \varepsilon_{2t-1} + \epsilon_t$ ..... (10)

Where;
Dummy = Reform periods (Post-SAP = 1, SAP = 0);
Δ = First difference;
δ_0 = Constant;
$\delta_{(1-n)}$ = Coefficient of estimated variable;
$\varepsilon_{(t-1)}$ = Lagged value of the residual derived from Equation (9);
$\varepsilon_{(2t-1)}$ = Lagged value of the residual derived from Equation (10); and,
ϵ_t = White noise.

Granger Causality Test

Granger (1969) causality test was used to determine the order and direction of short-term and long-term equilibrium relationships. Whether Agriculture GDP (P_1) Granger causes identified macroeconomic indicators (P_2)or vice-versa was checked using the following model:

$$P_t = \alpha + \sum_{i=1}^{n} (\phi P_{1t-i} + \delta_i P_{2t-i}) + \varepsilon_i \quad \ldots\ldots (11)$$

A simple test of the joint significance of δ_i was used to check the Granger causality, i.e.

$H_0: \delta_1 = \delta_2 = \ldots\ldots \delta_n = 0.$

Results and Discussion

Share Contribution of Agriculture Sub-Sectors to Agriculture GDP

The era-wise results of the share contribution of the sub-sectors to the AGDP showed that the crop sub-sector share contribution to agriculture GDP across the reform eras was highest with the share contribution exhibiting an increasing trend across the periods (Table 1).The subsequent sub-sector trailing behind the crop share contribution was livestock, then fishery and the least been forestry with their share contributions been distantly far away from the crop share contribution to agriculture GDP. However, it should be noted that the share contribution of forestry to agriculture GDP during the pre-SAP era was more than the share contribution of the fishery. In addition, the share contribution of the livestock, fishery and forestry sub-sectors were on decreasing trend across the reform periods, though the share contribution of the fishery sub-sector marginal surged during the transformation era. The share contribution of crop, livestock, fishery and forestry sub-sectors during the pre-SAP, SAP, deregulation and transformation periods were 79.82, 14.74, 2.64 percent and 2.80; 83.67, 12.02, 2.35 percent and 1.97, 89.28, 7.66, 1.97 percent and 1.10 percent and, 89.72, 7.11,2.14 and 1.04 percent, respectively. Furthermore, for the overall period, the chunk of agriculture GDP was accounted by the share contribution of crop sub-sector followed distantly by livestock share, then the fishery sector and the least been the forestry sub-sector share in respect of 87.50, 8.93, 2.16, and 1.40 percent, respectively. The dominant share contribution of the

Table 1. Share contribution of the sub-sectors to Agriculture GDP

Reforms	Crop	Livestock	Fishery	Forestry
Pre-SAP	79.82	14.74	2.64	2.80
SAP	83.67	12.02	2.35	1.97
Deregulation	89.28	7.66	1.97	1.10
Transformation	89.72	7.11	2.14	1.04
Overall	87.50	8.93	2.16	1.40

Source: Authors' computation, 2017.
SAP = Structural Adjustment Programme.

crop sub-sector to the agriculture GDP vividly show the country dimension towards achieving self-sufficiency in food security.

Level and Degree of Agricultural Sector Diversification

The results of agricultural sector diversification across the reform periods spanning for almost six decades from 1970 to 2016 are shown in Table 2. The results show that the sector witnessed low diversification during the pre-SAP period, plummeted in the subsequent reform period (SAP era) despite maintaining a status quo (low diversification) and continue to recede across the reform eras till the transformation period. Though, the diversification levels during both deregulation and transformation periods were very low. Comparatively, it can be inferred that the sector witnessed more diversification even though low during the pre-SAP era when compared with the subsequent eras. In addition, the extent of diversification was found to be highest during the pre-SAP period and continue to decline successively across the subsequent reform periods. However, the level of diversification for the overall period for the agriculture sector was observed to be low, thus, contradicting the much-touted chasm of a paradigm shift in the sector towards diversification. The dimension of these results showed that the agriculture sector was receding towards specialization.

Table 2. Distribution of level and degree of agricultural sector diversification

Reforms	BID	DDBI	EID	DDEI
Pre-SAP	0.366	48.78	0.306	50.79
SAP	0.294	39.24	0.254	42.13
Deregulation	0.197	26.21	0.185	30.64
Transformation	0.190	25.27	0.180	29.94
Overall	0.226	30.09	0.206	34.29

Source: Authors' computation, 2017.

DDBI and DDEI means Degree of diversification by BI and EI, respectively.

Unit Root Test

Presented in Table 3 are ADF and ADF-GLS unit root tests for logarithm transformed macroeconomic data series. The ADF results of the macroeconomic variables showed that the variables were integrated of a different order: the null hypothesis of a unit root at levels for agriculture GDP (AGDP), foreign domestic investment (FDI), trade openness (TOP), total agricultural credit (TAC), fixed capital stock (FCS),diversification index (DI), and premium motor spirit price (PMS) were accepted while that for inflation (INF) and exchange rate (EXR)were rejected as evidenced by their estimated tau statistics which were not different from zero at 5percent probability level. But at first difference, all the non-stationary variables mentioned earlier became stationary as evidenced from their estimated tau-statistics which were different from zero at 5 percent probability level. Furthermore, the robustness of the ADF unit root test was verified using ADF-GLS and the results of the latter showed that the variables were integrated of order one i.e. I(1): all the macroeconomic variables exhibited random walk at the level as shown by their estimated tau-statistics which were greater than the t-critical values at 5percent probability level while at the first difference they exhibited Gaussian white/pure white noise as shown by their estimated tau-statistics which were less than the t-critical values at 5 percent probability level. The ADF-GLS test exposed the weakness and inefficiency of ADF to be fit and appropriate for unit root testing of the macroeconomic variables. Therefore, the ADF-GLS test indicates that ADF has lost his power to test for stationarity due to the structural break in the time series data. Owing to this, Sadiq et al.(2017) reported that Maddala & Kim (1998) as cited by Gujarati et al.(2012) and Maddala & Lahiri (2013) advocated that the traditional DF, ADF, PP and KPSS tests should be discarded. However, yet there is no uniformly powerful test of the unit root hypothesis. The ADF test applied to the residual variablesviz.ECTt-1 and ECT2t-1 at their levels were found to be integrated of order zero I(0) i.e. have no unit root as evidenced from their estimated tau-statistics which were less than the Engel-Granger critical value at 5 percent probability level (Table 4). Thus, there is evidence of cointegrating relationships because the unit root hypotheses were not rejected for the individual variables and the unit root hypotheses were rejected for the residuals from the cointegrating regression. The cointegration relationships imply that these variables have long-run association, that is, they shared the same stochastic trend (Table 4). Furthermore, despite that the Durbin-Watson statistics of the long-run models were lesser than the coefficient of multiple determination the cointegrating regressions are not spurious regressions but long-run dynamic models whose least square estimators are reliable for long-run prediction given that their residual variables were stationary at level. Owing to high collinearity between INF and PMS; and IR and TC as evidenced from the Pearson correlation matrix (results not reported here), variables viz. inflation and interest rate were dropped from the analysis in order to ensure

efficiency and reliability of the least squares estimators for prediction.

