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Do Italian Firms Recovered from the Economic Downturn? Lessons Learned by a Niche in Fashion Sector

Alberto Lanzavecchia
University of Padova, Padova, Italy

Elena Meneghetti
Italian Lifestyle Management Group, Vicenza, Italy

Key Words
Italy, fashion, performance, peer group analysis.

Abstract
This paper examines a niche within a sub sector in the Italian textile-clothing industry: men fashion formalwear. The purpose of the paper is to analyze key fundamental data of firms operating in this market niche before and after the global 2008/09 economic downturn. This paper provides a comparative study, between Winners (those who recorded a positive 2007/10 EBITDA Compounded Average Growth Rate) and Losers, in a peer group of Italian manufacturing firms, on business fundamental data and performance indicators over last four years. A wide range of factors has been studied, such as export intensity, profitability, financial leverage, Relative Market Share, capital investments, number of brands, and number of direct point of sales. Dataset is based on primary data, extracted from official financial statements for the 2007-2010 reporting period. In order to compare the two groups, we tested the “difference-in-differences” for selected key data and run bivariate correlation among variables. The study provides also some case studies explanations on best performers. It was found that operating profitability, financial discipline, and multi-branding strategy are the main factors which differentiate the two groups. Losers were not different neither worst performers before the 2008/09 global crisis, but they became it. These firms implemented strategies that failed to react to such a global change and, ultimately, failed to maintain a competitive advantage.

The peer group sample is formed basically by medium and large firms, although made-to-measure fashion business is spread over hundreds of small and micro enterprises. Hence, findings cannot be generalized to the whole sub sector. The paper shows key figures of Winners and Losers and where they are different indeed. A managerial implication of our results is that sample firms, seeking to boost their Ebitda, should manage a portfolio of brands dedicated to different market segmentation. The general character of the study suggests future lines of investigations at organizational and marketing level.

Introduction

The fashion system, accounting an 11% on GDP, is the second largest Italian industry, even larger than automotive, food and beverage or chemicals (The European House-Ambrosetti, 2010, p. 3), and it provides one of the distinctive Italian products exported and recognized all over the world.

Italian fashion business is characterized by distinguishing features such as knowledge accumulated over a hundred of years of experience, flexibility for customize and deliver, even very small volume of production, a continue innovation on materials and products, style and creativity (Cappellari, 2011, p. 26). The production system is mainly based on small and medium enterprises, highly specialized, which operate in market niches, even if large multinational groups dominate the luxury market.

Table 1 provides key figures on Italian fashion industry. The peak in the turnover was reached in 2007 and the bottom in 2009, following a 18.4% shortfall. A partial recovery has been recorded in 2010, however turnover is still about 13% below the 2007 peak value.
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Table 1

Fashion business sector selected key data (Euro mln)

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turnover</td>
<td>69,269</td>
<td>66,498</td>
<td>56,524</td>
<td>60,198</td>
</tr>
<tr>
<td>Export</td>
<td>42,100</td>
<td>40,544</td>
<td>32,888</td>
<td>36,542</td>
</tr>
<tr>
<td>Import</td>
<td>25,215</td>
<td>24,609</td>
<td>21,713</td>
<td>24,752</td>
</tr>
<tr>
<td>Employees (000)</td>
<td>786</td>
<td>775</td>
<td>698</td>
<td>690</td>
</tr>
</tbody>
</table>


Business expansion in 2010 has been driven by BRIC (Brazil, Russia, India and China) countries, where the number of high net worth individuals and their per capita consumption are still growing fast. The Asia-Pacific high net worth individuals population grew 9.7% reaching 3.3 million in 2010, exceeding that of Europe, and is now nearing that of North America (CapGemini, 2011). A second driver of growth has been the capital expenditure on mono-brand shops, directly owned and managed by manufacturing firms, which yields above average retail performance.

In this study we analyze a sub sector within the fashion one: the tailored formalwear manufacturing. Albeit tailor clothing is designed both for men and women, we focus on menswear for two main reasons: i) women are not used to tailor their clothes (except for a wedding dress); ii) since men have a different way of doing and perceiving shopping (Dunhill, 1999), firms has accumulated knowledge and experience targeted at men only. As a consequence, brands in tailored and made-to-measure formalwear clothing are generally gender specific. Actually, men, differently from women, look for buying together the total look and they feel satisfied after a complete and useful buying (De Menech, 2010).

A key feature of this niche is the top quality of manufactures, derived from decades of experiences and improvements carried on by tailors who started up the business - in many cases more than fifty years ago. Nowadays the main collections are manufactured in own factories located in Italy, in order to guarantee the best quality, craftsmanship and the usage of exclusive materials. Some firms are addressing a supply chain challenging task: a made-to-measure suit and shirt service at shops located around the world (Christopher and Peck, 1997). Retail channels are mostly multi-brand shops and factory store. However, larger firms have developed mono-brand retail chains either directly managed or by franchisee, up to more than 500 point of sales all over the world (e.g. Ermenegildo Zegna).

Men formalwear sub sector during last four years recorded a performance above fashion sector average. However, in 2009 the global economic downturn hit hard the turnover of the sector which decreased by 11% (Pambianco, 2010). The determinants of this contraction might be identified in the following main explanations: i) turnover overexposed to declining GDP and per capita consumption countries (e.g. Italy, USA, Spain, etc.), or ii) a generalized shift among customers towards a new lifestyle and related products (e.g. from formalwear to informal and casualwear), or iii) a new demand for higher standards on product quality and innovation or customer services (e.g. luxury brand or artisan’s substitutive products).

1. As a consequence, three corporate strategies do respectively react to those determinants:
2. Entering in new fast developing markets. This road, however, requires strong brand awareness and huge capital expenditures to start up mono-brand and flagship stores. Since the 2007 financial crisis has determined a generalized credit crunch, such large corporate investments may be financed by high rated companies or by self-financing (free cash flow or selling new shares on equity markets) only.
3. Entering in the new lifestyle customers target by developing new dedicated collections and relative brands. A multi-brand strategy, however, might requires starting up a new dedicated retail channel and might “cannibalize” top-line products sales. As a result, a robust financial management is still required.
4. Investing into top quality manufacturing and continuous innovation on materials. The former might raise direct costs (and squeeze profitability) and capital employed, the latter might expose new collection to a higher market failure probability. Once more, given a typical high volatility derived by a small volume production, managers who operate in this niche are more concerned on profitability and return on assets, rather than on revenues and growth. Actually, this might result in a myopic strategy: whenever investments in assets and innovation are not effectively transferred within products, brand awareness will fade. Instead, firms must pursue the creation of difference as the strategy that can lead to competitive advantage (Campagnolo and Camuffo, 2011).

The purpose of this paper is to analyze key fundamentals economic and financial data of firms operating in this sub sector before and after the global 2008/09 economic downturn. We want to examine differences among Winners and Losers: to what extent are they really different each other? Or, more broadly considered: which variables are more correlated to a medium term economic performance?

**Winners and Losers: a four years comparative performance analysis**

The sample selection begins by listing the constituents of the fashion industry consultant leader’s peers group, which is composed by 15 firms operating in the formalwear business (Pambianco, 2010). Since we are focused on men fashion, we then excluded those companies which produce also women wear (e.g. Brioni) or have a wide range of customer target (e.g. Facis and Sanremo). We then added two firms which, by contrast, do have merely men tailored products and a focused brand, even if they are, actually, relatively smaller than the Pambianco’s ones. (namely: Isaia&Isaia and ). Hence, the final sample is constituted by 14 firms, of which 7 are at the head of the industrial group. All firms are either medium or large firms, according to the European Union definition (European Commission, 2003). Table 2 discloses company names and related own brands.

**Table 2**

<table>
<thead>
<tr>
<th>Company</th>
<th>Brands</th>
</tr>
</thead>
<tbody>
<tr>
<td>**Segment</td>
<td>**</td>
</tr>
<tr>
<td>Ermenegildo Zegna s.p.a.</td>
<td>E. Zegna</td>
</tr>
<tr>
<td>Canali s.p.a.</td>
<td>Canali</td>
</tr>
<tr>
<td>Corneliani s.p.a.</td>
<td>Corneliani</td>
</tr>
<tr>
<td>Ciro Paone s.p.a.</td>
<td>Kiton</td>
</tr>
<tr>
<td>Manifattura Paoloni s.p.a.</td>
<td>Paoloni</td>
</tr>
<tr>
<td>Raffaele Caruso s.p.a.</td>
<td>Raffaele Caruso</td>
</tr>
<tr>
<td>Lardini s.r.l.</td>
<td>Lardini</td>
</tr>
<tr>
<td>Lubiam s.p.a.</td>
<td>Luigi Bianchi Mantova</td>
</tr>
<tr>
<td>Boglioli s.p.a.</td>
<td>Boglioli</td>
</tr>
<tr>
<td>Cantarelli &amp; C. s.p.a.</td>
<td>Cantarelli</td>
</tr>
<tr>
<td>Belvest s.p.a.</td>
<td>Belvest</td>
</tr>
<tr>
<td>Eugenio Tombolini s.p.a.</td>
<td>Tombolini</td>
</tr>
<tr>
<td>Isaia &amp; Isaia s.p.a.</td>
<td>Isaia</td>
</tr>
</tbody>
</table>

Companies are polarized in managing just one brand or more than two brands, targeted at formalwear, informal and special events (e.g. weddings, black tie events, etc.) market segments. Although
two firms (namely, Ermenegildo Zegna and Corneliani) dedicate a specific brand to sportswear, however the formalwear still remains the most important in terms of revenues and corporate identity.

These companies are also polarized as regards dimension: the first four groups (Ermenegildo Zegna, Canali, Corneliani, and Forall) accounts for more than 80% of total sample group revenues; Ermenegildo Zegna, stand alone, sells for more than 56% of total sales. Export intensity, defined as the foreign sales-to-total sales ratio, is statistically different between larger and smaller firms: means are 67% vs. 48% respectively (p-value 0.090).

Table 3 presents four years trends in key selected data starting from aggregated financial statements. In 2007, after a long-run period of business expansion, the highest value of EBITDA (acronym for Earnings Before Interest, Taxes, Depreciation, and Amortization) was recorded, despite in 2008 revenues reached the top level of more than euro 1.780 billion. Actually, operating profitability shrunk for nearly a half, from 13.2% to 7.65% in three years only. In 2009 profitability vanished and financial distress reached the highest leverage, both in relation to sales and EBITDA.

### Table 3
Peer group key selected aggregated data (N=14)

<table>
<thead>
<tr>
<th>Euro 000</th>
<th>2010</th>
<th>2009</th>
<th>2008</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>1,725,401</td>
<td>1,545,981</td>
<td>1,780,832</td>
<td>1,719,853</td>
</tr>
<tr>
<td>EBITDA</td>
<td>186,563</td>
<td>120,522</td>
<td>201,781</td>
<td>229,556</td>
</tr>
<tr>
<td>EBITDA/Sales (%)</td>
<td>10.81</td>
<td>7.65</td>
<td>11.14</td>
<td>13.2</td>
</tr>
<tr>
<td>Profit/Sales (%)</td>
<td>3.57</td>
<td>0.01</td>
<td>5.11</td>
<td>6.14</td>
</tr>
<tr>
<td>ROE (%)</td>
<td>5.79</td>
<td>0.02</td>
<td>9.33</td>
<td>13.2</td>
</tr>
<tr>
<td>Debt/Equity</td>
<td>0.37</td>
<td>0.41</td>
<td>0.31</td>
<td>0.31</td>
</tr>
<tr>
<td>Debt/SALES (%)</td>
<td>22.38</td>
<td>24.55</td>
<td>16.73</td>
<td>14.06</td>
</tr>
<tr>
<td>Debt/EBITDA</td>
<td>2.10</td>
<td>3.24</td>
<td>1.52</td>
<td>1.08</td>
</tr>
</tbody>
</table>

Source: Company data.

The ultimate objective of any firms is to survive in the long run. As long as the value of running a business worth more than the liabilities sold to acquire the capital invested in the business, the firms will survive (Jensen, 2002). The creation of value is driven by a mix of growth and return on invested capital. Companies can sustain strong growth and high returns on invested capital only if they have a well-defined competitive advantage (Koller et al., 2010, p. 62).

Following Dora et al. (2011)’s insights on how small companies fared better in the downturn, this study is based on EBITDA compound average growth rate, through reporting years 2007-2010, as a measure of growth and accounting performance. We divided sample firms into two sub groups: those who recorded a positive performance and those who recorded a negative one. We define the former “Winners”, the latter “Losers”. Performance distribution is highly right-skewed: the mass of the distribution is concentrated on a negative performance, and positive values are limited to 3 cases out of 14 (namely: Ermenegildo Zegna, Manifattura Paoloni, and Lubiam).

Following Capon et al. (1990), we focused on those strategy variables that increase firm and business performance: growth, capital investment, and market share. Wherever managers pursue the maximisation of corporate value, operating profitability and financial management are intimately related. Since a financial manager has to trade-off the lower equity capital (e.g. the higher return on invested capital) against the higher funding costs, we then picked up two variables correlated to corporate credit risk and its financial policy: Debt/EBITDA ratio and D/E ratio (Standard & Poor's, 2009). Enhancing Pearce (2007)’s three stage turnaround model, we extended the financial ratio analysis by linking company data to strategies and retail management ones. Hence, a third set of variables is fashion and retail management...
specific. We used the number of brands managed as one potentially useful way to address the growth trade-off (Keller, 2009). Finally, according to Lu et al. (2011), to be successful in a foreign market, a fashion retailer should choose a higher control entry mode when market potential is high or its brand equity is high. Given the market potential of BRIC countries and the brand equity of main competitors, we then checked the number of direct point of sales.

The list of all variables studied is so the following:

- **PERFORMANCE**: comprehensive measure of economic performance based on the compounded average growth rate in EBITDA through reporting years 2007 to 2010.
- **CAGR_Sales**: compounded average growth rate in net sales through reporting years 2007 to 2010.
- **EXPORT_2010**: a comprehensive measure of business internationalization, based on sales generated abroad on total sales in reporting year 2010.
- **EBITDA/Sales**: the EBITDA-to-net sales ratio (EBITDA margin) in reporting year t.
- **ROA**: the EBIT-to-total assets ratio (Return on Assets) in reporting year t.
- **D/EBITDA**: the financial debt-to-EBITDA ratio in reporting year t.
- **D/E**: the financial debt-to-Total Equity ratio in reporting year t.
- **RMS**: Relative Market Share in reporting year t, calculated by dividing company’s sales by largest competitor’s sales (Handerson and Zakon, 1980).
- **CAPEX intensity_09**: the cash flow to investments-to-sales ratio in reporting year 2009.
- **CAPEX_cum**: total capital investments in tangible and intangible assets from reporting year 2007 to 2009, measured by the log of the sum of all investments (in thousands).
- **Brands_10**: number of own brands managed (e.g. licensee excluded) in reporting year 2010.
- **POS_10**: number of point of sales (POS) directly run (e.g. wholesale arrangements to third-party retailers and franchisee excluded) in reporting year 2010.

Table 4 presents the descriptive statistics of variables in the main analysis and their significance at different confidence level.

Winners’ **PERFORMANCE** mean is 5.1% while Losers performed, on average, a dramatic decrease of 21.7% in compounded average growth rate in Ebitda. This evidence is strongly supported by statistical tests. The lowest Winner outperformed the highest Loser for about a 5% incremental performance, although, as regards sales, both groups experienced, on average, a decrease. Furthermore Winners and Losers are statistically different as regards the following indicators:

- Profitability: strongly higher in Winners (either operating and on assets);
- financial leverage: in 2010, more than three times higher in Losers;
- capital intensity: in year 2010, 7.7% vs. 1.3% in Losers and Winners respectively;
- number of brands owned: in year 2010, three brands vs. one in Winners and Losers respectively.

A general insight is that Winners have performed better in all drivers of value creation: growth, profitability and financial discipline, even if both invested large amounts of capital in their business (e.g. from this perspective they are not different). Although Losers invested capital more than six times relatively to total sales in 2009 compared to Winners; the return on that capital is far to come.