Determinant of Agriculture GDP

The long-run dynamic model (Long-run prediction)

The results of the long-run dynamic model presented in Table 5 showed that the long-run dynamic model is not a spurious regression despite that the coefficient of multiple determination was higher than the Durbin-Watson statistic (DW). This is so, because the residual of the cointegrating regression was devoid of a unit root at the level when subjected to ADF test vis-á-vis 5 percent Engel-Granger critical value, thus, implying that the variables were co-integrated. This evidenced justified the reliability of the least squares estimators of the dynamic long-run model for a long-run prediction on Agricultural GDP. The results indicated that 99.67 percent of the variation in AGDP was jointly influenced by the predictors included in the model. With the exception of FDI, the remaining macro-parameters estimated coefficients were significant at probability levels less or equal to 10 percent. The estimated coefficients of TOP, TAC, DI and PMS were inelastic, inversely related to AGDP and significant at 5, 10, 5, and 5 percent probability levels respectively. This implies that a one percent increase in each of the aforementioned variables in respective order will lead to a decrease in AGDP by0.117, 0.629, 0.31, and 0.670 percent respectively. The inverse relationship of the TOP proxy for free trade implies that trade liberalization affects the agricultural economy of the nation owing to the poor development of the real sector and the volatile devaluation of the country exchange rate. In addition, it shows the weakness and non-competitiveness of the sector in the world market or integration into the global economy, that is, the international sphere. Agricultural commodities from developing countries inclusive Nigeria face trade restrictions' such as tariff escalation and quotas in the importing advanced economies. Verter & Bečvářová (2016) reported that the country has been recording negative terms of trade in agricultural products since 1975. As a consequence, the massive import of agricultural commodities appears to have been negatively influencing the agricultural economic growth of the nation.

Contrary to a priori expectation, TAC exhibited an inverse relationship with Agricultural economic growth, indicating non-productivity of the credit sunk into the sector owing to diversion of the credit for purposes other than agriculture at the micro and macro level, thereby narrowing returns due to huge debt to contend with. A similar finding was reported in the research paper of Iganiga & Unemhilin (2011). When credit is diverted for other purposes, the productivity of the credit receives a setback and the desired results would be a far cry. In the absence of consumption loan at the micro level, credit advanced may not be productive as they are expected to be due to diversion for purposes other than agriculture. But inspite of this known fact, the consumption credit is relegated to the backseat by the institutional agencies. In addition, the mismatch in the time frame of agricultural credit still remains a contending issue affecting the stability of this sector. Furthermore, this result reflects non-implementation of the government moral suasion policy by financial institutions due to the single digit interest rate for the sector. In addendum, the state of food insecurity which is threatening the economy of the nation owes to this.

The contrary relationship of diversification (DI) with the sector economy implies that the paradigm shift of the sector towards diversification will not be healthy and sustainable, as evidenced from the sector which recedes towards specialization. In conformity with a priori expectation, the PMS showed an inverse relationship with agricultural economic growth owing to multiplier effect-inflation which slow-down the value chain efficiency of the sector. Meanwhile, the estimated coefficients of EXR and FCS were inelastic, proportionally related and both significant at 1percent probability level. If ceteris paribus, 1percent increase in the aforementioned economic indicators in respective order would stimulate the economic growth of the sector by 0.202 and 0.514 percent respectively. From these findings, it can be inferred that exchange rate and FCS stimulate positive growth in the agricultural sector. As cited by Verter & Bečvářová (2016), volatility in foreign exchange (Verter& Bečvářová, 2014) and world price (Syrovátca & Darkwah, 2008; Syrovátca, 2009) trigger the demand and supply shocks in the global market (Weymar, 1969; Verter, 2016).

The short-run dynamic model (Short-run prediction)

A cursory review of the results in Table 5 which captured both the long-run and short-run equilibrium showed that the sector established a long-run equilibrium with the macroeconomic indicators as evidenced from the conformity of the attractor coefficient with the a prior expectation i.e. negatively signed and significant at a degree of freedom of less than 10 percent. The attractor coefficient (ECTt-1) showed the degree of co-integration of the sector with its macroeconomic indicators. The implication of the negatively signed and significant attractor coefficient (-0.69) at one percent probability level means that the sector will adjust its previous deviation from the long-run equilibrium at the speed of 68.6percent to re-establish equilibrium, that is, the speed at which the sector corrects its previous error between disequilibrium and equilibrium was high. Therefore, the time required for the agricultural sector to re-establish its long-run equilibrium would be approximately 3.8 months per annum. With the exception of FDI and TAC,

there exists short-run causality running from each of the macro-indicators to Agriculture GDP. The short-run causal effects running from trade openness (TOP), PMS and DI to AGDP were inelastic, inversely related and significant at 5percent, 1percent and 1percent probability level, respectively; while the short run causal effects running from EXR, FCS and Dummy were inelastic, proportionally related and significant at 1percent, 1percent and 5 percent risk levels respectively.

For the inversely related macro-indicators viz. TOP, PMS and DI, the implication of a percent monetary increase in these macroeconomic indicators would lead to decrease in the total agriculture GDP in the short run by 0.054, 0.039 and 0.66 percent respectively. The behaviour of TOP connotes poor comparative advantage of the sector at the international market which might be largely due to low product qualities of its sub-sectors; PMS behaviour entails the cripple effect of inflation due to multiplier effect which affects investment plans of the sector; and, the DI behaviour depict that the sector is receding towards specialization rather than the touted paradigm shift towards diversification. However, the implication of a percent monetary increase in EXR and FCS in the short run would lead to an increase in total agriculture GDP by 0.119 and 0.201percent respectively. In addition, it was observed that the post- structural adjustment phases (SAP) witnessed in the country viz. deregulation and transformation reforms helped in shaping the agricultural sector of the country positively: the reforms increase the growth of the agriculture sector economy by 0.022percent.

Therefore, it can be inferred that EXR, FCS and transformation phases (dummy) are the positive stimulant of the agriculture sector while TOP, PMS and DI tends to slow down the growth and development of the agricultural sector economy of the country.

The results of the Wald test for joint significance showed that the external factors (FDI, EXR and TOP) jointly has a short-run causal effect on AGDP and also the same applied to the internal factors (TC, FCS, DI and PMS) as evident from the significance of f-statistics at probability level less than 10percent.

Clearly depicted from the result was that 98.7percent variation in the AGDP was jointly influenced by the variables included in the Engel-Granger model.

Degree/Extent Determinant of Agricultural sector Diversification

Presented in Table 6 are the long (long-run prediction) and short run (short-run prediction) dynamic models determining the extent of agriculture sector diversification. The identified macroeconomic indicators which have significant impacts and effects on the extent of diversification were AGDP and TAC; and, AGDP and PMS, respectively. This was upheld because their degrees of freedoms were less or equal to 10percent probability level. The estimated coefficients of AGDP both in the long and short runs were inelastic, inversely related and significant at 5 and one percent probability levels, an indication of negative impact and effect on the extent of agricultural sector diversification. Meanwhile, a percent increase in the AGDP both in the long-run and short-run will decrease the extent of agriculture sector diversification by 0.89 and 0.94percent, respectively. This outcome clearly shows the ailing extent of the Nigerian agricultural sector which is due largely to stagnation thus hampering its performance.

Nevertheless, a cursory review of the results showed that total credit supply to agriculture (TAC) had a positive impact on the extent of agricultural sector diversification as indicated by the significance of the estimated coefficient at 10 percent probability level. The implication of a percent increase in TAC would result in an increase in the extent of agricultural diversification by 0.112 percent. However, the marginal effect of TAC may be attributed to poor productivity of credit utilization at micro-level and the problem of credit mismatch which characterize agricultural finance.

Also, the PMS was found to have a negative effect on the extent of agriculture sector diversification as evident from the estimated coefficient which is significant at 1percent degree of freedom. The implication of a percent increase in the price of PMS will lead to a decrease in the extent of agriculture sector diversification by 0.025percent. Therefore, it can be inferred that these macroeconomic indicators are the major barometers which determine the direction of agriculture sector diversification.

The estimated speed of adjustment coefficient (ECT2t-1) which captured both the long-run and short-run equilibrium was found to be negatively signed and significant at one percent probability level, implying that the extent of agricultural sector diversification tends to correct its previous disequilibrium from the equilibrium at the speed of 24.14percent per annum. Ceteris paribus, the extent of Nigeria agricultural sector diversification will take approximately 9.10 months to re-establish equilibrium

Also, observed was that the joint influence of the whole variables captured in the long and short-run model accounted for 95.5 and 96.5percent variation in the degree of diversification of agricultural sector respectively.

Granger Causality Test of AGDP vis-á-vis Macroeconomic Indicators

The Granger causality was used to determine whether the macroeconomic indicators contain useful information to predict the future of Agriculture GDP or vice-versa (Table 7 panel A). A cursory review of the results showed that AGDP had poor exogenity (no-causality) with all the macroeconomic indicators as evident from their f-statistics which were not different from zero at 10percent probability level: no macroeconomic indicators have a causal effect in determining revenue formation of agriculture sector likewise the later inturn has no causal effect in determining the direction of the macroeconomic indicators. This signified how poor and weak the performance of Nigerian agricultural sector. It is worth to note that a situation of either two-way (bidirectional) or one-way (unidirectional) feed forward and backward flow was not observed between AGDP in pair with any of the macroeconomic indicators, an indication that the sector revenue is not a game changer in the economy of the country.

Granger Causality of Diversification vis-á-vis Macroeconomic Indicators

Presented in Table 7 (panel B) are the causal directions of agricultural sector diversification vis-á-vis the macroeconomic indicators. The results showed that DI exhibited neither bidirectional causality nor unidirectional causality nay no-causality in pair with any of the macroeconomic indicators. Therefore, it can be inferred that DI does not contain useful information to predict the future of any of the macroeconomic indicators in pair likewise neither do the macroeconomic indicators contain useful information to predict the future of the former. This depicts poor economic performance of the sector which may be due largely to stagnation, thus, an indication that agriculture sector diversification of the nation is a chasm.

Diagnostic Test Results

Presented in Table 8 are the diagnostic tests viz. autocorrelation, homoscedasticity, Arch effect test, normality test, parameter stability test, structural break test at various points and multicollinearity test for AGDP and DI models. The results of the autocorrelation showed no evidence of a serial correlation between the successive values of the residuals as indicated by the Langrage multiplier test (LM) and Ljung-Box Q-stats which were not different from zero at 10percent probability level. The Arch effect and homoscedasticity tests showed no presence of arch effects i.e. no covariance between the successive variance of the residuals and absence of heteroscedasticity i.e. variance of the residuals are not transpose of themselves as indicated by the Arch LM and Breusch-Pagan LM tests respectively which were not different from zero at 10percent probability level. The test for normality of residuals showed that the error terms were normally distributed, that is, normally skewed as indicated by the test-statistics which were not different from zero at 10 percent. The parameter stability tests showed no change in parameters i.e. absence of a structural break in the equation for the pooled data as indicated by the CUSUM Harvey-Collier tests which were not different from zero at 10percent probability level. In addition, structural break tests at interval points viz. 2001 and 2011 years showed no evidence of structural break as indicated by their respective chow test statistics which were not different from zero at 10percent probability level. Lastly, the multicollinearity test results showed no problem of collinearity between or among predictor variables as indicated by the variance inflation factors (VIF) which were less the 10.0 baseline.

Table 8. ECM diagnostic statistics

Test		ECM diagnostic checking for ΔLNAGDP		ECM diagnostic checking for ΔLNBDI	
		t-stat	Prob. (P<0.10)	t-stat	Prob. (P<0.10)
Autocorrelation	LM test	0.0616	0.808	0.039	0.847
	Ljung-Box Q	0.0675	0.795	0.057	0.811
	Alternative stat	0.1174	0.732	0.075	0.785
Arch effect	LM test	0.0637	0.800	0.376	0.540
Parameter stability	CUSUM (H-C)	0.545	0.596	0.540	0.586
Structural break	Chow test @2001	0.8246	0.630	-	-
Structural break	Chow test @2011	1.419	0.294	-	-
Heteroscedasticity	Breusch-Pagan test	4.4353	0.880	5.410	0.797
Normality test	c^2	2.267	0.322	3.195	0.202
Multicollineraity	VIF	Values > 10.0 indicate a collinearity		Values > 10.0 indicate a collinearity	
	ΔLNFDI	1.610		1.738	
	ΔLNEXR	5.949		3.489	
	ΔLNTOP	2.687		1.585	
	ΔLNTAC	1.746		1.895	
	ΔLNFCS	7.346		9.347	
	ΔLNPMS	2.409		3.185	
	ΔLNBDI	5.256		-	
	ΔLNGDP	-		6.038	
	Dummy	2.540		2.065	
	ECT_{t-1}	2.044		1.200	

Conclusions and Recommendations

Sequel to these finding it can be inferred that the sector was receding towards specialization which if well managed will enable the sector to take a good shape among the comity of nations viz. comparative advantage. In addition, credit supply to the sector was not productive due to economic and social constraints at the micro-level i.e. farm sector. Therefore, based on these findings the study recommended that the sector should focus on specialization (crop sub-sector) in order to drive the maximum benefit inherent in comparative advantage; in order to make agriculture credit productive it should assume two-dimension: consumption credit alongside production credit; and, the problem of agriculture credit mismatch should be addressed in order to make moral suasion policy effective. In addition, the study called fora review of regional (Economic Community of West Africa-ECOWAS) charter on cross-border trade liberalization which does not favour Nigeria as massive smuggling of agricultural products continues to kill the nation's agricultural economy.

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Table 3: Unit root tests

Variables	ADF		Remarks	ADF-GLS		Remarks
	τ-stat	P<0.05		τ-stat	τ-critical	
LNAGDP	-2.0776	0.5304	Non-stationary	-1.9670	-3.19	Non-stationary
ΔLNAGDP	-4.3509*	0.0120	Stationary I(1)	-4.5782*		Stationary I(1)
LNFDI	-1.1884	0.6613	Non-stationary	-1.6712	-3.19	Non-stationary
ΔLNFDI	-5.810*	0.0001	Stationary I(1)	-5.9264*		Stationary I(1)
LNTOP	-1.7767	0.0722	Non-stationary	-0.1999	0.614	Non-stationary
ΔLNTOP	-2.033*	0.0403	Stationary I(1)	-2.5568*	0.012	Stationary I(1)
LNTAC	-2.7068	0.2429	Non-stationary	-2.3484	-3.19	Non-stationary
ΔLNTAC	-4.3182*	0.0129	Stationary I(1)	-4.4059*		Stationary I(1)
LNFCS	-2.6004	0.2832	Non-stationary	-2.1476	-3.19	Non-stationary
ΔLNFCS	-4.1379*	0.0186	Stationary I(1)	-4.3273*		Stationary I(1)
LNDI	-1.1179	0.6906	Non-stationary	-2.0246	-3.19	Non-stationary
ΔLNDI	-4.4947*	0.0020	Stationary I(1)	-4.6308*		Stationary I(1)
LNPMS	-2.5126	0.1256	Non-stationary	-1.8807	-3.19	Non-stationary
ΔLNPMS	-3.6856*	0.0044	Stationary I(1)	-4.0784*		Stationary I(1)
LNINF	-3.8543*	0.0024	Stationary I(0)	-1.2830	0.184	Non-stationary
ΔLNINF	-	-	-	-1.7003*	0.040	Stationary I(1)
LNEXR	-4.8337*	0.0008	Stationary I(0)	-2.0377	-3.19	Non-stationary
ΔLNEXR	-	-	-	-3.4831*		Stationary I(1)

*Note: * indicate that unit root at the level or at first difference was rejected at 5percent significance*