A deeper insight from these data is that Losers were not different neither worst performers before the 2008/09 global crisis, but they became it indeed. ROA, Ebitda margin, and Debt-to-Ebitda ratio were all better within Losers in 2007. Hence, hitherto these firms implemented strategies that failed to react to such a global change and, ultimately, failed to maintain a competitive advantage. As a result, Losers yielded ground to Winners in terms of relative market shares, which in Winners ends up at 2.1 from 1.6 recorded in 2007 (although not statistically significant due to a large sample variance).
Table 4
Descriptive statistics of variables

<table>
<thead>
<tr>
<th>Panel A - Winners (n=3)</th>
<th>MEAN</th>
<th>MEDIAN</th>
<th>STD DEV</th>
<th>MIN</th>
<th>MAX</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERFORMANCE</td>
<td>0.0511***</td>
<td>0.0484</td>
<td>0.0335</td>
<td>0.0191</td>
<td>0.0859</td>
</tr>
<tr>
<td>CAGR_Sales</td>
<td>(0.0074)</td>
<td>(0.0230)</td>
<td>0.0468</td>
<td>(0.0444)</td>
<td>0.0452</td>
</tr>
<tr>
<td>EXPORT_10</td>
<td>0.4689</td>
<td>0.3376</td>
<td>0.4070</td>
<td>0.1439</td>
<td>0.9254</td>
</tr>
<tr>
<td>EBITDA/Sales _07</td>
<td>0.0913</td>
<td>0.0893</td>
<td>0.0505</td>
<td>0.0418</td>
<td>0.1428</td>
</tr>
<tr>
<td>EBITDA/Sales _10</td>
<td>0.1051*</td>
<td>0.1098</td>
<td>0.0456</td>
<td>0.0573</td>
<td>0.1482</td>
</tr>
<tr>
<td>ROA _07</td>
<td>0.0529*</td>
<td>0.0486</td>
<td>0.0341</td>
<td>0.0211</td>
<td>0.0889</td>
</tr>
<tr>
<td>ROA _10</td>
<td>0.0466*</td>
<td>0.0493</td>
<td>0.0243</td>
<td>0.0211</td>
<td>0.0695</td>
</tr>
<tr>
<td>D/EBITDA_07</td>
<td>6.1433</td>
<td>3.2800</td>
<td>7.6103</td>
<td>0.3800</td>
<td>14.7700</td>
</tr>
<tr>
<td>D/EBITDA_10</td>
<td>5.6279</td>
<td>2.9761</td>
<td>6.3929</td>
<td>0.9877</td>
<td>12.9200</td>
</tr>
<tr>
<td>D/E_07</td>
<td>0.8600</td>
<td>0.4800</td>
<td>1.0243</td>
<td>0.0800</td>
<td>2.0200</td>
</tr>
<tr>
<td>D/E_10</td>
<td>0.5549**</td>
<td>0.3313</td>
<td>0.5114</td>
<td>0.1933</td>
<td>1.1400</td>
</tr>
<tr>
<td>RMS_07</td>
<td>1.5636</td>
<td>0.0608</td>
<td>2.6166</td>
<td>0.0450</td>
<td>4.5849</td>
</tr>
<tr>
<td>RMS_10</td>
<td>2.0854</td>
<td>0.0465</td>
<td>3.5400</td>
<td>0.0367</td>
<td>6.1731</td>
</tr>
<tr>
<td>CAPEX intensity_09</td>
<td>0.0132*</td>
<td>0.0133</td>
<td>0.0394</td>
<td>(0.0262)</td>
<td>0.0525</td>
</tr>
<tr>
<td>CAPEX_cum</td>
<td>9.6170</td>
<td>8.7305</td>
<td>2.4535</td>
<td>7.7300</td>
<td>12.3905</td>
</tr>
<tr>
<td>Brands_10</td>
<td>3**</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

| Panel B – Losers (n=11) | 107 | 20 | 168 | 0 | 300 |

| PERFORMANCE            | (0.2165)*** | (0.1914) | 0.1334 | (0.4889) | (0.0300) |
| CAGR_Sales             | (0.0716)    | (0.0522) | 0.0559 | (0.1921) | 0.0020  |
| EXPORT_10              | 0.6184      | 0.6547   | 0.1626 | 0.3884   | 0.8500  |
| EBITDA/Sales _07       | 0.1213      | 0.1052   | 0.0522 | 0.0492   | 0.2195  |
| EBITDA/Sales _10       | 0.0239*     | 0.0450   | 0.0842 | (0.1451) | 0.1299  |
| ROA _07                | 0.1157*     | 0.1017   | 0.0799 | 0.0292   | 0.2991  |
| ROA _10                | (0.0086)*   | (0.0097) | 0.0702 | (0.1401) | 0.1125  |
| D/EBITDA_07            | 2.1030      | 0.5400   | 2.8934 | 0        | 8.1400  |
| D/EBITDA_10            | 9.0928      | 0.9296   | 15.5299| 0        | 44.5058 |
| D/E_07                 | 1.3627      | 1.3800   | 1.0700 | 0        | 2.9600  |
| D/E_10                 | 1.6330**    | 1.5653   | 1.2451 | 0        | 3.7000  |
| RMS_07                 | 0.0851      | 0.0555   | 0.0668 | 0.0230   | 0.2181  |
| RMS_10                 | 0.0634      | 0.0384   | 0.0547 | 0.0171   | 0.1620  |
| CAPEX intensity_09     | 0.0773*     | 0.0739   | 0.0428 | 0.0255   | 0.1513  |
| Brands_10              | 3**         | 3        | 1      | 1       | 3       |
| Pos_10                 | 35          | 5        | 61     | 0       | 200     |

T-tests are two-tailed. Equal variances not assumed.
* Indicate significance at the 0.10 level.
** Indicate significance at the 0.05 level.
*** Indicate significance at the 0.01 level.

To take a step further in our analysis we measured the linear association between variables, that is how strongly two variables, say, PERFORMANCE and CAPEX_cum, are linearly related. Table 5 reports the Pearson correlation coefficients among the main independent variables from all sample firms and their level of significance.
Table 5
Pearson correlations among main variables (n=14)

<table>
<thead>
<tr>
<th></th>
<th>Performance</th>
<th>CAGR_Sales</th>
<th>Export_10</th>
<th>Ebitda_Sales_10</th>
<th>ROA_10</th>
<th>RMS_10</th>
<th>Capex_intensity_09</th>
<th>Capex_cum</th>
<th>Brands_10</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERFORMANCE</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAGR_Sales</td>
<td>0.274</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXPORT_2010</td>
<td>(0.321)</td>
<td>0.330</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EBITDA/Sales_10</td>
<td>0.494</td>
<td>0.730***</td>
<td>0.159</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROA_10</td>
<td>0.454</td>
<td>0.477*</td>
<td>0.116</td>
<td>0.888***</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RMS_10</td>
<td>0.379</td>
<td>0.514*</td>
<td>0.451</td>
<td>0.381</td>
<td>0.302</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAPEX_intensity_09</td>
<td>(0.629)**</td>
<td>(0.409)</td>
<td>0.381</td>
<td>(0.354)</td>
<td>(0.215)</td>
<td>(0.071)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAPEX_cum</td>
<td>(0.060)</td>
<td>0.737***</td>
<td>0.192</td>
<td>0.718***</td>
<td>0.434</td>
<td>0.212</td>
<td>(0.432)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Brands_10</td>
<td>0.563*</td>
<td>0.433</td>
<td>0.012</td>
<td>0.195</td>
<td>0.254</td>
<td>0.415</td>
<td>(0.328)</td>
<td>(0.036)</td>
<td>1</td>
</tr>
<tr>
<td>POS_10</td>
<td>0.286</td>
<td>0.538**</td>
<td>0.648**</td>
<td>0.508**</td>
<td>0.561**</td>
<td>0.812***</td>
<td>(0.080)</td>
<td>0.262</td>
<td>0.392</td>
</tr>
</tbody>
</table>

Tests are two-tailed.
* Indicate significance at the 0.10 level.
** Indicate significance at the 0.05 level.
*** Indicate significance at the 0.01 level

Overall, PERFORMANCE is statistically negatively correlated to capital intensity recorded in year 2009 and positively correlated with a multi-brand portfolio. The former evidence is not such surprising as far as Losers invested large cash flows yielding a poor performance. The latter hinges on brand management in different market segments: since brand segmentation strategies seek to exploit different market segments’ profitability, these two variables are highly positively correlated.

Sales growth correlations are enlightening: while a greater number of POS is highly positively correlated with sales growth, a new POS, stand alone, do not improve company’s performance. This is an (indirect) evidence that firms invested capital to push sales rather than operating profits. Moreover, POS do push growth rate on consolidated sales (and the relative market share of those firms that enlarge their direct retail network), but they have a weak (although not statistically significant) positive correlation with Ebitda growth.

Managerial implications and conclusions
Whilst “cash is king” in managing company value, Ebitda is its “mother”. Ebitda’s growth, at least in the medium run, might be reached even with lower revenues and higher return on invested capital (Cao et al., 2006). Operating profitability is driven either by a premium price or a cost effective production. The former, need higher quality standards and a strong brand awareness and image. The latter, investments in the supply chain and in machineries. Both requires large capital investments.

A managerial implication of our results is that sample firms, seeking to boost Ebitda, should manage a portfolio of brands dedicated to different market segmentation. As a matter fact, according to Moore et al. (2000), net margins are typically higher in a diffusion category collection (60-85%), slightly a half on a ready-to-wear (25-50%) and rarely profitable in a couture ones. However, to avoid confusion among brands and to exploit effectively their different market positioning, advertising, distribution and brand-naming strategies should be mutually exclusive. As a result, larger cash flows focused on investments (not only diverted to POS) are required. Here comes a new hard lesson learned: the bulk of
cash invested, mainly in supporting sales growth, does not guarantee a positive performance. On the contrary, even disinvestments might generate a positive performance (Huyett and Koller, 2011). This is what Manifattura Paoloni did: by disposing Greece and Cyprus business in 2010 it diverted resources in the domestic market (where it spills the 86% of total sales) and to the factory based in Romania.

Yet, BRIC countries are sales booster; however, they require large cash investments to develop a direct retail network and, again, a strong brand image and awareness to recover operating profits. Investing on shops openings without those fundamental requirements will end in a poor performance. A lesson learned from companies that do not have these requirements (namely: Manifattura Paoloni and Lubiam) is to focus internal corporate resources in a premium niche where they can exploit above average profitability (Bloch et al., 2011). On the opposite side, Ermenegildo Zegna is walking on the “high road”, where “leaders in premium categories have the best profit odds” (Bloch et al., 2011, p. 2). Those leaders need to continually protect and increase their competitive advantage. This requires innovation to upgrade the consumer experience and justify price premiums as well as marketing that strengthens the emotional ties with consumers (Bloch et al., 2011, p. 2).

In fact, Ermenegildo Zegna is celebrating this year the twentieth anniversary of the first monobrand store opened in China and in Turkey, and more than 20 years in Russia and India, demonstrating to be the first mover in this fashion sector. Moreover for upgrading the consumer experience Ermenegildo Zegna recently built a new e-commerce platform (Zegna in Store), where the costumer can feel the sensation of being in a real Ermenegildo Zegna store (Pambianco, 2011). Eventually, to increase operating profitability, in 2010 a new idroelectric power plant has been installed to feed the textile plant production.

Financial discipline is yet to come within Losers: business strategies and operating performance is worthless without a sound and safe financial management that supplies funds and manage financial risks – the value of the firm.

Research limitations and direction for further research

The peer group sample is formed basically by medium and large firms, although tailored formalwear business is spread over hundreds of small and micro enterprises. Hence, findings cannot be generalized to the whole sub sector. However, the general character of the study suggests future lines of investigations at organizational and marketing level.

Since all firms in this sub sector are privately held by entrepreneurs and his/her family, typical corporate governance issues emerge. As both the company and the family grow, does the family business meet two intertwined challenges: achieving strong business performance and keeping the family committed to and capable of carrying on as the owner (Caspar et al., 2010)? Future research might investigate to what extent family ownership and management do affect company performance in this sector.

As regards marketing level, accounting data used in this study are not broken down on sales and profits within line of business. Nonetheless, some firms carry out licensing business while other not. As long as it is likely to expect lower margins on licensing than on own brands, future research might investigate to what extent licensing production, marketing and selling activities divert internal resources from the main business and, ultimately, undermine a company’s global performance.

References


An Econometric Study of Indian Export and Import of Oil and Non-Oil Items

Ranajit Chakrabarty
University of Calcutta, India
Smarajit Lahiri Chakravarty
St. Xavier’s College, India

Key Words
Export, import, unit root test, cointegration, VAR, VEC, Granger Causality tests.

Abstract
The paper tries to analyse the export and import of black gold (oil) with respect to the Indian scenario. The study extensively tries to capture the trends over the last four decades. Existing stuff primarily focuses on real GDP, exports, imports. Unlike the existing papers this study has made an attempt to pin down the issue of export and import of oil, petroleum and the related products. In such a backdrop we have considered five variables - export of oil, import of oil, and GDP at constant prices, non oil exports, non-oil imports for the Indian case. It has been found that all five time series data are integrated of order one. In what follows the cointegration analysis was done to show that the bivariate relation between exports and imports of oil and non oil items is negative. So taking their first difference, an appropriate VAR specification was proposed. However, the other bivariate cointegration results were positive and so were the trivariate results for the variables. This result interestingly corroborates Milton Friedman’s theory of permanent income hypothesis. This allowed us to set up the vector error correction (VEC) model. The Granger causality tests were also carried out as a natural procedure. In the end, the paper also points to some policy implications.

Introduction
India’s export earnings increased at a very slow rate from 1970/71. For a few years, a rising trend was observed but from 1973/74, it took a dramatic upward turn. Thereafter the rising trend was observed up to 1989/90. Period after liberalization was marked by a sudden increase in export value. This declined again in 1998/99. Thereafter, exports increased only to decline marginally in 2001/02. From 2002/03 to 2009/10, the trend was rising.

The growth in the value of imports in the last 40 years was more intense than exports during the same period. The trade balance was positive only in 1972/73 and in 1976/77; the trade surpluses being of small amounts. The year 1990/91 saw a rise in trade deficit but in the next year strict import restrictions were imposed to lower the trade deficit. But this generated decelerating effect on industrial growth.

The situation during the Ninth plan (1997 – 2002) worsened. The imports increased at a greater intensity than exports. The Tenth plan (2002 – 2007) saw a positive improvement in foreign trade with the rising value of trade deficits. The beginning of the Eleventh plan witnessed more or less the same trend. Prior to 1991, there were severe import restrictions. The major problem at this time was the acute shortage of foreign exchange. Moreover, the negative effects of the Mahalanobis plan persisted for a long time. India therefore tried the idea of import substitution while export promotion policies basically integrated our domestic economy was the specification of a proper long term export strategy.

Literature review
The studies relating to the role of exports and also that of imports are vast. The ELG (export led growth) strategy came under a lot of attention during the 70s & the 80s. If both imports and the domestic resources are efficiently used, it would increase the factor productivity. Grossman and Helpman (1990), Romer (1991) found support of this idea. On the other hand, it was observed that exports increase domestic productivity; generate advantages of economies of scale, etc. The studies of Chow (1987), Sun (1988), Alse (1993), and Levin & Raut (1997) have focussed on such issues. The methodologies used have
improved over time. The earlier methods of using correlation between variables, using simple regression
analysis have been replaced by unit root tests, cointegration, and VAR & VEC. Schenzler (1982) had
considered the variables as real exports, real GDP and export share and concluded that was a significant
correlation between exports and growth. Jung and Marshall (1985) got a completely different answer
where there was no correlation between exports and growth. Ram (1987) derived no positive correlation
between exports and growth.

Nandi & Biswas (1991) concluded that export led growth was visible. Singh (1992) got a
completely different result i.e. there was no causality between exports and growth. Bhatt (1995) derived
two way causality between exports & growth. The study by Xu (1996) considered both real GDP and
exports. By considering a forty year period i.e. 1957 to 1990, he commented that India has experienced
export led growth.

There were some studies where the imports were also taken as variables. Nidugala (2000)
concluded in favour of exports led growth. Thus, as the study pointed out, imports had played a major
role. Dutta & Ahmed (2004) gave more importance to imports and they mentioned that the impact on
import demand due to liberalization was not highly significant. Sharma and Pangiotidis (2005) considered
imports as a vital variable and concluded that there was no causality between exports and growth.

Data
We have considered the time period from 1970/71 to 2009/10 i.e. we have covered a thirty nine
year period. The data was collected for oil exports, oil imports and GDP at constant prices, all given in
Indian rupees i.e. in rupees crores. The data was collected from DGIS, Kolkata (Ministry of Commerce,
Govt. of India), and Central Statistical Organization and also from the RBI website.

From the above mentioned sources as we also collected the WPI data. In this regard, as we have
considered only oil exports and oil imports, we considered the price index for fuel; power light &
lubricants (FPL & L). This is because both the oil exports and oil imports data were given in current prices
and we had to transform the given data to constant prices. By taking relatively recent period of 1993/94 as
the base year, the link relatives were determined for the entire range of study. Thereafter, the natural log
values of the given time series since were considered. The natural log values of oil imports are denoted by ‘LM’,
oil exports by ‘LX’ and that of GDP by ‘LG’. The non-oil exports and non – oil imports have been
considered and expressed in their respective constant prices. These two were denoted by ‘LNX’ and
‘LNM’ respectively.

Objective of the study
In this exercise we have considered the variables as LX, LM, LG, LNX, and LNM. Thus, our
objectivity is to find out -

a) Are these variables have the presence of a unit root?
b) If the variables are stationary, then we have further queries
   i. Are the bivariate systems: (LX-LM), (LG – LX),
   ii. (LG – LM), (LNX- LNM), (LG – LNX), (LG- LNM) cointegrated?
   iii. Are the trivariate systems (LG – LX - LM) and (LG – LNX – LNM) cointegrated?
   iv. What is the order of the cointegration if such exists?
c) If the variables are not cointegrated what would be the VAR specification and if so what would
   be the structure of VEC models?

Testing procedure
i) Unit root and stationarity:
To test the given time series data for unit roots versus stationarity, we refer to Engle and Granger
(1987). It is known that in most econometric procedures, stationarity is assumed while in reality it
might not be so.
We have followed three methods-
a) Augmented Dickey – Fuller (ADF) test
b) Dickey Fuller test with GLS detrending (DF – GLS)

c) Phillips – Perron (PP) test.

The basic unit root theory would consider a simple AR (1) process

\[ y_t = \rho y_{t-1} + \delta x_t + \epsilon_t \]  \hspace{1cm} (1)

where \( x_t \) are the exogenous variables having either a constant or a constant and trend. Here, the researcher has to estimate the parameters \( \rho \) and \( \delta \) and the white noise is \( \epsilon_t \). If \( |\rho| < 1 \), then we state that \( y \) is a trend stationary service but if \( |\rho| \geq 1 \), then \( y \) is non – stationary whereby the variance of \( y \) increases with time. Thus, by testing whether \( |\rho| < 1 \), one can check the whether \( y_t \) is trend stationary or not.

The standard DF test can be carried out by estimating equation (1) after subtracting \( y_{t-1} \) from both sides. This would give us

\[ \Delta y_t = \alpha y_{t-1} + \delta x_t + \epsilon_t \]  \hspace{1cm} (2)

Where \( \alpha = \rho - 1 \). Hence we would have

\[ H_0 : \alpha = 0 \text{ against } H_1 : \alpha < 0 \]  \hspace{1cm} (3)

The conventional t ratios were used for evaluation.

The analysis so far considers that the series is merely an AR (1) process. If the series is correlated at higher order lags, the assumption of white noise \( \epsilon_t \) is disturbed. The ADF test at this stage introduces a parametric correction for higher order correlation by assuming that the \( y \) series follows an AR (p) process. We hence test the regression.

\[ \Delta y_t = \alpha y_{t-1} + \delta x_t + \delta_1 \Delta y_{t-1} + \delta_2 \Delta y_{t-2} + \ldots + \delta_p \Delta y_{t-p} + \epsilon_t \]  \hspace{1cm} (4)

The ADF test is then used to test (3) using the \( t_a \) values.

It must be noted that including irrelevant regressions would lower the power of the test to reject the null hypothesis. Also, we have included a constant and a linear time trend which is a more general specification among the given choices. It must be noted that the lag length in the test regression has been chosen so as to remove the serial correlation in the residuals. The optimum lag lengths were selected by minimizing both the Akaike information criteria (AIC).