Table 4: ADF unit root test for residuals

Residual variable	ADF τ-stat	Engel-Granger critical value		Decision
		5 percent	10 percent	
Residual 1 (e_1)	-3.7101	-3.34	-3.04	Stationary at I(0)
Residual 2 (e_{21})	-3.4996	-3.34	-3.04	Stationary at I(0)

Table 5. Long-run and short-run predictions for AGDP

Long-run dynamic model (long-run prediction)				Short-run dynamic model (short-run prediction)			
Variable	**Coefficient**	**SE**	**t-ratio**	**Variable**	**Coefficient**	**SE**	**t-ratio**
Constant	6.9063	0.1355	50.96^{***}	Constant	0.0051	0.0110	0.4582^{NS}
LNFDI	-0.0215	0.0143	1.503^{NS}	ΔLNFDI	-0.0050	0.0102	0.4872^{NS}
LNEXR	0.1487	0.0392	3.795^{***}	ΔLNEXR	0.1192	0.0329	3.619^{***}
LNTOP	-0.0731	0.0240	3.050^{***}	ΔLNTOP	-0.0535	0.0222	2.408^{**}
LNTAC	-0.0109	0.0399	0.272^{NS}	ΔLNTAC	-0.0058	0.0125	0.462^{NS}
LNFCS	0.4225	0.0630	6.709^{***}	ΔLNFCS	0.2009	0.0357	5.622^{***}
LNPMS	-0.0438	0.0215	2.043^{*}	ΔLNPMS	-0.0385	0.0101	3.812^{***}
LNDI	-0.3098	0.1242	2.494^{**}	ΔLNDI	-0.6600	0.8250	7.999^{***}
R^2	0.998			Dummy	0.0215	0.0086	2.507^{**}
R^2Adjusted	0.996			ECT_{t-1}	-0.6863	0.1444	4.752^{***}
Durbin-Watson	0.847			R^2	0.987		
				R^2adjusted	0.977		
				Durbin-Watson	1.902		
				Wald F-test (External factor)	229.50***		
				Wald F-test (Internal factor)	15.11***		

Table 6. Long-run and short-run predictions for Diversification (DI) of agricultural sector

Long-run dynamic model (long-run prediction)				Short-run dynamic model (short-run prediction)			
Variable	**Coefficient**	**SE**	**t-ratio**	**Variable**	**Coefficient**	**SE**	**t-ratio**
Constant	6.0128	2.6203	2.295**	Constant	0.0360	0.0062	5.837***
LNFDI	-0.0404	0.0437	0.926^{NS}	ΔLNFDI	-0.0147	0.0097	1.524NS
LNEXR	0.0092	0.0940	0.098^{NS}	ΔLNEXR	-0.0193	0.0290	0.665NS
LNTOP	0.0368	0.0826	0.446^{NS}	ΔLNTOP	0.0112	0.0132	0.853NS
LNTAC	0.1118	0.0567	1.973^{*}	ΔLNTAC	0.0160	0.0150	1.065NS
LNFCS	0.1629	0.1978	0.824^{NS}	ΔLNFCS	0.0505	0.0343	1.473NS
LNPMS	0.0149	0.0458	0.325^{NS}	ΔLNPMS	-0.0254	0.0082	3.100***
LNAGDP	-0.8928	0.3610	2.473^{**}	ΔLNAGDP	-0.9345	0.0667	14.01***
R^2	0.955			Dummy	0.0049	0.0068	0.728NS
R^2-Adjusted	0.955			**ECT_{2t-1}**	-0.2414	0.0581	4.151***
Durbin-Watson	0.785			**R-squared**	0.965		
				R^2-Adjusted	0.935		
				Durbin-Watson	1.981		

*Note: *** ** * NS implies significance at 1percent, 5percent and 10 percent probability levels respectively*
NS: Non-significant

Table 7: Pair-wise Granger causality test

AGDP *vis-á-vis* macroeconomic indicators (Panel A)					DI *vis-á-vis* macroeconomic indicators (Panel B)				
H_0	**F-stat**	**P<0.05**	**Granger cause**	**Direction**	**H_0**	**F-stat**	**P<0.05**	**Granger cause**	**Direction**
DI→AGDP	0.4410	0.5146	No	None	**AGDP→DI**	0.0506	0.8244	No	None
DI←AGDP	0.0506	0.8244	No		**AGDP←DI**	0.4410	0.5146	No	
EXR→AGDP	0.4435	0.5135	No	None	**EXR→DI**	0.0020	0.9646	No	None
EXR←AGDP	0.1805	0.6757	No		**EXR←DI**	0.0564	0.8148	No	
TAC→AGDP	0.0241	0.8782	No	None	**TAC→DI**	0.0194	0.8906	No	None
TAC←AGDP	0.1483	0.7045	No		**TAC←DI**	0.0017	0.9673	No	
FCS→AGDP	2.0054	0.1729	No	None	**FCS→DI**	0.4734	0.4997	No	None
FCS←AGDP	0.8930	0.3565	No		**FCS←DI**	1.7325	0.2038	No	
FDI→AGDP	0.0013	0.9716	No	None	**FDI→DI**	0.0169	0.8978	No	None
FDI←AGDP	0.1456	0.7070	No		**FDI←DI**	0.0105	0.9192	No	
TOP→AGDP	0.9818	0.3342	No	None	**TOP→DI**	1.0273	0.3235	No	None
TOP←AGDP	0.0806	0.7796	No		**TOP←DI**	0.7598	0.3943	No	
PMS→AGDP	0.0899	0.7676	No	None	**PMS→DI**	0.0037	0.9519	No	None
PMS←AGDP	0.8905	0.3572	No		**PMS←DI**	0.1174	0.7357	No	

Rural Tourism: A Game Changer for the Economy

Shrushti Bajpai*

Abstract

India as we know is very rich in its cultural and varied heritage. From wide and varied landscape of snow capped mountains in the north to the temples in the south, from the royal forts of Rajasthan to rich forests of Madhya Pradesh, from the Rann of Kutch to the beaches of Mumbai, from the Ghats of Banaras to the diverse culture of North East, our nation offers some Incredible destinations thereby making the tourism sector a game changer for the economy. This paper talks about rural tourism, its impact on the economy as a whole and the government initiatives to promote rural tourism.

Keywords: *Rural, Tourism, Government, India, Economy*

Introduction

Tourism forms a major part in Indian economy. With higher purchasing power and spending power, easier and affordable modes of travel, more and more people are travelling across the world. The traveler today is ready to go to different places that offer unique experiences.

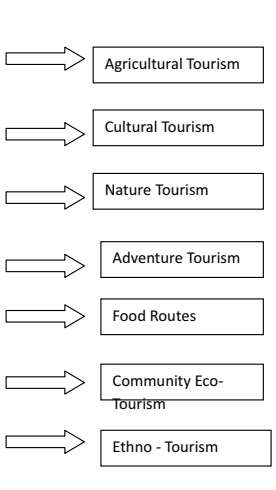
India is very rich in its tourist's destinations. There are different cultures, languages, festivals and rituals. The great monuments of Rajasthan, temples, Himalaya ranges, beaches, rich forests, picturesque north east and many more, our nation has many products to offer to the tourists. India today is an attractive tourist destination.

Rural tourism focuses mainly on the rural lifestyle. The tourists from different parts of the world travel to a rural location and experience the life of a village by participating in daily activities of the village. They get a chance to imbibe the traditions and cultures of the place.

Tourism has a very important role to play in India's remarkable growth in recent past. According to the Report of World Travel & Tourism Council, India is the world's seventh largest tourism economy in terms of its total contribution to the country's GDP. According to the latest data available, Travel & Tourism generated INR 14.1. trillion (USD 208.9 billion) in 2016, which is the world's seventh largest in terms of absolute size, the sum is equivalent to 9.6% of the country's GDP.

Government of India explains Rural Tourism as " Any form of tourism that show cases the rural life, art, culture and heritage at rural locations, thereby benefitting the local community, economically and socially, as well as enabling interaction between the tourists and the locals for a more enriching tourism experience can be termed as rural tourism. Rural tourism is essentially an activity that takes place in the countryside. It is multi-faceted and may entail farm/agricultural tourism and eco-tourism. As against conventional tourism, rural tourism has certain typical characteristics like-it is experience oriented, the locations are sparsely populated, it is predominantly in natural environment, it meshes with seasonality and local events and is based on preservation of culture, heritage and tradition."

TYPES OF RURAL TOURISM



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1. Agricultural tourism: it is about exploring the agricultural sector and how people work in farms, what are the various types of farm equipments they use, lush green fields with natural flora and fauna, the rivers, lakes, rich folklore etc.
2. Cultural tourism: in this the tourists, mainly from abroad, they mix in local culture related activities, like rituals and festivals. For instance, Barsane ki Holi is very famous among foreigners.
3. Nature tourism: best suited for nature lovers, in this people visit places of natural beauty, nature reserve etc.
4. Adventure tourism: it includes river rafting, paragliding or any other adventure.
5. Food routes: where desire to travel is for cuisine. This tourism focuses on food and knowing more about different staples of different places.
6. Community Eco-tourism: it is a travel to natural areas that conserve the environment and improves the well-being of local people.
7. Ethno-tourism: it's about knowing more regarding various ethnic and cultural beliefs and way of living.

Government Schemes to Promote Rural Tourism

To develop rural areas which can be the places for rural tourism, the Government has introduced some schemes, which are as follows:

1. Tourist Circuits: this acts as another push for tourism, recently the UP government has proposed to set up Mahabharata, Krishna, Jain, Sufi and other circuits in the state. UP has second position in terms of domestic arrivals and third in foreign tourist arrivals, thereby making it a highly popular tourist destination. There are popular tourist places , which are attractive but less known to people at large like Najafgarh near Kanpur, Naimisharanya, Paarijaat vrikshya, Bhitargaon Temple and many more. If these places are developed into attractive tourist destinations then it can provide hearty tourism experience to the tourists and it will also help the people around these places as it will be a good source of employment to these people.

Some circuits which are proposed by the UP Government are as follows-

- Mahabharata Circuit- the government will connect Hastinapur in Meerut with Kampilya in Farrukhabad and Ahichchatra, the ancient temple of Northeren Panchala whose remains have been found in Ramnagar.
- Krishna Circuit- it will include Mathura, Vrindavan, Goverdhan, Gokul, Barsana and Nandgaon.
- Jain Circuit- it will connect Meerut, Agra, Kaushambhi, Varanasi, Deoria, Ayodhya, Shravasti and Farrukhabad.
- ShaktiPeeth Circuit- Vindhyachal, Kaushambhi, Allahabad, Sonbhadra, Saharanpur.

2. **PRASAD-Pilgrimage Rejuvenation for Spiritual Augmentation Drive:** our nation has various religions like Hinduism, Islam, Sikhism, Buddhism, Jainism,Christianity etc. having their pilgrimage centers in different parts of the country. Religion and spirituality are main reasons for travel, with major tourists destinations having developed largely as a result of their connections to sacred places.

3. **Special Tourism Zones:** the government has introduced Five Special Tourism Zones, anchored on Special Purpose Vehicles (SPV's), will be set up in partnership with the states.

4. **E-Tourist Visa Facility:** to facilitate arrival of international tourists, Ministry of Tourism has been working very closely with Ministry of Home Affairs and Ministry of External Affairs for easing the Visa rules in the country.

5. **National Tourism Development Policy:** this was formulated in 2002. The main objectives of the policy were as follows-

- To position tourism as a major engine of economic growth
- To harness the direct and multiplier effects for employment and poverty eradication in an environmentally sustainable manner
- To focus on domestic tourism as major driver of economic growth
- To position India as one of the global brand in tourism
- To create and develop integrated tourism circuits
- To recognize the importance of private sector and private investment in tourism industry.

RECENT TRENDS IN TOURISM INDUSTRY

Table i: Foreign Tourists Arrival in India

Year	Number of Foreign Tourists Arrival (in Millions)	Annual Growth Rate (%)
2014	7.68	10.2
2015	8.03	4.5
2016	8.80	9.7
2017 (P) Jan-Jun 2017	4.89	17.2*(growth rate over same period in 2016)

(Source: India Tourism Statistics At a Glance, 2017)

The above figure shows that India's demand in global tourism is increasing, it can be because of the Government's policies in recent years or may be because of the favorable environment or may be both.

Table ii: Foreign exchange earnings from tourism in India

Year	FEE from Tourism in India (in US $ Million)	Annual Growth Rate (%)
2014	20236	9.7
2015	21071	4.1
2016	22923	8.8
2017 (P) Jan-Jun 2017	13230	22.3 * (growth rate over same period in 2016)

(Source: India Tourism Statistics At a Glance, 2017)

Table iii: Number of Domestic Tourist Visits

Year	Domestic Tourist Visits (in Million)	Annual Growth Rate (%)
2014	1282.80	12.3
2015	1431.97	11.6
2016	1613.55	12.7

(Source: India Tourism Statistics At a Glance, 2017)

Keeping these tables into mind, we can say that not only tourists from abroad but number of domestic travelers have also increased in the same time period.

Conclusion

In the end it can be concluded by saying that India being a developing economy with a stable government will definitely lead to a growth in tourism sector. Rural India has a lot to offer to people. Rural tourism is particularly important for employment generation. A growth in rural tourism will also lead to a balanced regional development, whereby the under developed regions will also be developed. For India's extraordinary performance in Tourism industry, the various schemes proposed by the Government should be implemented properly. The Central Government as well as the State Government must work hand in hand for exploring tourism potential in rural areas.

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Industry Concentration and Stock Returns: Indian Evidence

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Abstract

This study investigates whether industry concentration significantly affect stock returns after controlling for well-known predictors of average returns in the Indian context using data of firms comprising S & P BSE 500 index from October 2001 to September 2016. These well documented determinants of stock returns include the Fama-French three factors. The study document a negative relationship between industry concentration and average stock returns measured at both the firm and industry level in the Indian which is robust to choice of proxy for industry concentration. Moreover, it is found that although the Fama and French three factor model provides a better explanation of the monthly firm level as well as industry level excess returns of the concentration sorted portfolios than the CAPM, even the three factor model fails to completely capture the abnormal returns of the industry concentration sorted portfolios. This implies that industry concentration premium contains additional information about the cross sectional variation of stock returns that is not captured by the risk factors comprising the Fama and French three factor model.

Introduction

One of vital areas of empirical asset pricing research is identifying cross-sectional predictors of stock returns. Once a new variable is identified which can predict the cross-sectional variation of stock returns subsequent focus is on investigating two issues: whether this observed return pattern is pervasive in markets around the world; and whether the risk factors comprising the existing asset pricing models can explain the return pattern. If the relationship between the predictor variable and average returns is found to be pervasive and if the constituent factors of the existing asset pricing models fail to account for this return pattern then this empirically observed relationship constitute a capital market anomaly.