Under the Dickey – Fuller test with GLS detrending (DF-GLS), it is proposed as a simple modification of the ADF test so that the data are detrended allowing us to take out the explanatory variables before running the test regression. Thus, the DF-GLS test involves estimating the standard ADF test equation (4) where the original \( y_t \) is substituted with the GLS detrended \( y^d_t \).

\[ \therefore \Delta y^d_t = \beta_1 \Delta y^d_{t-1} + \beta_2 \Delta y^d_{t-2} + \ldots + \beta_p \Delta y^d_{t-p} + \epsilon_t \]  \hspace{1cm} (5)

We now consider the t-ratio values to form our conclusion.

The Philips – Perron (PP) test (1968) suggests a non-parametric method for controlling the serial correlation when checking for a unit root. The PP method estimates the non-augmented DF equation (2)

\[ \text{i.e. } \Delta y_t = \alpha y_{t-1} + \delta x_t + \epsilon_t \]

The t-ratio of the \( \alpha \) coefficient must be checked so that serial correlation does not affect the asymptotic distribution of the test statistic.

ii) **Cointegration:**

While most economic variables are non-stationary, their first differences are more or less stationary. Once the unit root testing is complete and satisfactory, we try to find out if there are any long run relationships or not between these variables. Two series \( y_t \) and \( x_t \) might be non-stationary but still there might be the same common stochastic trends across \( y_t \) and \( x_t \) in their respective first differences. This allows us to determine whether there is a long run relationship or not and if there is, what is the specification of such a relationship. This long run relationship is called cointegration and if this exists, we can test for causality between the variables.

Engle and Granger (1987) pointed out that a linear combination of two or more non-stationary series may be stationary. If such a stationary linear combination exists, the non-
stationary time series are said to be cointegrated. The stationary linear combination is called the cointegrating equation which is the long run relation among the variables. If \( y \) and \( x \) has to be co-integrated then they must have the same order. In this regard, we have applied the two maximum likelihood tests that are available. These are the maximum eigenvalue tests and the trace tests.

The cointegration analysis rests on the ‘Granger Representation Theorem’ which mentions the existence of a valid error correction representation of the data given that the set of variables are co-integrated of I(1). If cointegration is found across the variables, Granger Representation Theorem, if used, would help us to construct a vector error correction (VEC) model. In other words, if the variables in the VAR model are cointegrated, we should construct a VEC model to analyse the dynamic behavior of the model. The speed of disequilibrium towards a long run equilibrium situation is given by the size of the error correction term that determines such adjustments.

iii) Granger Causality:

The concept basically deals with the question, that given the variables \( x \) and \( y \), whether \( x \) causes \( y \) and to find out that how much of present \( y \) can be explained by past values of \( y \) and then checking whether the added lagged values of \( x \) can add to the explanation. Hence \( y \) is said to be Granger – caused by \( x \) if \( x \) helps in the prediction of \( y \). It must be noted that the VAR or VEC models are tested by using the standard Wald tests for zero restrictions which in turn would determine the Granger Causality, given that the variables in the system are stationary.

Stationary test result

The data if plotted would show a trend. LX, LM and LG are the natural logarithm values of oil exports, oil imports and GDP respectively, each being represented at constant prices. We observe–

The ADF tests for unit roots were carried out for LX, LM, LG, LNX and LNM. The null hypothesis that there is no unit root is rejected at 5% level of significance. However when we check for the unit roots in their first differences, there is no presence of unit root in all the five variables i.e. LX, LM & LG, LNX and LNM.

The tests thus tell us that all the five variables are integrated of order 1 i.e. I (1).

The same results are derived from DF-GLS test and PP test.

Cointegration

Once the variables are I(1) which we have derived on the basis of unit root tests, we can now go for cointegration. This is done to test whether the same stochastic trends are visible in LX, LM, LG, LNX and LNM. We have applied the two popular tests that are known – i.e. the trace test of Johansens and the maximum eigen value tests. In this regard, the following points are in order –

1. There is no cointegration between LX & LM.
   In other words, the model cannot be represented as
   \[
   \begin{bmatrix}
   LX_t \\
   LM_t
   \end{bmatrix} = \begin{bmatrix}
   c_1 \\
   c_2
   \end{bmatrix} + \begin{bmatrix}
   a_{11} & a_{12} \\
   a_{21} & a_{22}
   \end{bmatrix} \begin{bmatrix}
   \Delta LX_{t-1} \\
   \Delta LM_{t-1}
   \end{bmatrix} + \begin{bmatrix}
   \varepsilon_{1t} \\
   \varepsilon_{2t}
   \end{bmatrix}
   \]
   where a one period lag is considered

2. We can however represent the system in a VAR, given that LX and LM are not cointegrated. To do that, we must transform LX, LM so as to make it stationary.
It would be however more appropriate to take the lag period of two based on AIC. Thus, the system can be written as

\[
\begin{bmatrix}
\Delta LX_t \\
\Delta LM_t
\end{bmatrix} = \begin{bmatrix}
0.064 \\
0.103
\end{bmatrix} + \begin{bmatrix}
0.109 & 0.745 \\
-0.035 & 0.070
\end{bmatrix} \begin{bmatrix}
\Delta LX_{t-1} \\
\Delta LM_{t-1}
\end{bmatrix}
+ \begin{bmatrix}
-0.146 & 0.231 \\
-0.007 & 0.1529
\end{bmatrix} \begin{bmatrix}
\Delta LX_{t-2} \\
\Delta LM_{t-2}
\end{bmatrix}
\]

3. There is no cointegration between LNX and LNM. Hence, again specifying a VAR specification, by taking a lag period of 2 (as determined by AIC) we get,

\[
\begin{bmatrix}
\Delta LNX_t \\
\Delta LNM_t
\end{bmatrix} = \begin{bmatrix}
0.098 \\
0.348
\end{bmatrix} + \begin{bmatrix}
0.316 & 0.892 \\
-0.013 & 0.028
\end{bmatrix} \begin{bmatrix}
\Delta LNX_{t-1} \\
\Delta LNM_{t-1}
\end{bmatrix}
+ \begin{bmatrix}
-0.123 & 0.321 \\
-0.009 & 0.736
\end{bmatrix} \begin{bmatrix}
\Delta LNX_{t-2} \\
\Delta LNM_{t-2}
\end{bmatrix}
\]

CASE - II

There is cointegration between LM and LG. In other words, there are common stochastic trends between these two variables. But we have seen the evidence of such cointegration at a lag length 4 based on AIC.

Also, cointegration exists between LNM and LG. Here however, such cointegration is observed at lag length 3 along with lag lengths of 8, 9. Thus, based on the AIC value, we select lag 3.

CASE - III

In testing for a long run relationship between LX and LG, the cointegration test is carried out. But here, we are to select an appropriate lag length. This is based on Akaike Information criteria. We allow a linear deterministic trend with an intercept in the cointegrating equation. Thus, this bivariate system strongly reject the null-hypothesis of no cointegration (r=0) between the variables in this bivariate system. The Akaike Information Criteria allows is to select the lag length of 4.

In this regard, it may be observed that the bivariate system of LNX and LG also strongly reject the null hypothesis of no cointegration, the AIC allows us to choose a lag length of 4 here also.

CASE - IV

The trivariate system of LG – LX – LM shows cointegration at a lag length of 1 which again is based on AIC. This is a very strong result derived. We now consider the trivariate system of LG – LNX – LNM which again specifies the presence of cointegration at lag length 1. This particular lag length is selected as it minimizes AIC.

The test result shows that:
1. There is no cointegration between LX and LM
2. In the bivariate system, there is cointegration of (LG – LX) as well as in (LG – LM) and both these are true for a lag length of 4. This holds under the trace test but not under eigen value test.
3. In the trivariate system, there is cointegration between \((LG - LX - LM)\). Here it holds for lags 1, 2, 3 & 4 both for trace test & eigen value test. But the AIC Criteria allow us to select the lag length 1.

4. No such cointegration exists between LNX and LNM. Thus, there is no long run relationship between the variables.

5. The presence of cointegration is observed between LNX and LG. This holds for a lag length of 3 where it minimizes AIC.

6. There is also the presence of cointegration between LNM and LG where it holds for a lag length of 4 based on minimization of AIC.

7. The trivariate system \((LG - LNX - LNM)\) shows cointegration where it holds for lags 1, 2, 3, 4, 5, But lag 1 is selected as it minimize AIC.

**Granger causality tests:**

In respective of the cointegration results we now check for the granger causality. The Cointegrating equations have only intercepts while the level data has linear trends.

1) As LX, LM, inspite of being of I(1), are not cointegrated, we test for the Granger causality within first difference vector autoregressive (VARD) models. Similarly for the bivariate system LG-LX and LG-LM are considered up to 5 lags.

2) The oil import Granger causes oil export but the converse is not true. For lags 2, 3, 4, 5 we reject that LG does not Granger cause LM. So LG Granger causes LM but again converse is not true. For oil exports and GDP, we find that LG Granger causes LX.

3) Non-oil imports Grangers causes non-oil exports but the converse is not true. Again for lags 2, 3, 4 that GDP Granger causes non-oil imports but the opposite is not valid. Again GDP Granger causes non oil exports but for the other way it is not valid.

**Summary of the results:**

The analysis tells us that the data on oil exports, oil imports and GDP at constant price are integrated of order one i.e. I (1). The cointegration results are positive for the bivariate cases, but not for LX - LM and LNX - LNM. The trivariate results for LG - LM - LX, also LG - LNM - LNX show the presence of cointegration. While a suitable VAR Model was set up for LX - LM, LNX - LNM for the other cases, a VEC model was constructed. We also find that:

a) LM Granger causes LX

b) LG Granger causes LM

c) LG Granger causes LX

d) LNM Granger causes LNX

e) LG Granger causes LNM

f) LG Granger causes LNX

**Using Friedman’s permanent income hypothesis:**

The contiguration test would now allow as specifying the relationship between LG & LM. Given that the long run relationship exists, we can consider Friedman’s permanent Income hypothesis and the consumption function is given as

\[
C^p = \beta_1 y^p v_t,
\]

where \(C^p, y^p\) are the permanent consumption and income and \(v_t\) is a multiplicative disturbance term. By taking log on both sides we get,

\[
\log C^p = \log \beta_1 + \log y^p + u_{1t}
\]

Substituting oil imports (OM) as consumption and the GDP values as \(y^p\), we get

\[
\log (OM) = \log \beta_1 + \log GDP + u_{1t}
\]

or \(LM = \alpha_1 + LG + u_{1t}\) \hspace{1cm} \text{------------------------(1)}

Again if we consider that oil imports depend on the nation’s income, we can similarly derive

\[
LG = \alpha_2 + LM + u_{2t}\] \hspace{1cm} \text{------------------------(2)}
Thus equations (1) & (2) generate a VAR model. This has been extended by the ECM to determine the functional relationships between LG and LM.

If we plot India’s GDP and oil imports, we find that the gap is fairly stable between these two but in the middle of the period under study, the gap increases slightly. (Figure - I) Thus, the two series LM & LG, seem to be moving together. For this to hold true, u_{1t} must be a stationary process, because if it were not so, theoretical foundation would be disturbed and the two series would drift further and further apart. But it would not be so as the cointegration results tell us.

Policy implications for India:

The economic growth of India is largely dependent on the growth of exports and imports to a large extent, in particular, to that of oil. While India is a major importer of oil, on the export front, oil got a huge importance only in the last decade.

The causality results clearly hint that economic growth can be boosted by exports. This in turn would raise India’s GDP which would then allow us to purchase more imports. While there is no immediate econometric link between oil exports and imports, the former positively affects the latter, which is visible after several lags. Thus, lagged effect is visible for the Indian scenario. Moreover in certain sectors, like agriculture and mining, India is operating at a suboptimum level. Suitable imports can push up the performance of these sectors acting as ingredients.

With exports rising, this in the long run boosts up GDP. Given that imports are a function of income, this raises imports. Thus, boosting exports is of primary importance due to –

1) The domestic markets being limited become oversaturated after some period of time. Thus, India can exploit the advantages of economics of scale.
2) As exports rise, there generates new searches for overseas markets. Thus, the penetration into the international markets becomes more intense
3) With more penetration in the international markets, our exports would be more competitive.
4) In general, over time, more exports would allow for better and higher imports. The might have a positive effect on improving the capital base of the economy.

In general, along with imports of oil and non-oil items we also get enjoy import of services along with import of technology. While technology transfer simply reflects movements of the same, it is technology diffusion that each country aspires for. This can only come with the relations with the external world and especially through imports. India should thereby continue with the export oriented strategies. If we study the current trade policies of most SE Asian countries, we find that they are following the export oriented strategies.

The quantum of exports is also dependent on factor productivity and more crucially on labour productivity. But this tackles the question from the supply side given that from the demand side there is sufficient demand for our products abroad. Thus, as labour productivity rises, there is a tendency

![Figure - I](image-url)
for exports to rise. At the same time, imports have a strong impact on our labour productivity. If enough skill is not present, it would be difficult for India to use those imports efficiently. Thus, the focus of the issue now highlights the debate of qualitative versus quantitative.

India is still a developing country and oil imports are a major building block to restructure our economy. At the same time there should be a continuous effort to improve our exports so that in the long run, the trade deficit can be checked.

References
The Second-best Tax Credit Policy
Qinwen Tan, David Just & Harry de Gorter
Applied Economics and Management, Cornell University

Key Words
Tax credit, fiscal interaction effect, ethanol, second best policy

Abstract
To date, studies on biofuel policies focus only on the direct costs and benefits of biofuel policies, while the indirect, general effects on the economy, through “fiscal interaction effects” have largely been ignored. In this paper, we construct a general equilibrium model covering both ethanol production and consumption, investigate the fiscal interaction effects of the tax credit policy, and derive a second best tax credit given the presence of a fuel tax and a labor tax. We find that considering the fiscal interaction effects, the net welfare change caused by the tax credit policy is positive. We also find that the second best tax credit at the level of $0.22/GEEG ($0.15/gallon) is 67% lower than the current tax exemption of $0.475/GEEG ($0.45/gallon). Monte Carlo analysis shows that the probability of tax credit at $0.22/GEEG is 29% and at the current level of $0.475/GEEG ($0.45/gallon) is 72%.
A Quali-Quantitative Approach of Assessing Organized Retailing Potential of Food Industry in East India

Ranajit Chakrabarty
University of Calcutta, India

Ayan Chattopadhyay
University of Calcutta & Research Scholar, NSOU, Kolkata, India

Key Words
Exponential Smoothing Technique, Mean Absolute Deviation, Chi-Square, Contingency Co-efficient, Association, Organized/Modern Retail, Conventional Retail

Abstract
The retail industry in India is considered as the sunrise industry. The Indian retail landscape is undergoing a transition with a host of national and international players entering the organized retail business spread across various industries. Growth of organized retail sector in India is considered as one of the biggest driver of the economy by many. However, organized retailing in India has witnessed a mixed response; some industries flourishing with specific formats and in select cities while the flip side has witnessed closures of many organized retail stores. Shifting focus to Food industry, it has been observed that the organized retail penetration is relatively low. The ensuing research study aims to understand the organized retailing potential of Food industry in Eastern India. Efforts to evaluate the same have been done using both qualitative and quantitative approach. The qualitative approach makes an assessment of the organized retail potential from the consumer preference towards various retailing formats (conventional as well as organized) and primary research forms the basis of this study. The quantitative approach measures the organized retailing potential in value terms using double exponential smoothing technique as the forecasting tool. Secondary data forms the basis of quantitative study. The results of both qualitative and quantitative studies have been compared to arrive at a conclusive result. The ensuing study includes four states of East India; namely West Bengal, Bihar, Orissa & Jharkhand and primary research conducted in the state capitals. It covers a sample base of 333 respondents spread across four cities.

Introduction
Retailing as one understands is a simple act of selling goods and services to end consumers. Retailing is the last stage in the distribution process. Thus, any firm that sells a product or provides service to the final consumer is performing the retailing function. Regardless of whether the firm sells to the consumer in a store, through the mail, over the telephone, through the Internet, door-to-door, or through a vending machine, the firm is involved in retailing. With markets becoming more and more customer driven and competitive, this simple task is getting more and more complex. The complexities are getting reflected in all aspects of retailing from backend to front-end operations, from POP displays and loyalty schemes to outdoor promotions and advertisement etc. Innovation, differentiation and presentation have become the watchword in today’s retail industry. Newer retail formats are being evolved to meet the aspirations of the modern day customer.

Retailing, today, is the world’s largest private industry exceeding US $7 trillion¹ and 47 of the global fortune 500 companies and 25 of Asia’s top 200 companies² happen to be from retail industry. All of them are highly organized retailers and the organized sector is generating about 18 percent³ of the total shareholder’s return on a global platform. In the western world retailing is considered to be a full-fledged industry and organized retailing accounts for 75 percent⁴ of the total retail business. Retailing is becoming an important field because of its impact on the economy. Retailing in India is unorganized and fragmented. Retail stores in India are mostly small, individually owned businesses. Though India has the highest number of retail outlets per capita in the world, the retail space per capita at 2 sq. ft per person is almost the lowest in the world (Venugopal, 2001). The Indian retail industry has a rural bias. Nearly two-
thirds of the stores are located in rural areas. For Indian retailing, things started to change slowly in the 1990s, when India first began opening its economy and with companies from Textile sector like Bombay Dyeing, Raymond’s, S. Kumar’s and Grasim emerging with chain of retail outlets. Later on Titan, maker of premium watches successfully created an organized retailing concept in India by establishing a series of elegant showrooms. For long these remained the only organized retailers, but the latter half of the 1990s saw a fresh wave of entrants in the retailing business. This time around it was not the manufacturer looking for an alternative sales channel. These were pure retailers with no serious plans of getting into manufacturing. During the late 1990’s, Indian retailers underwent an experimentation phase when new formats like department stores were introduced by Raheja’s (Shoppers’ Stop) & Future Group (Pantaloons) along with specialty stores into retailing of Consumer Durables, FMCG, Music, Books and Food were introduced. Food World, Subhiksha and Nilgiris in Food and FMCG, Planet M and Music World in music and entertainment and Crossword and Fountainhead in books were the new entrants in this category. As the country marched into the new millennium, the organized retailing scenario began to stabilize, especially over the last 3-4 years when players like Big Bazaar, Pizza Hut, and Barista etc became successful in establishing national footprints. This was also the stage when international retailers like McDonald’s, KFC, Subway etc adopted a mix of global and India specific strategies in order to entice the local population. Organized retailing in India is witnessing a wave of players entering the industry with new formats being tested out; the old ones tweaked around or just discarded. Irrespective of the format, the biggest challenge for organized retailing is to create an environment that pulls in people and makes them spend more time in shopping and also increase the amount of impulse shopping which is why organized retailers are bringing in professional designers while developing a new property.