While the Fama and French three factor model (1993) can explain a large number of anomalies left unexplained by the CAPM there are also patterns in returns associated with some variables that cannot be explained even the highly successful three factor model. Among such predictor variables one of the most recently identified one is industry concentration. A striking feature about this predictor is that while other predictors are typically firm specific characteristics this one is an attribute of an industry. Hou and Robinson (2006) were the first to empirically identify that there is an inverse relationship between industry concentration and stock returns in the U.S. market which holds at both the industry level and firm level. The study also found that the observed industry concentration premium contains additional information about the cross sectional variation of stock returns that is not captured by the risk factors comprising the Fama and French three factor model. However, this pioneer study on industry concentration premium has been followed by only a handful of studies which explore the nexus between industry concentration and average returns in different markets outside the U.S. Hence, the issue of whether industry concentration premium should be added to the list of anomalies that pose a challenge to the Fama and French three factor model remains undecided. To resolve this significant issue it is necessary to gather extensive evidence that there exists a relationship between industry concentration and stock returns in different countries and this return pattern cannot be explained by the explained by the three factor model developed by Fama and French.

Given this background, the present study aims to investigate whether industry concentration significantly affect stock returns after controlling for well-known predictors of average returns in the Indian context. These well documented determinants of stock returns include the Fama-French three factors. Since, India is one of the fastest growing emerging economies this study is expected to contribute valuable out-of-sample evidence on the industry concentration-return relationship identified in the U.S. market.

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A time-series regression approach has been adopted to study the industry concentration-return relationship by employing two different industry concentration measures (proxy): the Herfindhal index (H) and the Entropy index (E).

The rest of the paper is organised as follows: In the second section prior research in this area has been analysed to reveal the gap in existing literature. The third section has been devoted to a brief discussion of the research methodology that has been employed for carrying out this study. The fourth section contains the empirical findings that are obtained from statistical analysis. Section 5 incorporates the concluding remarks.

Literature Review

The available literature on the link between industry concentration and average return is very sparse.

A study conducted by Hou and Robinson (2006) on a sample of U.S. stocks first documented the existence of a negative relationship between industry concentration and average stock returns after controlling for the factors that are known to affect stock returns (Fama-French three factors and momentum) during the period spanning 1963 to 2001. The study confirmed that concentration premium is not related to chance, measurement error, capital structure and persistent-in-sample cash-flow shock. Hence, concentration premium can be attributed to firm's risk and therefore, it needs to be taken into account when determining the firm's expected return. The researchers are of the opinion that either innovation risk or distress risk is responsible for the concentration premium. But, although the evidence in this paper preliminarily support the innovation risk theory, the evidence cannot be considered to be conclusive and further work is necessary to clearly identify whether concentration premium arises from innovation risk or distress risk.

Dan et al. (2007) made an attempt to investigate the nature of relationship between industry concentration and average stock returns in the China A-share market. In contrast to the finding of Hou and Robinson (2006) in the U.S. market, this study revealed a significant positive relation between industry concentration and expected returns even after accounting for size, book-to-market equity and momentum. It was also found that neither cash-flow shocks nor macroeconomic factors can explain the concentration premium. However, the findings of this study are debatable because the sample period spanning only four years (July 2001 to June 2005) is too short.

Inspired by the study of Hou and Robinson (2006) Ignatieva and Gallagher (2011) aimed to examine the effect of the structure of the product market (measured by industry concentration) on the cross-section of stock returns in the Australian stock market. Since, the Australian equity market is significantly different from the U.S. market in terms of political and geographical characteristics as well as Government policies this study constitute an important out-of-sample testing of the concentration premium identified by Hou and Robinson (2006) in the U.S. market. In contrast to the U.S. finding this study reported a positive relationship between industry concentration and risk-adjusted returns. Moreover, this study also revealed that this relationship between industry concentration and expected returns is conditional on size: While the relationship is negative for large firms, it is positive for small companies.

Hashem (2011) sought to examine the relationship between market structure and mean stock returns in the London Stock Exchange over the period 1985-2010. This study found that like in the U.S. market a negative relationship exists between industry concentration and expected returns even after controlling for known risk factors, such as, size, BE/ME ratio, momentum and leverage. They suggested that a likely explanation of the concentration premium is that investors require higher premium as a compensation of greater distress risk associated with more competitive industries.

From the above review of literature certain gaps becomes apparent. The linkage between liquidity and average returns has been investigated in very few stock markets. In addition, majority of these few studies on industry concentration-return nexus are based on developed markets – the U.S.A., the U.K. and Australia. But, gathering evidence of existence of a industry concentration premium in emerging markets is particularly important to counter the data-snooping argument put forward by Black (1993) and Mackinlay (1995). The only study examining the relationship between industry concentration and stock return in an emerging market is the one conducted by Dan (2007) on the Chinese market. But, the findings of this study are debatable because the sample period spanning only four years (July 2001 to June 2005) is too short. Moreover, since none of the studies on industry concentration premium have been conducted recently (post 2010), it is not known whether industry concentration is still a determinant of average returns in the contemporary period. Furthermore, out of the three available approaches to study such relationships, all the previous studies have adopted either characteristics adjusted return approach (Daniel et al., 1997) or the Fama-MacBeth cross-sectional regression approach and neglected the time-

series regression approach. But, Subhramanyam (2010) have advocated that when studies on cross-sectional predictors of returns should examine whether the predictive power of the variable is robust to variation in methodology.

Therefore, in order to bridge these gaps in literature the present study aims to investigate whether industry concentration significantly affect stock returns after controlling for well-known predictors of average returns in the Indian context. These well documented determinants of stock returns include the Fama-French three factors. The study covers an updated period of October 2001 to September 2016. A time-series regression approach has been adopted to study the industry concentration-return relationship by employing two different industry concentration measures (proxy): the Herfindhal index (H) and the Entropy index (E).

Research Methodology

Data

The sample consists of companies comprising the S & P BSE 500 index as of March 31, 2015. The accounting information for the sample firms have been obtained for the financial years ending on 31st March, 2001 to 31st March, 2015. The time period during which the models have been tested is October 2001 to September 2016.Out of these 500 companies, those with non-March financial year-ending and those belonging to the GICS sector 'Financials' have been excluded from the sample. Further, to be included in the sample in a given year, data pertaining to all the attributes of the company which are required to construct the explanatory factors for that year and net sales of past three years must be available. Hence, the number of companies constituting the sample varies from year to year. The sample size ranges from 183 in 2001 to 365 in 2015.

Accounting information and stock price data pertaining to the companies constituting the sample has been gathered from the Prowess IQ database maintained by Center for Monitoring Indian Economy (CMIE). Annual data has been collected for the following database items for each firm:

- Market capitalisation at March end of each year 2001-2015
- Price-to-book (P/B) at March end of each year 2001-2015
- Net sales at March end of each year 1999-2001

Monthly records have been obtained for the following data types:

- Adjusted share prices spanning the period September 2001 to September 2016

The monthly adjusted share prices of the firms have been converted into monthly return in percentage using arithmetic returns. Since dividend yields on Indian stocks are negligible (Gupta, 2000), the returns have been computed on the basis of the capital gain component only. Moreover, return on S & P BSE 500 index has been used as a proxy for return on market portfolio. Since the return on this index does not incorporate dividends, inclusion of dividends in calculating stock returns will bias the results of the study.

Each sample stock has been assigned to an industry according to its two digit Global Industry Classification Standard (GICS) industry sector code as on March 31, 2015. GICS industry sector of the firms constituting the sample have been obtained from Thomson One Banker database of Thomson Reuters.

S & P BSE-500 index has been used as market proxy. Monthly data for S & P BSE-500 index has been collected from the official website of Bombay Stock Exchange. The index series has been converted into percentage return series using arithmetic returns.

According to standard practice in asset pricing literature implicit yields on the month-end auction of 91-day T-bills are used as risk-free rate proxy. This data has been obtained from Reserve Bank of India's website: www.rbi.org.in. The figures have been converted into monthly figures using the following formula:

$$(1 + r)12 = (1 + R)$$

Where,
r = monthly risk-free return
R = annualized yield

3.2. Measuring Industry concentration

Following the approach of Hashem (2011) the study employs two proxies (measures) of industry concentration - Herfindahl index and Entropy index. The rationale behind using two measures of industry concentration is to examine whether the observed relationship between industry concentration and stock returns is robust to choice of proxy for industry concentration. For each j industry is calculated using the formula:

$$H_j = \sum_{i=1}^{N} S_{ij}^2$$

Where, Sij symbolises the market share of the i-th firm in the industry j on the basis of net sales. It follows from the above formula that in case of monopoly the Herfindhal index is 1 and it decreases as competition increases and can reach a minimum value of zero.

For each j industry entropy index is computed according to the formula:

$$E_j = \sum_{i=1}^{N} S_{ij} \; Ln(\frac{1}{S_{ij}})$$

Fom the above formula it is evident that the the entropy index in a monopoly setting is 0 and it increase as completion increases reaching a maximum value Ln(N).

The Herfindhal index and entropy index are calculated annually for each industry and averaged over the past three years to ensure that potential data errors do not affect the measures of industry concentration.

Constructing the industry concentration sorted portfolios

Each year t the industries are sorted into three portfolios based on each measure of industry concentration. P1 denotes the least concentrated portfolio while P3 represents the most concentrated portfolio. The monthly return on each portfolio is calculated at both firm and industry level for the period October of year t to September of year t +1. The firm level portfolio returns are computed by equally weighting the monthly returns of each firm included in the portfolio. The industry level returns are calculated by first calculating the equally weighted monthly returns of each industry within the portfolio and then equally weighting these industry portfolio returns. The portfolios are rebalanced in September of each subsequent year throughout the study period. The Companies Act, 1956 stipulates that a company must publish its balance sheet within a period of six months from its financial year ending. Therefore, the returns are calculated from October of year t to ensure that the accounting data at the financial year ending in March of year is known to investors by the time of portfolio formation. Creating a portfolio without this time lag from the end of the accounting year, yields results that are affected by look-ahead bias. This bias is introduced by the use of data in a study that would have been unknown during the study period.

Models

The index model representation of CAPM (Bodie et al., 2007) and the Fama and French three factor model (1993 are used to examine whether these existing asset pricing models can explain the monthly excess returns on the industry concentration sorted portfolios. Table 1 specifies the asset pricing models and table 2 describes the factors constituting the models.

Table 1.
Asset Pricing Models

Model	Description
CAPM Index model	$R_{it} - R_{ft} = a_i + b_iMKT_t + e_{it}$
Fama and French three factor model	$R_{it} - R_{ft} = a_i + b_iMKT_t + s_iSMB_t + h_iHML_t + e_{it}$

Table 2.
Variable description of the asset pricing models

Variables	Description
R_{it}	Rate of return on i-th asset in time‘t’
R_{ft}	Rate of return on risk free assets in time‘t’
MKT_t	excess return of the market portfolio over the risk free rate
SMB_t	Small minus Big i.e. returns of a portfolio of small stocks in excess of the returns of a portfolio of large stocks in time‘t’
HML_t	High minus Low ie. returns of a portfolio of stocks with high book to market ratio in excess of the return on a portfolio of stocks with low book to market ratio in time ‘t’
a_i	unconditional mean return of i-th asset
b_i	factor loading of asset i on MKT
s_i	factor loading of asset i on SMB
h_i	factor loading of asset i on HML
e_{it}	error term for asset i at time t

Constructing the Explanatory factor portfolios

MKT

The monthly risk-free rate of return is subtracted from the S & P BSE 500 index return in order to create the MKT factor portfolio.

SMB

The SMB factor is obtained from independent double 2x3 sorts on size and BE/ME ratio respectively. The firms that constitute the sample are ranked according to their market capitalisation (price times number of shares outstanding) in September of each year t from 2001 to 2015. If the market capitalisation of a firm is less than the median value it is classified as Small (S), otherwise it is placed in the category Big (B). The sample stocks are ranked according to their book-to-market equity ratio in March of each year t from 2001 to 2015 and then divided into three groups: Low (L) bottom 30%, Medium (M) 30% to 70% and High (H) above 70%. Six portfolios (SL, SM, SH, BL, BM, BH) are constructed from the intersection of two size and three BE/ME categories. Equally weighted monthly return on each portfolio is calculated for the period October of year t to September of year t+1. The portfolios are revised in September of each subsequent year according to new size and BE/ME ratio rankings.

The explanatory factor SMB (small minus big) is meant to mimic the size related risk factor in return. SMB is defined as the difference between the average monthly returns on three small sized ones among the six size-value sorted portfolios (SH, SM and SL) and the average monthly returns on the three big ones (BH, BM and BL). Thus, SMB is the difference between the returns on small and big stock portfolios with almost the same weighted average boo-to-market equity. Hence, SMB is largely free of BE/ME effect, capturing instead the different return behaviour of small and big stocks.

HML

The explanatory factor HML (high minus low) is the mimicking portfolio for the book-to-market equity risk. HML is defined as the difference between the mean monthly returns of the two high value portfolios (SH and BH) and the simple average of the monthly returns of the two low BE/ME stock portfolios (SL and BL). The construction procedure ensures that the HML factor is almost neutral with respect to size, focussing instead on the different return behaviours of high and low BE/ME stocks.

Empirical Results

Mean Excess Returns

Table 3 shows the monthly excess returns in percent earned on average by the portfolios formed on the basis of Herfindhal index and entropy index measured at both the firm and industry level; the p-values are reported below the corresponding mean returns.

As shown in Table 3 across the Herfindhal portfolios, the portfolio containing the least concentrated (most) competitive industries earn a statistically significant average firm level monthly excess return of 2.46% which decreases to 1.94% for the most concentrated portfolio but remains statistically significant. For the Herfindhal portfolios, it is seen that the statistically significant average industry level monthly excess returns are also higher for the most competitive portfolio (2.4%) compared to the most concentrated portfolio (1.73). Thus, it is found that there is a negative relationship between industry concentration and average stock returns measured at both the firm and industry level in the Indian market during the study period October 2001 to September 2016.

Table 3.

Average monthly percent excess returns of the industry concentration portfolios
(October 2001 – September 2016, 180 observations)

		P1	P2	P3
Herfindhal Index_ firm level returns	Mean	2.46	2.73	1.94
	p-value	0.001	0.000	0.007
Herfindhal Index_ industry level returns	Mean	2.4	2.44	1.73
	p-value	0.001	0.000	0.016
Entropy index_ firm level returns	Mean	2.65	2.2	2.01
	p-value	0.000	0.000	0.004
Entropy index_ industry level returns	Mean	2.65	2.12	1.81
	p-value	0.000	0.001	0.009

The tabulated average monthly excess returns of the Entropy portfolios computed at both the firm and industry levels shows that the negative relationship identified between industry concentration and average stock returns measured at both the firm and industry level in the Indian market during the study period October 2001 to September 2016 using the Herfindhal index as proxy for industry concentration is robust to the choice of industry concentration measure.