Detailing reasons for the organized retail boom in India, it may be understood that rapid transformations in the last few years has set the platform for scalable and profitable retail models across categories. The Indian Government has taken a host of macro & micro measures that is not only helping retailers make their establishments in the country, but also creating situations for greater earning opportunity of consumers and thus helping them in having more disposable income to spend. As a result of such transformations, retailing in India has received global recognition and attention and this market is witnessing a significant change in its growth and investment pattern. According to UN’s world investment report 2004, Foreign Direct Investment [FDI] inflows to India grew by 24 percent to USD 4.26 billion in 2003 over USD 3.44 billion in 2002, putting India among the top 10 FDI destinations among developing economies. A. T. Kearney Inc. places India among the top nations on a global retail development index. The size of the organized retailing market in 2004-05 stood at INR 28,000 crore out of the estimated retailing in India at INR 930,000 crore, thereby making a mere 3 percent of the total retailing market. Moving forward, organized retailing is projected to grow at the rate of 25 – 30% per annum. Of the Rs. 930,000 crore retail markets, Food & Grocery retail is by far the single largest block estimated to be worth Rs. 140,000 crore, but more than 99 percent of this market is dominated by the neighbourhood Kirana stores.

Success of modern retail in any segment critically depends on supply side as well as demand side factors. While major investments are happening to improve the supply side factors influencing modern retail (MR), there is a mixed reaction on modern retail acceptance from consumers across the country - the demand may be termed inconsistent. It has been found out that while modern retail stores are opening every week, a good number is also getting closed at the same time. This has been found to be the real life scenario for a host of industries across towns. The demand factors are guided primarily by the consumer mind set/ attitude that are deep rooted to the age old habit of buying from conventional retail. Thus, the scope/ potential of both conventional and organized retailing are proportional to the Consumer preference towards either conventional or organized retailing formats. In other words, if consumer preferences towards organized retail formats (i.e. discount stores or super markets or hyper markets or malls) are found to be more compared to the conventional retail formats (i.e. bazaar, stand alone stores, shopping district), then it can be safely assumed that the scope/ potential of organized retailing is more than conventional retailing and vice-versa. This represents the qualitative approach and in such studies it is important to find out the level of association and its strength between the preferred formats in retailing.
Conclusion can be drawn if an association is found which is strong enough. The same (organized retailing potential) can be estimated using one of the quantitative methods. If both the studies yield similar result the safer interpretation of the qualitative study can be made.

A real time study on the organized retailing potential of Food industry using the qualitative-quantitative approach has been made for East India. Also the All India organized retail sales forecast and overall retail sales forecast (in value terms) have been made.

Review of Literature
Most of the research work conducted on Organized/ Modern Retailing in India falls under the category of Organizational Research. Modern retailing concept being quite new in India, the individual work is quite limited as compared to other areas and subjects. However, the most relevant and important research works, carried out by organizations as well as individuals have been captured for the necessary knowledge and theoretical base on Indian Retailing and to identify the research gap.

India Brand Equity Foundation [a CII & GOI Initiative], 2007, made an in-depth study on the future Indian Retail Industry. The research reveals that India has topped the AT Kearney’s annual Global Retail Development Index (GRDI) for the third consecutive year, maintaining its position as the most attractive market for retail investment. The research also highlights that the share of modern retail is expected to increase to about 15-20 percent with the entry of a number of corporate into the segment by 2010-11. Changing lifestyles, strong income growth and favourable demographic patterns, have been identified as the drivers of Indian modern retail. The research report also highlights that the country may have 600 new shopping centers by 2010. Mall space from a meager one million square feet in 2002, is expected to touch 40 million square feet by end-2007 and an estimated 60 million square feet by end-2008. Food dominates the shopping basket in India and forms 44 percent of the entire FMCG sales. It is growing at 9 percent and has set the growth agenda for modern trade formats.

Images KSA Technopak (2005) also made a study on the scope of organized retailing in India by 2010. The study forecasts organized retailing to grow at the rate of 25% - 30% p.a. and are estimated to reach an astounding INR 1500 billion by 2010. Further its contribution to total retail sales is likely to rise to 9% by the end of the decade. On the supply side, the study also estimates mall development activity in the small towns to pick up at a rapid pace, thereby creating quality space for retailers to fulfill their expansion plans and contribution of these tier II cities to total organized retailing sales is estimated to grow by 25%-30%. The report also mentions that lucrative opportunities exist across product categories, however, food and grocery, presents the most significant potential in the Indian context.

The changing face of the Indian food retail landscape against the backdrop of liberalization and shifting demographics has been captured in Just Food, an Indian Food Retail Industry Research Report, 2005. It analyses the emerging trends. The report highlights that by 2020, India is expected to become the fourth largest food retail market in the world. The growth in modern retail formats for food industry is far more than in traditional formats, indicating that consumers are quickly adapting to modern retail market, and its share is likely to reach 8-10% in the next five years. The segment is most likely to be dominated by the corporate houses like HUL, ITC and Reliance to name a few. Forecast on Indian Food & Beverage Industry (2007-2011), by RNCOS, 2007, reveals that Supermarket sales will expand at a much higher rate than other retail formats. This is because greater number of higher income Indians will prefer to shop at supermarkets because of convenience, higher standards of hygiene and attractive ambiance. It is forecasted that fruit consumption will increase at a CAGR of 4.33% for the period spanning from 2007-2011. The study highlights that processed food market will be the main focus for foreign companies as this segment is underdeveloped and presents enormous potential for growth. The study also expects the consumption per head will increase at a CAGR of 3.45% for the forecasted period. The growth rate of soft drink sales is expected decelerate during the forecasted period due to growing popularity of fruit juice drinks and bottled water. Coffee consumption is likely to expand at a rapid rate during the forecasted period. It is expected that it will grow at a CAGR of 10.05% for the period spanning from 2007-2011.
A unique study on Food Retailing by Retailing Research Council, ASIA, 2005, on Fresh Food Retailing revealed that more than 50% of the Asian consumer’s food bill is spent on Fresh Food categories. Food will continue to be Asian consumers’ biggest single area of expenditure, and is increasing at 2.6% every year – faster than the rate of Asia’s population growth. The findings of the study mention that Asian consumers will be spending more per capita on food in future. By 2020, it is estimated that there will be 700 million new consumers in Asia. In this context Indian retail industry faces twin challenges of keeping more consumers supplied, as well as satisfying their rapidly changing tastes and preferences. The research on India confirmed that perceptions of fresh food go well beyond the produce of sale. The retail environment sends powerful signals to consumers, who respond to the store layout and also the volume of traffic.

The study on Food and Retail Chains in India, N. Viswanadham (2006) tries to identify the reasons for retailing growth in India (2006). In this context, bright future of organized retail has been highlighted. Expansion of country’s middle class is cited as one of the most important reasons for such growth. There is a detailed analysis of the agribusiness in India. It is concluded that while there are significant developments at the organized retail level, the farm-to-shop supply chain is fragmented, inefficient and has no supply chain integrator. The Indian organized retail cannot be competitive until the supply chain is made integrated, efficient and customer centric.

The Observed Gap - Researches conducted so far by organizations/ institutions reveal huge opportunity for organized retailing in India. Reports of most studies conducted so far share the macroscopic view of the future retailing opportunity in value terms and on expected growth pattern. Also the studies conducted on consumer demand for modern retailing are very limited in number. It is worth mentioning that most of these studies were restricted to geographical territories outside of East India. Also, evaluation of modern retailing potential of East India either in terms of value or from demand aspect is found to be missing which creates the platform for conducting a research study that is aimed at evaluating the same for Food Industry.

Research Objectives

Two basic research objectives have been framed to make a qualitative & quantitative assessment of the modern/ organized retailing potential of Food industry of East India.

1. Under the qualitative assessment part, the researcher/ investigator has made an attempt to understand the consumer preference towards different formats and also find out the level of association between the different state locations and preferred formats in retailing.

2. Under the quantitative assessment part, the researcher/ investigator has made an attempt to forecast the Food sales for the period 2011 to 2016. Also the same has been evaluated for All India Retail Sales, All India Modern Retail Sales & All India Food Retail Sales.

It must be noted that the research methodology adopted for both the qualitative and quantitative studies have been elaborated in the subsequent sections.

Qualitative Assessment of Retail Potential

1. Research Design - The investigator has adopted a research design that is primarily based on the research objectives. Out of the different types of design, Descriptive research, in the present case, is found to be more appropriate which defines the questions, people surveyed and the method of analysis prior to the beginning of data collection. Basis the Descriptive research design, the sampling technique, questionnaire framing and data collection procedures have been detailed in the subsequent sections.

2. Sampling Technique - Among the various methods of sampling, the investigator prefers to choose the simple random sampling method as it facilitates the need to generalize the results of the
population parameter. Primary data was collected with the help of questionnaire, which is an integral part for this research work.

3. Questionnaire - The questionnaire forms the basis of this research. It is a mix of both closed ended and open ended questions. The first part of the questionnaire was designed to obtain information about the personal details. The second part is designed to capture insights on the preference of consumers on the type of formats for their future retailing needs in the four cities under study. It is imperative to mention here that the food business was categorized into two sections, food & grocery and eating out / restaurant business.

4. Pilot Survey - Pilot Study was done on a limited number of people from the population before a full scale survey was undertaken. As a result of this process, the flaws and deficiencies could be identified and eliminated before it was administered to the chosen sample. Conducting pilot survey also helped to check if the instructions were clear and understandable.

5. Data Collection Procedure - The researcher employed simple random sampling method to collect data from the respondents to ensure that the sample is truly representative of the population and to avoid sampling bias. Owing to time & feasibility constraints, primary research was conducted in the state capitals with the assumption that state capital population characteristics are representative of the state. The study uses a sample size for Kolkata, Bhubaneswar, Patna & Ranchi as 137, 54, 70 & 72 respectively. The process of Data Collection consists of certain stages:

   Telephone directories of Kolkata, Bhubaneswar, Patna & Ranchi have been used as the frame database to source the name and phone numbers of the probable respondents. Randomness in selection process has been maintained. From the random number table we chose the random numbers between 8 & 784 for Kolkata, 6 & 467 for Bhubaneswar, 7 & 500 for Patna and 4 & 311 for Ranchi (page range of telephone directories). Pages with those numbers were selected for drawing the sample. Then the first two names and the last two names from each page were listed along with the respective telephone numbers from all the randomly selected pages. Thus for Kolkata, 200 names, for Bhubaneswar, 100 names, for Patna 120 names and for Ranchi, 120 names with their telephone numbers were listed. In each city, larger numbers of probable respondents (compared to the defined sample size) were listed since not everybody would agree to participate in the survey.

   All four cities namely Kolkata, Bhubaneswar, Patna & Ranchi, were then divided as East / West / North / South based on the pin codes. Pin code wise - Area wise segregation of each city have been sourced from the postal office city guide book. The objective of this exercise is that once sampling is done and the respondents have filled up the questionnaire, we have a reference to check the uniformity in terms of representation from different areas of the city. Effort has been made to ensure that there is representation from each area of the city.

6. Findings
6.i. Consumer Preference towards different retailing formats

   Within this section, the consumer responses towards food purchase were classified as food & grocery purchase and eating out/ restaurant. The consumer responses were extracted from the relevant portion of the questionnaire. The respondents were asked to indicate their preference towards the formats they prefer to shop from. It is to be noted that the respondents had the option of indicating multiple formats i.e. for Food & Grocery, one may opt for conventional bazaar or he may opt for departmental store along with conventional bazaar and discount store. The individual preferences of all the respondents were then plotted against the individual formats. From the frequency data, the percentage preference towards individual formats was plotted for all the four state locations. Exhibit 1 and 2 shows the Frequency and Percentage Preference towards different retailing formats for Food & Grocery purchase and Eating Out/ Restaurant. The combined response of these two is shown in Exhibit 3 that shows the consumer preference towards Food purchase. The modern retail formats are represented by Malls, Department Stores, Discount Stores, Brand Shops, Stores on High Street and Hypermarkets while
The conventional retailing system is represented by Conventional Bazar, Stand Alone Stores and Stores in shopping District/Area. For simplicity the various retail formats have been coded as shown below:

<table>
<thead>
<tr>
<th>CODE</th>
<th>RETAIL FORMAT</th>
<th>CODE</th>
<th>RETAIL FORMAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Conventional Bazar</td>
<td>F</td>
<td>Department Stores</td>
</tr>
<tr>
<td>B</td>
<td>Mall</td>
<td>G</td>
<td>Discount Stores</td>
</tr>
<tr>
<td>C</td>
<td>Stand Alone Store/ Restaurant</td>
<td>H</td>
<td>Brand Shop/ Company Showroom</td>
</tr>
<tr>
<td>D</td>
<td>Shopping District/ Area</td>
<td>I</td>
<td>Hypermarket</td>
</tr>
<tr>
<td>E</td>
<td>Stores on High Street</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For Food & Grocery purchase, it has been observed that in Orissa, maximum consumer preference for is towards Discount Stores (61%). The second maximum preference is towards Conventional Bazar (21%) followed by Hypermarkets (15%). Thus, there is an indication of Modern Retail being preferred to conventional system in this state. However, consumers of Bihar, Jharkhand & West Bengal show distinct characteristics. In Bihar, maximum preference has been found for Conventional Bazar (37%) followed by Discount Store at 29%. Again there is strong preference of 20% towards Shopping District/Area. It is to be noted that unlike Orissa, there is still a strong preference of over 50% towards the conventional retailing system to modern retail formats. The consumer preference pattern of Jharkhand is quite similar to that of Bihar. Here also, Conventional Bazar has been preferred to the modern retail formats with 42% followed by Department Stores at 36%. Shopping District is the third most preferred choice with 21%. Thus, for Food & Grocery, conventional retailing system scores more to modern retail formats in terms of their preference in Bihar & Jharkhand. West Bengal on the other hand has a very different consumer preference distribution. Though Conventional Bazar is still the most preferred future retailing format with 28% preference, Modern retail formats like Department Store and Discount Stores stay in close competition with Conventional Bazar. Department Stores & Discount Store occupy the second and third positions with 26% and 24% preference respectively. It is to be noted that there is clear and distinct preference towards modern retail with 63% over the conventional retailing system at 37% but Conventional Bazar still remains on top of the preference list as an individual format.

For Eating out/Restaurant Retailing, the most preferred future retailing format in all the four state locations is found to be Stand Alone Store that leads the preference list by great margins. Stand Alone Store has the highest preference; 73% in Orissa, 53% in Bihar, 68% in Jharkhand and 64% in West Bengal. However, it must be noted that the preference distribution of other future retailing formats have distinctive characteristics in all the four states. In Bihar & Jharkhand, the second most preferred future retailing format is Stores on High Street with 31% and 22% preference. In Orissa and West Bengal, the second most preferred future retailing format is Malls.

<table>
<thead>
<tr>
<th>Exhibit 1</th>
<th>Food &amp; Grocery</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Orissa</td>
</tr>
<tr>
<td>A</td>
<td>18</td>
</tr>
<tr>
<td>B</td>
<td>3</td>
</tr>
<tr>
<td>C</td>
<td>1</td>
</tr>
<tr>
<td>D</td>
<td>26</td>
</tr>
<tr>
<td>E</td>
<td>11</td>
</tr>
<tr>
<td>F</td>
<td>2</td>
</tr>
<tr>
<td>G</td>
<td>13</td>
</tr>
<tr>
<td>H</td>
<td>85</td>
</tr>
<tr>
<td>I</td>
<td></td>
</tr>
</tbody>
</table>

The calculations are shown in Appendix A1.ii & A2.ii.

Chi Square = \[ \sum \frac{(O - E)^2}{E} \]

Both these account for 48% of the consumer preference and with Shopping District preference of 8% the overall preference is highest towards Stand alone stores followed by Conventional bazar. Thus, for purchase of food that includes food & grocery as well as restaurant retailing, it is observed that Modern Retail formats like Department Store and Discount Stores have the highest preference; 73% in Orissa, 53% in Bihar, 68% in Jharkhand and 64% in West Bengal. However, it must be noted that the preference distribution of other future retailing formats have distinctive characteristics in all the four states. In Bihar & Jharkhand, the second most preferred future retailing format is Stores on High Street with 31% and 22% preference. In Orissa and West Bengal, the second most preferred future retailing format is Malls.
Table 2

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orissa</td>
<td>1</td>
<td>16</td>
<td>45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>62</td>
</tr>
<tr>
<td>Bihar</td>
<td>7</td>
<td>67</td>
<td>13</td>
<td>39</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>128</td>
</tr>
<tr>
<td>Jharkhand</td>
<td>10</td>
<td>69</td>
<td>22</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>101</td>
</tr>
<tr>
<td>West Bengal</td>
<td>45</td>
<td>119</td>
<td>2</td>
<td>11</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>185</td>
</tr>
<tr>
<td>Freq. Total</td>
<td>1</td>
<td>78</td>
<td>300</td>
<td>15</td>
<td>72</td>
<td>5</td>
<td>3</td>
<td></td>
<td></td>
<td>474</td>
</tr>
<tr>
<td>% Preference</td>
<td>0%</td>
<td>16%</td>
<td>63%</td>
<td>3%</td>
<td>15%</td>
<td>1%</td>
<td>1%</td>
<td></td>
<td></td>
<td>100%</td>
</tr>
</tbody>
</table>

Thus, for purchase of food that includes food & grocery as well as restaurant retailing, it is observed that in East India the overall preference is highest towards Stand alone stores followed by Conventional bazar. Both these account for 48% of the consumer preference and with Shopping District preference of 8% the Conventional Retailing preference is found to be at 56% compared to modern retailing preference of 44%

Table 3

<table>
<thead>
<tr>
<th>Industry</th>
<th>Modern Retail Preference</th>
<th>Conventional Retail Preference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food</td>
<td>44%</td>
<td>56%</td>
</tr>
</tbody>
</table>

Exhibit 2

6.ii. Evaluation of Consumer Association with different Retailing Formats

Test of association between the different state locations and the preferred formats in retailing where they would like to shop from has been found out individually for food & grocery and eating out/ restaurant business so as to have a better assessment of the qualitative study. For both, Chi Square test is performed followed by calculation of Contingency Co-Efficient that gives a measure of the strength of Association.

The Chi Square Test is performed with the following hypothesis.

H₀: Null Hypothesis: State Locations and different formats of retailing are independent i.e. there is no association between state locations and retailing formats

H₁: Alternative Hypothesis: State Locations and different formats of retailing are dependent i.e. there is an association between state locations and retailing formats

Firstly, the observed frequencies are first plotted against the different retailing formats and the row & column totals have been found out (as shown in Appendix A.1.i & A.2.i). Next, the Expected Frequencies (Eᵢ) have been calculated using the following formula:

\[ Eᵢ = \frac{\text{Row Total} \times \text{Column Total}}{\text{Grand Total}} \]

The calculations are shown in Appendix A1.ii & A2.ii.

Next, Chi Square is calculated (as shown in Appendix A1.iii & A2.iii) using the formula:

\[ \text{Chi Square} = \sum \frac{(\text{Observed Freq.} - \text{Expected Freq.})^2}{\text{Expected Freq.}} \]
Finally the Contingency Co-efficient is calculated using Karl Pearson’s formula:

**Contingency Co-efficient = SQ. RT. [Chi Square/(Chi Square + N)]**

N: Frequency total. Contingency Co-Efficient shows the degree of association and its value ranges between 0 (Zero) and 1. Contingency Co-efficient value closer to 1 signifies stronger association while values closer to zero indicate weaker association. The summary of the association characteristics is shown below in Exhibit 4.

<table>
<thead>
<tr>
<th>Industry</th>
<th>Chi-Square (Calculated)</th>
<th>Chi-Square (Tabulated at 5% level)</th>
<th>Degrees of Freedom</th>
<th>Contingency Co-efficient</th>
<th>Inference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food &amp; Grocery</td>
<td>278.96</td>
<td>36.42</td>
<td>24</td>
<td>0.5745848</td>
<td>Strong Association exist</td>
</tr>
<tr>
<td>Eating Out/Restaurant</td>
<td>475.39</td>
<td>36.42</td>
<td>24</td>
<td>0.6855926</td>
<td>Very Strong Association exist</td>
</tr>
</tbody>
</table>

**Exhibit 4**

The above findings for food industry (food & grocery and eating out/ restaurant) as detailed in Exhibit 3 & 4 can be assumed to be conclusive from the fact that there exist strong associations between state locations and retailing formats which are quite strong.

**Quantitative Assessment of Retail Potential**

The quantitative assessment uses Normative Method. Using this process or method, an attempt is made to forecast the Modern Retail Sales (in value terms) for Food Industry. The forecasting method uses Secondary data captured for the period 2004 to 2010 and forecast made for the period 2011 to 2016.

**a) Methodology**

Exponential Smoothing Technique is used as the forecasting methodology in the present study. Exponential Smoothing is another Averaging technique that inherently assigns weight to the observations. Exponential smoothing methods are recursive, that is, they rely on all observations in the time series. It is a procedure for continually revising a forecast in the light of more recent experience. Exponential Smoothing assigns exponentially decreasing weights as the observation get older. In other words, recent observations are given relatively more weight in forecasting than the older observations.

When the data shows a trend, Double Exponential Smoothing is the most effective method of forecasting which single exponential smoothing method does not anticipate. Single exponential smoothing uses the formula:

\[ \hat{Y}_{t+1} = \alpha Y_t + (1-\alpha) \hat{Y}_t \]

where:

- \( \hat{Y}_{t+1} \) represents the forecast value for period \( t + 1 \)
- \( Y_t \) is the actual value of the current period, \( t \)
- \( \hat{Y}_t \) is the forecast value for the current period, \( t \) and
- \( \alpha \) is the smoothing constant, or alpha, \( 0 \leq \alpha \leq 1 \)

To account for a trend component in the time series, double exponential smoothing incorporates a second smoothing constant, beta (\( \beta \)). Now, three equations must be used to create a forecast: one to smooth the time series, one to smooth the trend, and one to combine the two equations to arrive at the forecast:

\[ C_t = \alpha Y_t + (1-\alpha)(C_{t-1} + T_{t-1}) \]
\[ T_t = \beta(C_t - C_{t-1}) + (1-\beta)T_{t-1} \]
\[ \hat{Y}_{t+1} = C_t + T_t \]

All symbols appearing in the single exponential smoothing equation represent the same in the double exponential smoothing equation, and \( \beta \) is the trend-smoothing constant (whereas \( \alpha \) is the...
smoothing constant for a stationary – constant – process); $C_t$ is the smoothed constant process value for period $t$; and $T_t$ is the smoothed trend value for period $t$. As with single exponential smoothing, one has to select the starting values for $C_t$ and $T_t$, as well as values for $\alpha$ and $\beta$. These processes are judgmental, and constants closer to a value of 1.0 are chosen when less smoothing is desired (and more weight placed on recent values) and constants closer to 0.0 when more smoothing is desired (and less weight placed on recent values). Determination of $\alpha$ and $\beta$ values is critical in the correctness of the forecast. Since there are no strict rules about selecting these parameters, one has to experiment with the smoothing constants to find the most accurate forecast at the lowest possible MAD (Mean Absolute Deviation). The absolute deviation is the absolute value of the difference between $Y_t$ and $\hat{Y}_t$.

From the secondary data sources, the All India Modern Retail Sales Values for Food and Overall Modern Retail Sales were captured and analysed. The sales value analysis shows a trend (as shown below) for all categories which is why Double Exponential Smoothing Methodology is chosen for the present study that accounts for the trend component in the time series.

Double Exponential Smoothing Methodology is chosen for the present study that accounts for the trend component in the time series.

From the secondary data sources, the All India Modern Retail Sales Values for Food and Overall Modern Retail Sales were captured and analysed. The sales value analysis shows a trend (as shown below) for all categories which is why Double Exponential Smoothing Methodology is chosen for the present study that accounts for the trend component in the time series.

<table>
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<tr>
<th>Year</th>
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<th>AI MR FOOD Sales</th>
</tr>
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<td>28,000</td>
<td>140</td>
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<tr>
<td>2005</td>
<td>35,000</td>
<td>210</td>
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<td>2006</td>
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<td>440</td>
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<tr>
<td>2007</td>
<td>63,000</td>
<td>693</td>
</tr>
<tr>
<td>2008</td>
<td>93,403</td>
<td>1,345</td>
</tr>
<tr>
<td>2009</td>
<td>107,672</td>
<td>1,637</td>
</tr>
<tr>
<td>2010</td>
<td>127,425</td>
<td>1,988</td>
</tr>
</tbody>
</table>

Source: Images; FIICI AND E&Y; NABARD; Knight Frank
Sales Values in INR Crores

E.2. Findings
Using Double Exponential Smoothing Forecast equation, the forecast for All India Modern Retail Sales (AI MR Sales) and All India Modern Retail Food Sales (AI MR Food Sales) have been calculated for the period 2011 to 2016 (detailed calculation shown in Appendix B.1.). It is to be noted that forecasting was conducted at different values of $\alpha$ and $\beta$ ranging between 0.1 and 0.3 and forecast values taken at those values of $\alpha$ and $\beta$ where MAD (Mean Absolute Deviation) is minimum. The Sales Forecasts are shown below.
For the purpose of estimating the Modern Retailing Potential (in value terms) for East India, it is worth mentioning that the concept of Modern Retailing being quite new in India, till 2009 none of the secondary sources mention state wise/region wise – sector wise modern retail sales value, although there is enough secondary data on the state wise/region wise – sector wise overall retail sales value. Thus, considering state wise – sector wise overall retail sales growth pattern in the present context would be inappropriate since it includes both conventional as well as modern retailing data. Iris Research, a renowned research agency engaged in retailing studies, for the first time has captured state wise/region wise – modern retail sales for different sectors. For e.g. in 2010, Iris Research has captured East India share of Modern Retail Sales to the All India Modern Retail Sales. East Region MR Sales: 9.0% and Food MR Sales: 9.7%. It must be noted that though East contributes between 15-23% of All India Retail Sales for different sectors (as found out from different secondary sources incl. NSS figs.), the modern retail share is much lesser than the overall retail share. It has been observed that East Modern Retail Contribution by Retail Space to All India is only at 7.15% (Iris Research 2010). Thus, East Region modern retail sales forecast (Value Potential in other words) has been calculated at 2010 base with an assumption that East Region modern retail share would at least remain at 2010 base, if not improve. Hence, East Region Annual Modern Retail Sales Forecast for the period 2011 – 2016 has been made at a constant contribution rate as mentioned above.

<table>
<thead>
<tr>
<th>Year</th>
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<th>Al MR FOOD Sales</th>
<th>Al MR FOOD Contribution</th>
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<td>157,485</td>
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<td>1.67%</td>
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<td>2016</td>
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Exhibit 7

East Retail in East India is expected to growth annually at the rate of 14% to 20% in the next 6 years with a CAGR of 13.9% for East India Food Sales where as for All India Modern Retail Sales, it is 10.37%. The annual growth rate is expected to decrease with time. The above study gives an estimate of the size or potential of modern retailing of Food business in value terms. From the analysis it is clear that conventional retailing is way ahead in terms of business potential compared to modern retailing in India. It is worth mentioning that the quantitative analysis like double exponential smoothing technique runs a risk of not considering the consumer taste and preference. However, if the qualitative analysis found out from consumer preference reveals findings similar in nature to that of the findings of the quantitative study, it can be safely assumed that the quantitative study is devoid of the risk of consumer non acceptance.
Conclusion & Recommendations

The empirical observations made through the process of the research highlight interesting facts.

- For Food & Grocery, there is still a strong consumer preference towards conventional bazar in most of the state locations. The preferred modern retailing formats include department store, discount store & hypermarkets. However, for eating out/ restaurant business, the preference is very strong towards stand alone store.

- Very strong association is observed between the state locations and the different retailing formats; hence consumer preferences obtained from the study is likely to match with reality.

- The Modern Retail Food Sales forecast reveal that though a growth in MR sales is observed, yet the pace is not as fast as expected. From ~1% sales contribution in 2010, the All India MR Food Sales is likely to touch 2% in 2016. This indicates conventional retailing is still going to dominate the food sales in India.

- East as a region has a lower MR Food Sales contribution to All India MR Food Sales compared to the region’s contribution of food sales to the nation’s food sales. In East India, though growth of MR Food Sales is observed year on year; however it is found to follow a decreasing growth pattern.

Limitations of Study

- Survey is restricted to 4 state locations. Scope to increase locations per state.
- Survey was made in 4 cities of East India; hence the findings cannot be generalized for other regions or entire country as a whole.
- Sample size is not the same for all 4 locations. Scope to increase sample size.
- Income wise, Age group & Qualification wise segmentation of sample have not been done in the selected sample. Scope to do segmented analysis for the same.
- East India MR Food sales forecast made for the period 2011 to 2016 is on an assumption that the contribution to All India MR Food Sales would at least be of 2010 base level.

References

DOT, Telephone Directory, Kolkata, Bhubaneswar, Patna & Ranchi.
Fresh Food Retailing, Retailing Research Council, ASIA, 2005.
Nagaram Narashimhan, Head – Research, Cris Infac, 2005. “Report on key sectors that will drive Indian Retailing”.
Retail Report, 2008, India Brand Equity Foundation, Ministry of Commerce & Industry, Govt. of India.
Footnote
1 India Retail Report – Images KSA Technopak, 2005
2 Ibid.,
3 Ibid.,
4 Ibid.,
5 FDI in Retail, Centre for Policy Alternatives, 2007
6 India Retail Report – Images KSA Technopak, 2005
7 Ibid.,

I. Appendix
A. Evaluation of Consumer Association with different Retailing Formats

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<th>loc</th>
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\[ \text{CHI SQ.} = \sum \frac{(O - E)^2}{E} \]

\[ \text{DF} = (\text{ROW} - 1) \times (\text{COL} - 1) = 8 \times 3 = 24 \]

A.1.iii. Chi Square and Degrees of Freedom

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A.2.ii. Expected frequencies – Eating Out

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\[ \text{CHI SQ.} = \sum \frac{(O - E)^2}{E} \]

\[ \text{DF} = (\text{ROW} - 1) \times (\text{COL} - 1) = 8 \times 3 = 24 \]

A.3.ii. Chi Square and Degrees of Freedom

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### B.1. Modern Retail Sales Forecast

#### All India Modern Retail Sales Forecast (INR Crore)

<table>
<thead>
<tr>
<th>Year, t</th>
<th>Yt</th>
<th>Ct</th>
<th>Tt</th>
<th>Ŷt = Ct + Tt</th>
<th>Deviation Absolute Deviation</th>
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Source: Images

C2 = Y1, T2 = Y2 - Y1. Hence, forecast for t3 = Ŷ3 = C2 + T2

#### MAD Calculation at Different α & β Combinations for AI MR Sales (INR Cr.)

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Source: Images

### All India Modern Retail Food Sales Forecast (INR Crore)

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<th>Ct</th>
<th>Tt</th>
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<td>3,384</td>
<td>406</td>
</tr>
<tr>
<td>2012</td>
<td>2,628</td>
<td>2,364</td>
<td>264</td>
<td>5,000</td>
<td>264</td>
</tr>
<tr>
<td>2013</td>
<td>3,104</td>
<td>2,592</td>
<td>512</td>
<td>5,706</td>
<td>512</td>
</tr>
<tr>
<td>2014</td>
<td>3,622</td>
<td>3,355</td>
<td>267</td>
<td>7,204</td>
<td>267</td>
</tr>
<tr>
<td>2015</td>
<td>4,103</td>
<td>3,895</td>
<td>208</td>
<td>8,006</td>
<td>208</td>
</tr>
</tbody>
</table>

Source: NABARD, IRIS Research

C2 = Y1, T2 = Y2 - Y1. Hence, forecast for t3 = Ŷ3 = C2 + T2

#### MAD Calculation at Different α & β Combinations for AI MR Food Sales (INR Cr.)

<table>
<thead>
<tr>
<th>α</th>
<th>β</th>
<th>MAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1</td>
<td>0.1</td>
<td>302</td>
</tr>
<tr>
<td>0.1</td>
<td>0.2</td>
<td>289</td>
</tr>
<tr>
<td>0.1</td>
<td>0.3</td>
<td>277</td>
</tr>
<tr>
<td>0.2</td>
<td>0.1</td>
<td>197</td>
</tr>
<tr>
<td>0.2</td>
<td>0.2</td>
<td>157</td>
</tr>
<tr>
<td>0.2</td>
<td>0.3</td>
<td>150</td>
</tr>
<tr>
<td>0.3</td>
<td>0.1</td>
<td>150</td>
</tr>
<tr>
<td>0.3</td>
<td>0.2</td>
<td>150</td>
</tr>
<tr>
<td>0.3</td>
<td>0.3</td>
<td>150</td>
</tr>
</tbody>
</table>

Source: Images

### All India Retail Sales Forecast (INR Crore)

<table>
<thead>
<tr>
<th>Year, t</th>
<th>Yt</th>
<th>Ct</th>
<th>Tt</th>
<th>Ŷt = Ct + Tt</th>
<th>Deviation Absolute Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>933,334</td>
<td>933,334</td>
<td>8,888</td>
<td>972,222</td>
<td>97,004</td>
</tr>
<tr>
<td>2005</td>
<td>972,222</td>
<td>933,334</td>
<td>38,888</td>
<td>972,222</td>
<td>97,004</td>
</tr>
<tr>
<td>2006</td>
<td>1,195,652</td>
<td>1089,112</td>
<td>99,880</td>
<td>1,264,992</td>
<td>77,772</td>
</tr>
<tr>
<td>2007</td>
<td>1,067,796</td>
<td>1145,368</td>
<td>77,572</td>
<td>1,243,368</td>
<td>77,572</td>
</tr>
<tr>
<td>2008</td>
<td>1,482,600</td>
<td>1495,415</td>
<td>449,555</td>
<td>1,944,965</td>
<td>449,555</td>
</tr>
<tr>
<td>2009</td>
<td>1,383,417</td>
<td>1517,358</td>
<td>124,941</td>
<td>1,542,309</td>
<td>124,941</td>
</tr>
<tr>
<td>2010</td>
<td>1,699,006</td>
<td>1609,222</td>
<td>99,784</td>
<td>1,798,700</td>
<td>99,784</td>
</tr>
<tr>
<td>2011</td>
<td>1,928,213</td>
<td>1671,526</td>
<td>126,687</td>
<td>2,048,213</td>
<td>126,687</td>
</tr>
<tr>
<td>2012</td>
<td>2,103,150</td>
<td>1736,286</td>
<td>146,864</td>
<td>2,250,114</td>
<td>146,864</td>
</tr>
<tr>
<td>2013</td>
<td>2,282,664</td>
<td>1808,880</td>
<td>173,785</td>
<td>2,456,649</td>
<td>173,785</td>
</tr>
<tr>
<td>2014</td>
<td>2,456,649</td>
<td>1808,880</td>
<td>173,785</td>
<td>2,456,649</td>
<td>173,785</td>
</tr>
<tr>
<td>2015</td>
<td>2,631,694</td>
<td>1808,880</td>
<td>173,785</td>
<td>2,631,694</td>
<td>173,785</td>
</tr>
</tbody>
</table>

Source: Images

C2 = Y1, T2 = Y2 - Y1. Hence, forecast for t3 = Ŷ3 = C2 + T2

#### MAD Calculation at Different α & β Combinations for Retail Sales (INR Cr.)

<table>
<thead>
<tr>
<th>α</th>
<th>β</th>
<th>MAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1</td>
<td>0.1</td>
<td>116,370</td>
</tr>
<tr>
<td>0.1</td>
<td>0.2</td>
<td>114,083</td>
</tr>
<tr>
<td>0.1</td>
<td>0.3</td>
<td>109,618</td>
</tr>
<tr>
<td>0.2</td>
<td>0.1</td>
<td>92,732</td>
</tr>
<tr>
<td>0.2</td>
<td>0.2</td>
<td>87,149</td>
</tr>
<tr>
<td>0.2</td>
<td>0.3</td>
<td>82,650</td>
</tr>
<tr>
<td>0.3</td>
<td>0.1</td>
<td>73,947</td>
</tr>
<tr>
<td>0.3</td>
<td>0.2</td>
<td>70,230</td>
</tr>
<tr>
<td>0.3</td>
<td>0.3</td>
<td>68,504</td>
</tr>
</tbody>
</table>

Source: Images
Sustainability Education @ B-Schools

S. Rangnekar & Amit Sharma
Indian Institute of Technology, Roorkee, Uttarakhand, India

Key Words
Sustainable Development, B-Schools, Industry, Government, Management & Education.