Summary Asset Pricing Tests

In addition to GRS test, some other statistics have been computed in order to present a more detailed insight into the performance of the asset pricing models. These statistics are – average of the absolute values of the intercepts and two ratios which measure the dispersion of the pricing errors (unexplained mean excess returns of the test portfolios) with respect to the dispersion of mean excess returns of the test assets. Dispersion needs to be measured from some reference point. If an asset pricing model is complete then the true intercepts are zero. Hence, the zero is the obvious choice for reference point for measuring dispersion in pricing error (intercepts). Since value weighted market portfolio is the sum of the portfolios selected by investors, the average excess return of value weighted market portfolio is chosen as the reference point for measuring the dispersion of mean excess returns of the test portfolios. The mean excess return on the test asset i minus the average excess return of the value weighted market portfolio is denoted by (r_i) . The two ratios which measure the relative dispersion of the pricing error are – the ratio of the average absolute intercept to the average of (r_i) values (A ai /A (r_i)); the ratio of the average of the square of the intercepts divided by the mean squared value of ri (Aai2/Ari2). Finally we calculate a ratio that provides an estimate of the proportion of the dispersion of the regression intercepts that is caused by sampling error. It is the ratio of the average squared standard error of the intercepts over the average squared intercepts (A s2(ai)/Aai2). Low values of the average absolute pricing error, A | a | /A | (r_i) | |and Aai2/Ari2 and high value of As2(ai)/Aai2 indicate good performance of the asset pricing model being examined.

Since, the literature on industrial organization suggest that Herfindhal index is superior as a proxy for industry concentration compared to other measures of industry concentration the CAPM and Fama-French three factor regressions are run on the Herfindhal index sorted portfolios only. Table 4 presents the GRS and the other statistics discussed above for the CAPM and the Fama-French three factor model.

Table 4.

Summary statistics for tests of the CAPM and the Fama-French three factor model
(October 2001 – September 2016, 180 observations)

Model factors							
3 H sorted portfolios _firm level returns							
MKT	9.59	0.000	1.05	0.88	0.82	0.1	0.8
MKT SMB HML	3.49	0.017	0.33	0.28	0.11	0.59	0.87
3 H sorted portfolios _ industry level returns							
MKT	8.03	0.000	0.83	0.84	0.76	0.1	0.83
MKT SMB HML	3.08	0.029	0.3	0.3	0.12	0.48	0.89

While the CAPM and the Fama-French three factor model are both rejected by the GRS test for both the firm level as well as industry level returns, the rejection is much stronger in case of the CAPM with a GRS p-value that is zero up to three places of decimal for both the firm level as well industry level returns. The average absolute intercepts are 1.05% and 0.83% from the CAPM for the firm level and industry level returns respectively, versus 0.33% and 0.3% for the three factor model. Like the average absolute intercepts, the ratios A ai /A (r_i) and Aai2/Ari2 have much higher values for both firm level as well as industry level returns for the CAPM in comparison to the three factor model. In addition, the ratio As2(ai)/Aai2 has a much lower value for both firm level as well as industry level returns for the CAPM than the Fama-French three factor model. Hence, it is evident that although the Fama and French three factor model provides a better explanation of the monthly excess returns than the CAPM even the three factor model fails to completely capture the abnormal returns of the industry concentration sorted portfolios at both the firm as well as industry level. This implies that industry concentration

premium contains additional information about the cross sectional variation of stock returns that is not captured by the risk factors comprising the Fama and French three factor model.

Calendar time factor regression details

Table 5 and table 6 show the intercepts and slopes produced by the CAPM and the three factor model for the firm level returns and the industry level monthly percent excess returns of the Herfindhal index sorted portfolios respectively. The figures within bracket indicate the corresponding t-statistics. The regression details impart perspective on the summary statistics in table 4.

Table 5.

Calendar time factor regressions for firm level monthly percent excess returns of three Herfindhal index sorted portfolios (October 2001 – September 2016, 180 observations)

Asset Pricing Model	Test Asset	a	b	s	h
CAPM	P1	1.01	1.22		
		(0.000)	(0.000)		
	P2	1.52	1.01		
		(0.000)	(0.000)		
	P3	0.6	1.12		
		(0.178)	(0.000)		
Fama and French three factor model	P1	-0.07	1.15	0.68	0.29
		(0.655)	(0.000)	(0.000)	(0.000)
	P2	0.62	0.93	0.56	0.37
		(0.016)	(0.000)	(0.000)	(0.000)
	P3	-0.29	1.08	0.57	0.15
		(0.497)	(0.000)	(0.000)	(0.085)

In case of the firm level returns the CAPM intercepts for P1 and P2 are statistically significant and positive. But the Fama-French three factor model produces a statistically significant intercept only in case of P2 which is also positive. The improvement in intercepts produced by the three factor model can be explained by the SMB and HML slopes. All the portfolios have statistically significant positive exposures to SMB and HML except P3 which has a statistically insignificant HML slope. Positive SMB and HML exposures increase three factor estimates of expected returns and reduce the statistical and economic significance of the intercepts.

Table 6.

Calendar time factor regressions for industry level monthly percent excess returns of three Herfindhal index sorted portfolios (October 2001 – September 2016, 180 observations)

Asset Pricing Model	Test Asset	a	b	s	h
CAPM	P1	0.96	1.21		
		(0.000)	(0.000)		
	P2	1.21	1.03		
		(0.000)	(0.000)		
	P3	0.33	1.17		
		(0.304)	(0.000)		
Fama and French three factor model	P1	-.05	1.15	0.63	0.28
		(0.76)	(0.000)	(0.000)	(0.000)
	P2	0.51	0.96	0.43	0.36
		(0.027)	(0.000)	(0.000)	(0.000)
	P3	-0.35	1.12	0.42	0.23
		(0.284)	(0.000)	(0.000)	(0.000)

Patterns of the intercepts produced by the two asset pricing models in case of the industry level returns are similar to those in case of the firm level returns. In case of the industry level returns the SML and HML factors have statistically significant positive slopes for all the portfolios which explain the improvements in intercepts produced by the three factor model.

Since, it is observed that although statistically significant positive loadings on size and value factors reduce economic significance of the intercepts of each of the Herfinhal index sorted portfolios, but still each of the intercepts does not become statistically significant it is evident that the industry concentration premium contains independent information about the cross-section of expected returns that is not explained by the risk factors comprising the Fama-French three factor model. This finding holds for both firm level and industry level returns.

Conclusion

Motivated by the studies on industry concentration-return relationship based on developed markets, the present study aims to investigate whether industry concentration significantly affect stock returns after controlling for well-known predictors of average returns in the Indian context. These well documented determinants of stock returns include the Fama-French three factors. Since, India is one of the fastest growing emerging economies this study is expected to contribute valuable out-of-sample evidence on the industry concentration-return relationship identified in the U.S. market. A time-series regression approach has been adopted to study the industry concentration-return relationship by employing two different industry concentration measures (proxy): the Herfindhal index (H) and the Entropy index (E). The index model representation of CAPM (Bodie et al., 2007) and the Fama and French three factor model (1993) have been used to adjust the monthly excess returns on the industry concentration sorted portfolios.

The study document a negative relationship between industry concentration and average stock returns measured at both the firm and industry level in the Indian market during the study period October 2001 to September 2016 which is robust to choice of proxy for industry concentration. This finding is in agreement with those in the U.S.A. and the U.K. market but contradicts the finding of positive industry concentration-return relationship in Australia and China. Moreover, it is found that although the Fama and French three factor model provides a better explanation of the monthly firm level as well as industry level excess returns than the CAPM, even the three factor model fails to completely capture the abnormal returns of the industry concentration sorted portfolios. This implies that industry concentration premium contains additional information about the cross sectional variation of stock returns that is not captured by the risk factors comprising the Fama and French three factor model. This result agrees with the findings of all the previous studies on industry concentration return nexus.

The study suffers from certain limitations. It does not attempt to provide any insights into possible explanations for industry concentration premium. Although previous studies have identified interaction between size and industry concentration and also between BE/ME ratio and industry concentration the present study does not examine the interaction between these factors and industry concentration. Although the Fama French five factors – market, size, book-to-market equity, profitability and investment are well known for providing better explanation of return patterns than their three factors the study does not control for profitability and investment while investigating the industry concentration-return relationship. These issues provide scope for future research which is necessary for a better understanding of the risk and return.

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