Abstract
In the age when almost all the industries have recognized the importance of Sustainable Development, B-Schools are yet to play the part that is long due on them. As the effects of industries and production become more and more prominent in their social – ecological interactions the need for generating management excellence in the field of Sustainable Development becomes impending.

Role of Sustainable Development in the management education is a topic of heated discussions. Critics have argued that designing the management curriculum based on vague ideas about depleting resources, social, ecological and economic impacts of industrialization will be very ineffective in the view that management is still faced with many unsolved concrete problems. But the paper here is written with the view that management education is all about managing uncertainty and working towards a better future and hence imparting the basis of Sustainability right at the educational level is the responsibility of academia. Also designing courses that address future problems have immense impact on results when the actual problems turn up. This is very well observed in the case of IPR Education (for which we have specially designed management courses), 6 Sigma and Energy Audit courses.

The paper here tries to outline the need for sustainability education, dwells upon the points hampering its creation and execution. Paper also tries to identify the organizational changes that B-Schools need to address to achieve sustainability education dream. In the implementation part paper tries to identify the points of interaction between industry, government and B-Schools and how B-Schools education can make a positive impact on the way sustainability is achieved in the industry. In the course we will try to generate a framework for the collaboration between the three entities and a roadmap for the implementation of the same.
An Exploration of the Impact of International Trade on the Growth of Nigeria’s Manufacturing Sector; 1978-2010

Omolade Adeleke
College of Education, Ikere-Ekiti, Nigeria.

Ogunleye E. O.
University of Ado-Ekiti, Nigeria.

Key Words
International Trade, Manufacturing Sector Growth Rate, Import, Export

Abstract
The study investigates the impact of International trade on the Nigerian Manufacturing sector growth, MSGR. It employs cointegration and error correction model technique to explore the long run dynamic relationship between some proxies of International trade on one hand and Nigeria’s manufacturing sector growth on the other. The study shows that there is a long run relationship between the two. Again, the findings shows that despite the positive relationship between Export, Import and the Nigerian manufacturing sector growth, both export and import do not have significant impact on the Nigerian manufacturing sector growth. In all International trade had a weak explanatory power of just 40% of the total variation in the MSGR. The findings further reveals that Nigeria’s manufacturing sector has not been benefiting from trade liberalization as the coefficient of trade openness is negative. The causality test confirmed the weak influence of the Nigerian manufacturing sector on the major macro economic variables. The policy recommendation is that both export promotion and import substitution policies of the government should be made more vibrant in terms of implementation while making the country more investment friendly.

Introduction
Output growth enhancement remains crucial to the drive for rapid industrialization and economic growth in all countries of the world. Output growth in economic sense means the rate of an increase in the amount of goods and services that are being produced in an economy over a period of time. However, output growth in the manufacturing sector happens to receive greater attention this is because the manufacturing sector has been regarded as the heart of an economy. Hence, the growth of the sector remains one of the major indices used in appraising the development of an economy. World Bank (2002). Over the years, some developing countries like Nigeria have embarked on unilateral trade liberalization in recent years with very limited results at best in terms of increased growth and development. Based on these facts, several researchers like Analogbe (2000) and Oviemuno (2003) etc have made output growth concerns their priority.

Globally, the output growth rate of the manufacturing industry is seen as one of the crucial factors in determining the level of dependency of any economy. Manufacturing sector which can be expressed as part of industrial sector that deals with production of goods in large quantities for private and commercial use, has served a very important purpose in both human and capital development. World Bank (1999). Therefore, all hands must be on deck to enhance output through accelerated investment in the industry.

International trade and output growth are both recognized as a catalyst for economic development. The contribution of trade to economic development is immense, owing largely to the obvious fact that most of essential element of development such as capital goods, raw materials and technical know-how etc are almost entirely imported because of inadequate domestic supply especially in the developing countries.

The World Bank report of 2002 stressed that inability of many countries in the sub-Sahara Africa to efficiently utilize the gains from trade has contributed immensely to the backwardness of these countries economically. The report further emphasized that the manufacturing sector of these countries...
should serve as the medium through which the benefits from trade is transformed to all round economic development.

It is very clear from this report that empirical analysis of the relationship between international trade and output growth of the Nigerian manufacturing sector is necessary. This is because, despite the growth of international trade in Nigeria as one of the sub-Saharan Africa countries, the growth of the manufacturing sector has not been encouraging which may force one to question the role of the manufacturing sector in the effective transformation of gains from trade to an all round economic development. (World Bank Statistical Bulletin, 2003).

Over the years, many researchers that centered their research work on trade and manufacturing growth have not examined the link between international trade and output growth of Nigeria manufacturing sector. For instance, Olomola (2003) examined empirically the link between foreign trade and economic growth: Oviemuno (2003) in his study analysed the impact of international trade on economic development. Craft (1992) and Nash (1993) assessed the effects of trade policy environment on productivity among others. The common feature of most of these studies is the fact that manufacturing sector, which is the major catalyst through which the positive impact of trade can be felt, has not been given priority in their analyses.

Again, the direction of causality between international trade and manufacturing output growth has been a source of concern, which requires a special attention. For instance, Analogbe (2000) stressed that there will be a positive relationship between trade and output growth of Nigeria manufacturing sector if the problem of inappropriate implementation of industrial policies is put under control while Iyoha (2003) opined that trade will cause manufacturing output to grow if properly managed.

On this note, it is very apparent that a research work that will examine empirically the link between international trade and manufacturing output growth is necessary. This is the major focus of this research work as it studies the impact of international trade on manufacturing sector output growth in Nigeria and expires the long run relationship between the two from 1975 to 2007.

Some literature

Olomola (2003) focused on assessing the nature and direction of causality between foreign trade and economic growth in Nigeria. The study employed the use of co-integration and error correction model after the estimation of his model which expressed economic growth (using Nigeria GDP) as a function of foreign trade; he discovered that there existed bi-directional causality between the two i.e. foreign trade and economic growth during the trade and economic growth during the period under review.

Oviemuno (2003) made use of a model that expressed the GDP of Nigeria as a function of export value, import value, exchange rate and inflationary rate. He used ordinary least square of the estimation technique and discovered that all the four regresses i.e. export import, exchange rate and inflationary rate did not have impact on the Nigeria economic growth.

Analogbe (2000) conducted a pure desk research on trade reforms and output growth in Nigeria. He undertook an examination of different trade policies in Nigeria ranging from per-SAP trade policies, SAP trade policies among others. He also appraised different output trends in Nigeria, this ranged form per-SAP output trend and output trend since SAP. In addition, he asserted the factors responsible for low output growth in Nigeria, the assessment was carried out before and after the adoption of SAP. He however concluded that the growth in the manufacturing sector of Nigeria was hampered by inappropriate implementation of all these industrial policies.

Craft (1992) and Nash (1993) in similar studies examined the effects of trade policy environment on productivity in an economy. They made use of varieties of variables to capture the trade policy environment, some of the variables used are import growth rate, simple average tariff rate, concentration ratio etc, all these were regressed on the growth rate of gross domestic product of the economy While Craft (1992) used developing Asian countries as his case study, Nash (1993) used the developing countries in Africa as his case study. Craft (1992) observed that trade environment has been having
significant positive impact on the output growth of the Asian countries; Nash discovered that there has been no noticeable improvement in the growth of many African countries despite the increase in the volume of trade in these countries.

**Methodology**
Lucas (1988) made use of the conventional production function to explain the relationship between output growth and Trade Liberalization. In the Model:

\[ y = F(K, L, H, TL) \]  \( \ldots 1 \)

Where:
\[ Y = \text{Output growth} \]
\[ K = \text{capital input} \]
\[ L = \text{Labour input} \]
\[ H = \text{Human capital} \]
\[ TL = \text{Index of Trade Liberalization}. \]

He further broke down trade Liberalization to include Degree of Openness (DOP) and real export (RXT) Hence the modified version of equation 1 is

\[ y = F(K, L, H, DOP, RXT) \]  \( \ldots 2 \)

Other things being equal, Lucas in his measure of the empirical relationship among the variables opined that, real depreciation of domestic currency will raise the price of tradables relative to that of non-tradables and, thus, resources will move out of the non-tradables sector into tradable sector. Consequently, real export would rise. Also, the degree of openness enters positively into the model. With trade liberalization, a country with high degree of openness tends to enjoy greater growth than a country with low degree of openness.

**Model Specification**
The model formulated for the purpose of assessing the impact of International trade of the Nigerian Manufacturing sector growth follows the work of Oviemuno (2003). The model was a modified form of Lucas (1988). In Lucas model the index of trade liberalization only included real export and degree of openness but in our model, real import and exchange rate is added so as to complete the major variables of international trade.

\[ MSGR = f(REXPT, RIMPRT, EXR, TOP) \]

It is stated in log-linear form as

\[ MSGR = a_0 + a_1 \ln REXPT + a_2 \ln RIMPRT + a_3 \ln EXR + a_4 \ln TOP + u \]

Where: \( MSGR = \text{Nigerian Manufacturing Sector Growth}, REXPT = \text{Real Export}, RIMPRT = \text{Real import}, EXR = \text{Exchange rate and TOP = Trade Openness.} \)

**Estimating Technique**
The estimating technique adopted for this study is cointegration and error connection model. According to Engle and Granger methodology, the first step is to examine whether the time series contained in the equation has a unit root. In the cointegration literature, the more frequently used tests for a unit root are the Augmented Dickey-Fuller (1979 and 1981) Philips – Perron (1988) and Perron (1986 and
1988) test. These tests agreed in their treatment to the intercept parameter. Thus, the null hypothesis model to test for unit root has the following form:

\[ X_t = \mu + aX_{t-1} + E_t \]  

...3

And the model under the alternative hypothesis:

\[ X_t = \mu + \theta(t - \frac{1}{2}) + aX_{t-1} + E_t \]  

...4

When \( X_t \) is the of the time series, and under the null hypothesis; \( a = 1 \) and \( \theta = 0 \). \( T \) represents the number of observations. In this paper, we use the Augmented Dickey-Fuller (ADF) to test for the stationarity of the time series. The ADF test can be obtained by applying OLS to estimate the coefficients of the following relation:

\[ \Delta X_t = \mu + \theta_t + X_{t-1} + \sum_{1}^{a} \lambda_i \Delta X_{t-1} + u_t \]  

...5

\( n \) is chosen to eliminate the autocorrelation. If a unit root exists, then \( y = a - 1 \) would not be statistically different from zero. The ADF test can be conducted by comparing the t-value on the coefficient of \( X_{t-1} \) with critical values.

The Granger representation indicates that if \( X_t \) and \( \lambda_i \) are integrated; they will have an error correlation representation as follow:

\[ a(L)\Delta y_t = a_0 - \lambda(y_t - aX_t) + b(L)\Delta X_t + c(L)E_t \]  

...6

Where \( a(L), \ b(L) \) and \( c(L) \) are stable and invertible polynomials, respectively. Such models provide a more attractive way of presenting and modeling cointegrating series. The error correction models combine the long run \( (y_t - aX_t) \) and the short run dynamics.

The second step of Engle and Granger methodology consist to estimate the following regression:

\[ \Delta y_t = a + \sum\alpha^r \Delta y_{t-r} \sum \beta_j \Delta X_{t-r} + bEC_{t-1} \]  

...7

Where \( A \) denotes the first difference and the EC represents the error term. The estimated error term coefficient must have statistically significant negative sign. This coefficient indicates the percentage of the disequilibrium in the dependent variable that would be adjusted from period to another. It is widely recognizable that Engle and Granger test for cointegration would be enough if we want to examine the effect of error correction mechanism on the dependent variable for two sequences periods such as \( t \) and \( t - 1 \).

The maximum Likelihood procedure (Johansen’s test), suggested by Johansen (1988 and 1991) is particularly preferable when the number of variables in the study exceeds two variables due to the possibility of existence of multiple cointegrating vectors. The advantage of Johansen’s test is not only limited to multivariate case, but it is also preferable than Engle-Granger approach even with a two-variable-model (Gonzalo, 1990).

To determine the number of cointegrating vectors, (Johansen, 1988 and 1991) and Johansen and Juselius (1990) suggested two statistic tests. The first one is the trace test \( (\lambda_{\text{trace}}) \). It tests the null hypothesis, that the number of distinct cointegrating vectors is less than or equal to \( (q) \) against a general unrestricted alternative \( (q = r) \). The second statistical test is the maximal eigenvalue test \( (\lambda_{\text{max}}) \). This test concerns a test of the null hypothesis that there is \( (r) \) of cointegrating vectors against the alternative that there is \( (r + 1) \) cointegrating vectors.

**Results and Discussion**
Augmented Dickey Fuller tests for stationarity result is shown in Table 1

---

<table>
<thead>
<tr>
<th>Variable</th>
<th>I (1)</th>
<th>I (1)</th>
<th>I (1)</th>
<th>I (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>lnMSGR</td>
<td>22.9612</td>
<td>66.6652*</td>
<td>115.4904*</td>
<td>111.1152</td>
</tr>
<tr>
<td>lnREXPRT</td>
<td>38.1152</td>
<td>5.7062</td>
<td>58.9300*</td>
<td>5.1213</td>
</tr>
<tr>
<td>lnr</td>
<td>39.3300</td>
<td>39.3300</td>
<td>82.2300*</td>
<td>3.5672</td>
</tr>
<tr>
<td>lnTOP</td>
<td>38.1152</td>
<td>5.7062</td>
<td>82.2300*</td>
<td>3.5426; DF regressions include an intercept and a linear trend.</td>
</tr>
<tr>
<td>lnRIMPRT</td>
<td>38.1152</td>
<td>5.7062</td>
<td>82.2300*</td>
<td>3.5426; DF regressions include an intercept and a linear trend.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Integration Order of the Variables</th>
<th>Amax</th>
<th>Stat</th>
<th>95% Critical Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>r ≤ 1</td>
<td>5.1213</td>
<td>95%</td>
<td>5.1213</td>
</tr>
<tr>
<td>r ≤ 2</td>
<td>6.4780*</td>
<td>95%</td>
<td>5.1213</td>
</tr>
<tr>
<td>r ≤ 3</td>
<td>180.2707*</td>
<td>95%</td>
<td>5.1213</td>
</tr>
<tr>
<td>r ≤ 4</td>
<td>180.2707*</td>
<td>95%</td>
<td>5.1213</td>
</tr>
<tr>
<td>r ≤ 5</td>
<td>180.2707*</td>
<td>95%</td>
<td>5.1213</td>
</tr>
</tbody>
</table>

The * indicates statistical significance at the 5% level.
The Business & Management Review, Vol. 1   Number 2, November 2011 37

Table 1: Unit root test result

<table>
<thead>
<tr>
<th>Variable</th>
<th>ADF Statistics</th>
<th>Order of Integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSGR</td>
<td>-4.5152</td>
<td>I (1)</td>
</tr>
<tr>
<td>( \ln REXPRT )</td>
<td>-5.7062</td>
<td>I (1)</td>
</tr>
<tr>
<td>( \ln RIMPRT )</td>
<td>-4.5255</td>
<td>I (1)</td>
</tr>
<tr>
<td>( \ln EXR )</td>
<td>-3.5672</td>
<td>I (1)</td>
</tr>
<tr>
<td>( \ln TOP )</td>
<td>-5.1213</td>
<td>I (1)</td>
</tr>
</tbody>
</table>

NOTE: ADF critical value at 5% is \(-3.5426\); DF regressions include an intercept and a linear trend.

Augmented Dickey Fuller test for stationarity indicates that all the variables are integrated of order 1. The univariate analysis of the non-stationary series indicates that these variables can be characterized as (1)

The result of the Johansen Cointegration test is presented in Table 2

Table 2: Test for cointegration using Johansen procedure.

<table>
<thead>
<tr>
<th>Trace</th>
<th>Amax</th>
<th>Trace</th>
<th>Amax</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ho</td>
<td>H1</td>
<td>Stat</td>
<td>95%</td>
</tr>
<tr>
<td>( r = 0 )</td>
<td>( r = 1 )</td>
<td>180.2707*</td>
<td>82.2300*</td>
</tr>
<tr>
<td>( r \leq 1 )</td>
<td>( r = 2 )</td>
<td>64.7804*</td>
<td>58.9300</td>
</tr>
<tr>
<td>( r \leq 2 )</td>
<td>( r = 3 )</td>
<td>38.1152</td>
<td>39.3300</td>
</tr>
<tr>
<td>( r \leq 3 )</td>
<td>( r = 4 )</td>
<td>15.1940</td>
<td>11.5400</td>
</tr>
</tbody>
</table>

NOTE: The * indicates statistical significance at the 5% level.

Table 2 is a summary of results of cointegration analysis using the Johansen maximum likelihood approach i.e. the cointegration likelihood ratio tests based on trace of the stochastic matrix and maximal eigenvalues. In the cointegration test for the variables, both the trace and maximal eigenvalues were carried out. The first line of the table tests the hypothesis \( r = 0 \), that is there is no cointegration relations. This is rejected at 5 percent level by both the maximum eigenvalue (\( \Lambda \) Max) and trace statistics.

Therefore, there is a long-run relationship. Again the result further confirms the existence of at least two cointegration vectors.

After using the cointegration test to establish the long-run relationship, the Long-run regression analysis was carried out for manufacturing output growth rate and variables of international trade. The cointegration regression result is presented thus:
\[ MSGR = 95.17 + 11.64 \ln REXPRT + 8.32 \ln RIMRRT + 6.32 \ln EXR - 8.21 \ln TOP \]
\( (26.82)^* 
\)
\[ R^2 = 0.42 
\]
\[ \bar{R}^2 = 0.35 
\]
\[ D.W. = 2.23 
\]

Both exchange rate and export exert positive and significant relationship on manufacturing sector growth rate in Nigeria. A positive but insignificant relationship exists between import and manufacturing sector growth rate. A Trade openness has a negative but significant relationship with the manufacturing sector growth rate. The \( R^2 \) of 0.4243 is relatively low as it showed that international trade indicators explain about 42% change in the manufacturing sector growth rate in Nigeria. The overall regression model is statistically significant by considering the F statistics. The Durbin Watson value of 2.23 is an evidence of absence of auto correlation problem.

Considering the interpretation of the empirical result it is apparent that Nigeria has not maximized her gains from international trade with special reference to the manufacturing sector growth.

According to the result, Nigeria import has not impacted significantly on the manufacturing sector growth. This might not be unconnected with the position of Obadan (2006) who stressed that excessive importation of goods that can be produced locally will effect the growth of the Nigerian manufacturing sector. This is an indication that the long term import substitution policy of the Federal government in Nigeria has not yielded any significant result since the result have shown that import is not making any significant impact on the Nigerian manufacturing sector growth. This situation is corroborated by the coefficient of trade openness in the result which is negative. The evidence from this result showed that the degree of openness has inverse relationship with the Nigeria manufacturing sector growth, it shows that the rate at which Nigeria opens her border for trade with other countries is not bring the expected benefit to the manufacturing sector. This can be stated in other form that other countries that are Nigeria’s trade partners a benefiting more than Nigeria from their trade relationship. Again, the result showed that increase in exchange rate will promote the growth of the manufacturing sector. This is because high exchange rate discourages importation of goods more importantly goods that can be competing with the local manufactured products are discouraged through this means hence it will accelerate the growth of the Nigeria manufacturing sector.

<table>
<thead>
<tr>
<th>Hypotheses:</th>
<th>F Statistics</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Export does not granger cause manufacturing growth rate.</td>
<td>2.0090</td>
<td>0.092</td>
</tr>
<tr>
<td>Manufacturing sector growth rate does not granger case export</td>
<td>7.5017</td>
<td>0.000</td>
</tr>
<tr>
<td>Import does not granger cause manufacturing Growth rate</td>
<td>1.7582</td>
<td>0.1391</td>
</tr>
<tr>
<td>Manufacturing sector growth rate does not granger cause import</td>
<td>7.3876</td>
<td>0.000</td>
</tr>
<tr>
<td>Exchange rate does not granger cause Manufacturing Growth rate</td>
<td>1.3227</td>
<td>0.2791</td>
</tr>
<tr>
<td>Manufacturing growth rate does not granger cause exchange rate</td>
<td>181.5965</td>
<td>0.000</td>
</tr>
<tr>
<td>Trade openness does not granger cause manufacturing growth rate.</td>
<td>1.6470</td>
<td>0.1671</td>
</tr>
<tr>
<td>Manufacturing growth rate does not granger cause trade openness.</td>
<td>150.1680</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Table 3 Granger Causality Test
The result in table 3 for the causality test showed that only export and manufacturing sector growth rate has bidirectional causality. In other words, export can Granger cause manufacturing sector growth and vice versa. For other variables, there is a unidirectional causality between each of them and manufacturing sector growth. The unidirectional causality for all the variables showed that manufacturing sector growth do granger cause all the variables i.e. Exchange rate, import and Trade Openness. This followed the rejection of all the All hypotheses that manufacturing sector growth does not granger cause each of these variables. This is evidence that manufacturing sector growth has little or no influence on all these variables used as indicators of international trade except export.

Conclusion and Recommendations

The empirical result showed that there is long –run positive relationship between manufacturing sector growth and export. The same relationship goes far import and exchange rate while trade openness has a long – run negative relationship. The causality test have revealed the weak influence of manufacturing sector in Nigeria on Key Macro economic indicators such as exchange rate, and import and Trade openness. It affirms the moribund nature of the manufacturing industry in Nigeria. Evidence from various empirical work like Fabayo (2000) have shown that a good number of manufacturing firms are folding up daily while some are leaving the country for other neighboring countries in their bid to survive. The most worrisome aspect of this scenario is the fact that trading partners of Nigeria are benefiting more than Nigeria from their trade relationships hence; trade liberalization measured by trade openness has not positively influenced the Nigerian manufacturing sector growth. Excessive importation of finished goods that can be produced locally is a colossal set back for the growth of the Nigerian manufacturing sector. This has over the years killed the skill and initiative of many entrepreneurs in the country. Recently, the Federal government re-opened the border for importation of cement, a product that the country has abundant raw materials to produce this may have a long run negative effect on the manufacturing sector as shown by the findings in this research work.

Finally, if Nigeria is to maximize her gains from international trade effort must be made to revitalize the implementation of export promotion and import substitution policies. These two policies are just “paper tigers” going by the findings in this research work i.e. they have not made the expected impact on the Nigerian manufacturing sector. Again, effort must be made to make the production environment in Nigeria friendlier by ensuring security of life and properties as well as improving in power generation, roads and other infrastructural facilities. This will limit the alarming exits of manufacturing firms from the country.

References


Iyoha M. A and Ekanem, O. T. (2002), Introduction to Econometrics, March Publisher, Benin City, Nigeria.


Export & Economical Growth: New Evidence from Developing Countries using Pool Data

Yousef Mehnatfar
Mazandran University, Group Economics-Babolsar –Iran

Seyed Bijan Babayee
Agricultural Science University of Sari, Iran.

Key Words
None- oil exports, economic growth, GLS method.

Abstract
In export based economic growth theory emphasized by the World Bank, the promotion of export especially the manufacturing export support economic growth. In other words division of labor, comparative advantage, large economic scales, market size are among some important variables playing an important role in this regard. Many studies during 1990s support the positive impact of foreign trade on economic growth. The purpose of this paper is to examine the impact of export on economic growth for a sample of 19 developing countries for the period 1998-2006. The results based on a pooling data generalized least squares (GLS) method show that there is a positive and significance relationship between export increase and economic growth in developing countries under consideration. Therefore policies to promote export in developing countries such as Iran are suggested.
Compulsory Licensing and Public Health an Interpretation of the Article 31 of the TRIPS Agreement

Ping Xiong
Law School, University of South Australia, Australia

Key Words
Pharmaceutical Patents, The TRIPS Agreement, Public Health, Compulsory License, Treaty Interpretation

Abstract
The development on public health issue in the WTO regime impacts on the understanding of compulsory licensing contained in the Article 31 of the TRIPS Agreement. Article 31 of the TRIPS Agreement, in conjunction with the Doha Declaration and the 30 August Decision, provides a basic framework in which WTO member nations are allowed to enact compulsory licensing mechanism. The understanding on it needs an interpretation of the relevant provisions. The interpretation of Article 31 of the TRIPS Agreement should be understood in line with the subsequent of development of TRIPS Agreement and its object and purposes. The interpretation of Article 31 should also be conducted with reference to its context material and supplementary material of TRIPS Agreement so that the access to medicines can be further promoted.
Measuring Customer Relationship Management (CRM) and its Relationship with Customer Satisfaction in the Egyptian Banking Sector

Heba Sadek & Passant Tantawi
Arab Academy for Science, Technology and Maritime Transport, Egypt

Key Words
CRM, Customer Satisfaction

Abstract
The main purpose of this paper is to measure customer relationship management (CRM) components, and to examine the relationship between CRM and customer satisfaction in the Egyptian Banking Sector. The paper used quantitative approach which consists of two different structured questionnaires distributed on a stratified sample. The first one involved 180 employees in the sampled banks to measure the CRM applicability and the second one involved 270 customers from the sampled bank to measure the level of customer satisfaction. The findings show that the selected banks apply the CRM components but the level of application differs from one bank to another. Furthermore, it shows that there is a significant positive relationship between CRM and customer satisfaction in the Egyptian Banking Sector, when applying the four components of CRM altogether not separately. The findings confirm the importance of studying the CRM, for the purpose of improving it in the Egyptian Banking Sector in order to satisfy customers. Firms wishing to improve their relationships with customers need to focus on the CRM components to develop relevant and effective marketing strategies and tactics.

Since this study was conducted in the Egyptian Banking Sector, the replication of this study could be done within other services and within other countries. In addition, a cross-sectional data was used in this study. Future studies should collect time-series data for testing the relationship between CRM and customer satisfaction.

Introduction
In today’s competitive market, the growth of the service sector is noticeable all over the world, in both developed and emerging countries. In Egypt, the service sector represents the largest and fastest growing economic sector and accounts for almost 51% of gross domestic product (GDP). The Egyptian Banking Sector, particularly, constitutes one of the main sources of service sector revenue (Encyclopedia of the nations, Egypt-Economic sectors, 2009). Therefore, it should be financially stable and growing, as this sector is responsible for the savings of communities (Rootman et al., 2008). Furthermore, the Banking Sector in Egypt represents a cornerstone of its financial architecture and plays a crucial role in the overall economic development and growth. Over the past years, it has witnessed important changes such as privatization, bank mergers and acquisitions; the largest number of mergers and acquisitions took place between 2004 and 2007.

Thus, this came as a golden opportunity for the entry of more foreign banks that perceived Egypt as a lucrative market (AmCham Egypt BSAC, 2005 and 2008). The appearance of new leading parties (such as bank mergers and acquisitions) and the globalization of international markets are both the result of technological developments and the loosening of administrative and monetary interventions that have led to the severe market competition and the risk of declining market shares for each banking institution (Kokkomelis, 1995, p.132-133). Owing to this competitive and global banking era, the customers are considered as one of the most important and valuable assets that a bank should maintain and continuously expand. As customers are of significant importance, it is crucial for banks to satisfy their needs and wants (Mylonakis, 2009). These banking institutions need to focus on attracting, retaining and growing customers because a lot of benefits result from customer relationships, including customer loyalty and higher profitability (Rootman et al., 2008). Therefore, by focusing on managing customer relationships and in particular customer satisfaction, revenues will be maximized (Stefanou et al., 2003).

CRM is recognized globally as one of the most innovative means to facilitate the creation of a customers’ base in order to meet market competition requirements (Mylonakis, 2009). It appeared in the
mid-1990s and was strongly promoted during the late 1990s – throughout this time period, the term CRM has obtained different meanings to different people (Goldberg, 2002, p.7). Evidently, the CRM is regarded as a multidisciplinary topic since it deals with marketing, information systems, management, etc. (Kevork and Vrechopoulos, 2009). The CRM is seeking to establish long term, committed, trusting and cooperative relationships with customers, characterized by openness, genuine concern for the delivery of high quality services, responsiveness to customer suggestions, fair dealing and the willingness to sacrifice short term advantage for long term gains (Bennett, 1996). In applying the CRM, the goal of the organizations is to identify their own profitable customers and to provide personalized services, in order to enhance and increase both customer satisfaction and loyalty in the long run (Shani and Chalasani, 1992; Kalakota and Robinson, 2001; Gebert et al., 2003).

The Origins of CRM
The early trend of customer-oriented marketing and relationship marketing leads to the Customer Relationship Management (CRM). Therefore, this part will start from the early beginning with the customer-oriented marketing till the CRM.

Customer-Oriented Marketing
After adopting the marketing philosophies, companies face the challenges of a new concept which is the customer orientation (Bose, 2002). The customer orientation is considered to be an innovative business paradigm (Jain, 2005). It consists of a deep understanding of the target customers to create superior value and additional products for them. Furthermore, the customer orientation takes into consideration not only the comprehension of customers’ value chain at present but also in the long run to increase benefits and decrease costs (Narver and Slater, 1990).

Companies wishing to succeed should research all the effects that could influence the customer decisions starting from the direct effect of the 4 P’s (product, price, place, and promotion) till the economic and the political conditions in respective markets (Narver and Slater, 1990). In the past few decades, along with the trend of customer-oriented marketing, there has been a rapid growth in studying the economics of customer relationships (Gronroos, 1994).

Relationship Marketing
Relationship marketing appeared first in the research field of services marketing in the early 1980s (Ford, 1980; Hammarkvist et al., 1982; Berry, 1983; Jackson, 1985; Dwyer et al., 1987).

According to Copulinsky and Wolf (1990) and Gronroos (1994), relationship marketing is about establishing, maintaining and enhancing relationships with customers and other partners, at a profit, so that the objectives of the involved parties are met.

Relationship marketing has an objective to build long term, mutual satisfying relations with customers, suppliers and distributors in order to earn and retain their long-term preference and businesses (Kotler, 2000). In order to guarantee the success of external relationship marketing, the company should pay attention to the internal relationship marketing (employees) by guiding internal relationships and establishing internal customer orientation (Bruhn, 2003).

According to Anderson et al. (1997), customer satisfaction resulting from the relationship marketing guarantees loyal customers that strongly support and advocate the organization through word of mouth that leads to lower cost when attracting new customers. As a result, customer satisfaction is significant in building trustworthy relationships with customers and retaining the competitive advantage (Stefanou et al., 2003).

Based on the importance of relationship marketing, there has been a rapid progress and development in studying the theory and practice of CRM in business management, particularly, where CRM was recognized as a crucial cornerstone for all corporations (Gronroos, 1994).
Customer Relationship Management (CRM)

The CRM is a recent phenomenon, started to rise in the 1990s and is rapidly becoming a major discipline in its own right (Ryals et al., 2000; Ling and Yen, 2001; Xu et al., 2002).

It has emerged as a strategic solution to business problems, if implemented successfully. CRM offers a lot of benefits to the organization in terms of improved sales, market share profitability, customer satisfaction and reduced customer turnover, service cost and time (Jain et al., 2003). Furthermore, CRM is not only a solution but also a strategy which can provide enormous competitive advantage if implemented in a co-operative environment (Kotorov, 2003). Therefore, organizations whether small or large have to adopt CRM in order to build more effective relationship with respective customers and also to increase business profitability (Ngai, 2005). Thus, CRM is a must for most organizations to survive in the market. “Do nothing” or “wait and see” are not viable options: “CRM should be the center of your universe...The best way to organize the information you use.” (Allen Bonde, analyst with the extraprise group, quoted in Colkin, 1999).

CRM definitions

CRM has different meanings to different people (Iriana and Buttle, 2006) and it has been defined and conceptualized in several ways, reflecting many viewpoints of different scholars. CRM is considered to be an approach to maximize customer value through differentiating the management of customer relationships (Xu et al., 2002). Therefore, most CRM definitions are based around the collection and use of customer data for specific customer-focused activities (Xu and Walton, 2005). In addition, CRM is considered to be a way to maximize the value of the company through specific customer strategies. Thus, they suggest that CRM is a set of business practices designed to make an organization closer to its customers in order to be able to better understand each customer so that each one becomes more important and more valuable to the organization (Godsen, 2004, p.141).

In this line of thought, Jackson (1985) defines the CRM as a marketing orientation toward strong, lasting relationships with individual accounts. Hobby (1999) added that CRM is not only a marketing orientation but also a management approach that helps the organizations to identify, attract and increase retention of profitable customers by managing relationships with them. Payne (2000) asserts that CRM includes the creation, development and enhancement of individualized customer relationships with carefully targeted customers and customer groups resulting in maximizing their total customer life-time value. Recently, Kotler and Armstrong (2004) define CRM as “The overall process of building and maintaining profitable customer relationships by delivering superior customer value and satisfaction”. Furthermore, Payne and Frow (2005) explain that CRM is considered to unite the potential of relationship marketing strategies and Information Technology (IT) in order to create profitable, long-term relationships with customers and other key stakeholders. Thus, CRM provides opportunities to use data and information to understand customers and co-create value with them.

Based on the above definitions, Kevork and Vrechopoulos (2009) note that CRM is a multidisciplinary topic since it deals with several domains, such as marketing (e.g. relationship marketing, consumer behavior, etc.), management and information systems (e.g. e-commerce, human computer interaction, etc.). However, there is a big amount of confusion regarding its domains and meanings (Parvatiyar and Sheth, 2001). Some have defined it as a process; others as a strategy, a philosophy, a capability, or as a technological tool (Zablah et al., 2004). However, it has become clear that CRM is more than just technology. While technology is only a way in order to implement the CRM (Chan, 2005). Many authors consider the CRM as multiple-variant construct, a combination between strategy and IT (Chan, 2005; Payne and Frow, 2005), between process and IT (Plakoyiannaki and Tzokas, 2002), between strategy, process and IT (Buttle, 2004; Rigby et al., 2002), and between process, strategy, philosophy, capability and IT (Zablah et al., 2004).

In this paper, the CRM is defined as a multidimensional construct composed of four behavioral components: key customer focus, CRM organization, Knowledge management and technology-based CRM in order to implement the CRM in a successful way.
CRM components

Based on related literature (Crosby and Johnson, 2001; Day, 2003; Fox and Stead, 2001; Kalustian et al., 2002; O’halloran and Wagner, 2001; Paracha and Bulusu, 2002; Ryals and Knox, 2001; Tiwana, 2001), CRM was hypothesized as a multi-dimensional construct consisting of four broad behavioral components: Key customer focus, CRM organization, Knowledge management, and technology-based CRM. More elaboration about this construct and its components are presented below.

Key customer focus: it can be said that organizations that apply CRM are customer-driv en in that all their decisions must take into consideration customers’ interest and welfare. In doing so, the companies should promise superior value to their customers and try to deliver the desired satisfaction more effectively and efficiently than their competitors. This involves an attempt to design its offer in a personalized way to its key customers. Key elements of this dimension consist of customer-centric marketing, key customer lifetime value identification, personalization and interactive co-creation marketing.

CRM organization: in implementing CRM many changes are required in the way that firms are organized (Ryals and Knox, 2001), business processes are conducted (Hoffman and Kashmeri, 2000) and the qualified employees that are involved in delivering value to the target customers. Therefore, firms should take into consideration the organizational challenges inherent in any CRM initiative (Agarwal et al., 2004). The key considerations in order to successfully organize the whole company around CRM are as follows: organizational structure, organization-wide commitment of resources, and human resources management.

Knowledge management: knowledge management is a key cornerstone in any attempt to implement CRM. This involves the creation, transfer and application of knowledge in order to better satisfy customers’ needs and wants. This can be done by utilizing internal data, conducting the needed empirical research about the changes in the market dynamics and the use of data-base marketing. Key elements include knowledge learning and generation, knowledge dissemination and sharing, and knowledge responsiveness.

Technology-based CRM: the use of technology is a prerequisite for any successful CRM performance (Abbott et al., 2001). Consequently, the technology has an important role in CRM in adding to firm intelligence (Boyle, 2004). In reality, the advancement in Information Technology has enabled the company to collect huge and precise information about customers, competitors and the other key actors in the market, analyze and share such information with other functional areas and other key value providers in a way that allows to customize the needed offerings, which in turn lead to satisfying and thus retaining customers. Recently companies start to utilize different tools such as: computer-aided design/manufacturing, data warehouses, data mining and CRM software systems that enable them to provide greater customization with better quality at lower cost. In addition, it helps the staff at all contact points to serve the customers in a better way. Therefore, many customer-centric activities would be impossible without the use of an appropriate technology (Sin et al., 2005).

Customer satisfaction

According to Mithas et al. (2005), it has been found that CRM are likely to have an effect on customer satisfaction. This, in turn, has great implications on the economic performance of the organization (Bolton et al., 2004). The effect of CRM on customer satisfaction is due to at least three reasons.

First, CRM enables firms to customize their offerings for each customer in order to suit their individual tastes by accumulating information across customer interactions and by processing this information to discover hidden patterns. Because CRM helps firms customize their offerings, this will enhance the perceived quality of products and services from a customer’s point of view (a determinant of customer satisfaction). Therefore, CRM applications indirectly impact customer satisfaction through their effect on perceived quality.
Second, CRM also enables firms to promote the reliability of consumption experiences through facilitating the timely accurate processing of customer orders and requests.

An improved ability to customize and a reduced variability of the consumption experience enhance perceived quality, which positively influences customer satisfaction.

Finally, CRM also helps firms manage customer relationships more effectively across the stages of relationship initiation, maintenance, and termination (Reinartz et al., 2004).

It can be said that customer satisfaction is a major goal of business organizations, since it affects customer retention and companies’ market share (Hansemark and Albinsson, 2004). Therefore, it is highly recognized for its crucial role (Jamal and Naser, 2002). Customer satisfaction is a complex construct which has been defined in various ways (Besterfield, 1994; Kanji and Moura, 2002; Fecikova, 2004). In this study, it is defined in a broad concept that involves both cognitive and affective components (Yu and Dean, 2001).

The cognitive component refers to a customer’s evaluation of the perceived performance in terms of its adequacy in comparison to the customer’s expectation standards (Oliver, 1980; Wirtz, 1993; Liljander and Strandvik, 1997). The affective component which is the emotional component consists of various emotions, such as happiness, surprise and disappointment (Oliver, 1993b, Liljander and Strandvik, 1997; Stauss and Neuhaus, 1997; Cronin et al., 2000).

Based on Levitt (1983), a number of surveys confirm the general economic benefit of customer satisfaction, which can be primarily attributed to the positive correlation between customer satisfaction and customer retention (Dawkins and Reichled, 1990). In addition, Fecikova, (2004) stated that loyalty of customer is considered to be a function of satisfaction and according to Bowen and Chen, (2001); Fecikova, (2004) the loyal customers contribute to company profitability by spending more on company products and services, via repeat purchasing and by recommending the organization to other customers.

Research objectives

The research has two main objectives; (1) measuring the CRM in the banking sector in Egypt, (2) Identifying the relationship between CRM and customer satisfaction

In addressing these objectives in the Egyptian Banking Sector, the perspective of bankers as well as customers will be taken into account.

Research hypotheses

To give effect to the research objectives, a number of hypotheses were formulated, as follows

H1: The CRM is associated with customer satisfaction
H1a: The key customer focus is associated with customer satisfaction
H1b: The CRM organization is associated with customer satisfaction
H1c: The technology-based CRM is associated with customer satisfaction
H1d: The knowledge management is associated with customer satisfaction

Research methodology and design

This research study uses quantitative approach to measure the CRM in the Egyptian Banking sector and to test hypotheses to provide an enhanced understanding of the relationship that may exist between (CRM and customer satisfaction).

To cover the different segments in the Egyptian Banking Sector and to obtain accurate results, a stratified random sample was drawn. Three strata have been constituted from three different banking groups. The categorization of such banks was the result of in depth interview with experienced bankers who provide such categorization.

Group 1 includes Egyptian banks, i.e., National Bank of Egypt (NBE), Commercial International Bank (CIB) and Arab African International Bank (AAIB).
Group 2 includes multinational and regional banks, i.e., National Société Générale Bank (NSGB), Hong Kong and Shanghai Banking Corporation (HSBC) and Ahli United Bank.

Group 3 covers Egyptian banks with special nature which includes Faisal Islamic Bank, Housing and development Bank and Export development bank. All these banks represent more than 50% market share of total Egyptian Banking Sector customers’ deposits. Since total Egyptian banking sector customer deposits is amounted for EGP 810 Billion (CBE report, 2009) and total samples customers deposits amounted for EGP 434.2 Billion. From each banking group, a quota sample of employees and another quota sample of customers were drawn.

The measurement instrument consisted of two different structured questionnaires; the first one "employee questionnaire" was structured to measure CRM components as applied in their banks in order to verify areas where specific improvements are needed and to pinpoint aspects of the bank’s CRM that necessitate enhancement. A pilot survey was conducted among forty five employees (five employees/bank) in the selected banks at different hierarchical levels to measure the reliability of scales and then the questionnaire was distributed among a sample of 300 employees that have been chosen at different hierarchical levels to fulfill the required questions. A satisfactory response rate of 60% was achieved, as 180 questionnaires were usable for analysis. (Approximately 20 questionnaires per each bank). At the same time, another structured questionnaire "customer questionnaire" was developed, translated and piloted among forty five banking customers (five customers/bank) to measure the reliability of scales. It was used to measure the level of customer satisfaction in order to improve the relationships between the banks and its customers in the Egyptian Banking Sector. The questionnaire was distributed among a sample of 450 banking customers that have been chosen from the selected nine banks in order to measure the level of customer satisfaction towards their banks. The questionnaire has been distributed and collected among the selected banks’ customers. A satisfactory response rate of 60% was achieved, as 270 questionnaires were usable for analysis (Approximately 30 questionnaires / bank).

**Results**

**Quantitative part**

**The reliability assessment**

Reliability of the scales used in the research was calculated using Cronbach’s alpha coefficient. All Cronbach alphas’ values are higher than 0.7 indicating the stability and consistency with which the instrument measures the concept.

**Table (1): Reliability of scale**

<table>
<thead>
<tr>
<th>Employees</th>
<th>No. of items</th>
<th>Reliability (cronbach’s Coefficient)</th>
<th>Customers</th>
<th>No. of items</th>
<th>Reliability (cronbach’s Coefficient)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key customer focus</td>
<td>5</td>
<td>0.805</td>
<td>Cognitive component</td>
<td>24</td>
<td>0.927</td>
</tr>
<tr>
<td>CRM organization</td>
<td>6</td>
<td>0.785</td>
<td>Affective component</td>
<td>8</td>
<td>0.940</td>
</tr>
<tr>
<td>Technology-based CRM</td>
<td>7</td>
<td>0.843</td>
<td>Total</td>
<td>32</td>
<td>0.952</td>
</tr>
<tr>
<td>Knowledge Management</td>
<td>10</td>
<td>0.935</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>28</td>
<td>0.942</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Testing hypotheses**

In order to test the first research hypothesis which states that CRM is associated with customer satisfaction, Spearman correlation coefficient (r) was calculated, and the value of Spearman was r = 0.675 with significance level= 0.03 which supports the first hypothesis of a significant positive linear relation between the CRM and customer satisfaction.

The Spearman coefficients were calculated and their significance levels are shown in Table 2.

**Table (2): The Spearman correlation coefficients and the corresponding significance levels between each CRM components and customer satisfaction**
From the above table and the results of testing the main first hypothesis, it has been found that the CRM 4 components complement each other and work altogether in their relation with customer satisfaction not separately.

The following Table of CRM and customer satisfaction ranks can be shown as follows.

**Table (3): An ascending ranking for the banking groups according to their level of CRM and customer satisfaction**

<table>
<thead>
<tr>
<th>Banking groups</th>
<th>CRM</th>
<th>Customer satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 2</td>
<td>3.82</td>
<td>4.25</td>
</tr>
<tr>
<td>Group 1</td>
<td>3.54</td>
<td>4</td>
</tr>
<tr>
<td>Group 3</td>
<td>2.71</td>
<td>3.25</td>
</tr>
</tbody>
</table>

From the above table, it has been found that group 2 (Multinational and Regional banks) has the highest level of CRM and the highest level of customer satisfaction, while group 3 (Egyptian banks with special nature) has the lowest level of CRM and the lowest level of customer satisfaction.

**Discussion**

In our competitive markets, customers are the key to maintain a competitive advantage. Banking institutions should be aware of who their customers are, which customer group produce higher profits and what factors keep them happy and influence their loyalty. Customers affect a bank’s success; therefore the winners will be those institutions that succeed in managing their relationship with customers in an effective manner and in quick time. Thus, the best weapons of banking institutions within a strongly competitive environment is the establishment of a customer-centered attitude with the implementation of CRM and the recognition of customers’ strategic role in all banking activities. The importance of using CRM lies as personalized customer approach, and the understanding in advance of customer needs constitute the main criteria for achieving a competitive advantage in the banking market.

The Egyptian banking sector has adopted the CRM, as banks have realized the need to maintain their customers’ base and to better use their resources in order to promote their products and services.

This study focuses on the importance of CRM as a multidimensional construct and its effect on customer satisfaction. This multidimensional construct consists of key customer focus, CRM organization, knowledge management and technology-based CRM because the failure of CRM implementations is a problem of incompleteness. Concerning the results of the bank survey, the level of CRM implementation and the applicability of its components differ from one bank to another. In addition to the customer survey, it has been found that the CRM components were positively associated with customer satisfaction and that all the four CRM components should work altogether not separately. Moreover, it has been found that the 2nd group which is the Multinational and Regional banks has the highest level of CRM and customer satisfaction.

Finally, any firm committed to CRM must continuously invest in its relationship with its customers because this is the main competitive advantage remaining particularly to a bank.

**Implications of the study**

This study has confirmed the importance of studying and understanding the CRM, for the purpose of improving it in the Egyptian Banking Sector in order to satisfy customers. Thus, the results of the present study have a number of meaningful implications that could help.

- First, the implementation of the CRM components can improve the staff’s understanding of the activities involved in implementing CRM.
• Second, top management may use this framework to develop relevant and effective marketing strategies and tactics.

• Third, Functional managers can also use the framework to set clear policies that develop CRM as a necessary and essential business process rather than a burden on the staff.

• Fourth, changing the corporate culture and reward system that creates strong CRM.

Recommendations for banks

The current study indicates the vital role of CRM as a multi-dimensional construct in the Egyptian Banking Sector due to its favorable impact on business performance, particularly on customer satisfaction. These findings show that the four components of CRM complement each other. They should also work altogether not separately in order to achieve customer satisfaction. Therefore, its value is in integrating these four components to provide a more comprehensive and holistic pictured of CRM.

The Egyptian Banking Sector should implement the CRM components in a beneficial way to increase customer satisfaction and accumulate value for the business. CRM is a globally innovative mean to facilitate the creation of customers’ base (Mylonakis, 2009). Therefore, it should be utilized in the Egyptian Banking Sector as a tool to discover new patterns to create needs for new products/services based on the customer database and the customer segmentation. Thus, the CRM will not only sell or customize existing products/services but enhance the creativity of launching new innovative products/services and the developing of new ideas.

More specifically, it has been found that Multinational and Regional Banks have the highest level of CRM that is associated with a high level of customer satisfaction compared to the other groups. This result is not surprising because CRM is perceived more in these banks as a culture, process, strategy and technology. In order to improve the level of CRM in the other Egyptian Banks (public, private and especially in banks with special natures), it is recommended to:

• Identify the most profitable customers by ranking them according to their value and then differentiating them based on what they need from the bank. After identifying the customers’ needs, the bank has to develop unique strategies to focus on one to one marketing. This will add unique functions of acquiring, increasing and retaining valuable customers.

• Organize the bank around the CRM; each employee should work effectively as a team member to support each other. The employees should be well educated. Training employees on the bank’s products, policies, procedures, rules and regulations is needed. These factors will help provide better customer service.

• Set up an ongoing dialogue between the customers and the employees to learn more about the customers’ interests, needs and priorities in order to share information among employees. By acting on what the employees have learned about individual customers, the bank will be able to offer customized products/services in response to particular customer desires.

• Establish a central data warehouse for new and old data in order to facilitate the decision making process. When implementing the CRM, it is better to use specialized CRM software.

• This will help the bank’s employees in segmenting customers and in cross-selling bank’s products/services.

Limitations and future direction

Since this study was conducted in the Egyptian Banking Sector, the replication can be done within other services (e.g., insurance company, hospitals, airlines, hotels and universities) because the applicability of the CRM may vary from one service to another. Cross-sectional data were used in this study. Future researches should collect time-series data for testing the relationship between CRM and customer satisfaction.

In this study, data was collected by the key informant approach in order to measure the applicability of the CRM in the Egyptian Banking Sector. This approach consists of managers as key
informants that provide adequate sources for reliable and valid data (Tan and Litschert, 1994). However, the information by a firm is not the only source of information about the level of CRM. Clearly, it is important to contrast a firm’s degree of CRM as assessed by internal information (e.g. managers' responses to questionnaire as it is done in this study) with the firm’s level of CRM as perceived by its customers, competitors and distributors. This is possibly another challenging area of future research in CRM.

A quota sampling has been used in this study in selecting the banks’ employees and customers. It may appear that this type of sampling technique is totally representative of the population, however, it cannot be generalized to the population (Sekaran, 2003). Therefore, a simple random sample is suggested in future research in order to be able to generalize to the population.

References


Ryals, L., Simon, K., & Maklan, S. (2000). *Customer Relationship Management (CRM).* UK, Granfield University, School of management: Prentice-Hall.


A Study on Styles and Contents of Messages in Contemporary Advertising

Dibakar Pal
Civil Servant in India & Independent Researcher

Key Words
Contemporary Advertising, Prospective Buyers, Marketing.

Abstract
That messages for advertisement change with the changes of time, is a known fact. Even at a particular point of time two messages of the same product may not be equally effective. It is reflected in the fact that two identical products of two different marketers are not able to attract equal number of prospective buyers. One of the probable reasons of this difference may be attributed to the difference in the messages carried by the respective advertisements of the products. So role of styles and contents of messages can never be overstated or dismissed. Thus the objective of this study is to identify suitable messages for a selected group of products and their users/consumers.
Customer Relationship Management in Private Hospitals –
(with special reference to Madurai City, Tamil Nadu, India)

A. Jayakumar
Periyar University, Salem, Tamil Nadu, India.

Key Words
Customer Relationship Management, Healthcare Sector, Patient Relationship Management (PRM)

Abstract
Customer Relationship management is the strongest and the most efficient approach in maintaining and creating relationships with customers. It creates strong personal bonding within people. Development of this type of bonding drives the business to new levels of success. All the business organizations have realized the importance of CRM and adopted CRM strategy in its business in order to retain the existing customer than to create new customers. Now it has gained the attention of the many healthcare organizations as a solution to better communicate to customers and increase revenue. This is a research study aimed to analyse the CRM in private hospitals in Madurai city, Tamil Nadu, India. The main purpose of the study is to examine the CRM concept in healthcare sector, to identify factors perceived by healthcare providers and to measure the level of satisfaction of patients. For this purpose, primary data were collected through a well-structured interview schedule from a sample of respondents by using the simple random technique in Madurai city.

Introduction - CRM

Customer Relationship Management (CRM) as the name suggests, the primary focal point is placed on the customer. The key objective is to increase customer value over time by increasing customer loyalty. If a company develops better customer relationships, it also improves business processes as well as its profits. In general, CRM is a more efficient automated method used to connect and improve all areas of business to focus on creating strong customer relationships. All forces are coupled together to save, improve, and acquire greater business to customer relationships. The most common areas of business that are positively affected include marketing, sales, and customer service strategies.

Customer relationship management (CRM) is a business strategy that spans the entire organization from front office to back-office. It is a commitment you make to put customers at the heart of your enterprise. The right CRM strategy and solutions can help you securely, reliably and consistently:

- Delight your customers every time they interact with your business by empowering them with anytime, anywhere, and any channel access to accurate information and more personalized service.
- Reach more customers more effectively, increase customer retention and boost customer loyalty by leveraging opportunities to up-sell and cross-sell and driving repeat business at lower cost.
- Drive improvements in business performance by providing your customers with the ability to access more information through self-service and assisted-service capabilities when it is convenient for them.
- Balance sophisticated functionality with rapid implementation and effective support for a faster return on your CRM investment.

CRM in Service Sector

Today, every firm has to compete with many domestic as well as multinational companies. The customer is bombarded with a variety of products to choose from. Shifting from one product to another and from one company to another is easy, as every product seems to be goods and to be standard. As technologies and customer expectations are changing rapidly, businesses are now realizing the value of having long-term relationship with individual customers and other business partners. Also at this stage
of intense competition, the only way companies can differentiate themselves from the competitors is by delivering a customized product or service which probably will help in retaining the customer. The focus of CRM is to make it easier for companies to ‘reach out and touch’ their customers, and vice versa. This is the very reason for CRM’s rise in service industry. The scope of CRM in service sector is vast where it includes Govt, health care /hospitality education, banking, insurance, financial, legal, consulting, news media, hospitality (restaurants, hotels, casinos), tourism, retail sales etc.,

**Indian Healthcare Sector Structure:**
The sector comprises hospital and allied sectors that include:

a) Medical care providers that includes physicians, specialist clinics, nursing homes and hospitals.
b) Diagnostic service centers and pathology laboratories.
c) Medical equipment manufacturers
d) Contract research organizations and pharmaceutical manufacturers
e) Third party support service providers

In India, 80% of all the healthcare expenditure is borne by the patients. Expenditure borne by the state is 12%. The expenditure covered by insurance claims is 3%. As a result the price sensitivity is quite high. The high level healthcare facilities are out of reach for the patients.

**CRM in Health Care Service Sector**
Due to escalating marketing costs, finding a more effective way to reach current and prospective patients has become increasingly valuable. Many health care organizations have adopted customer relationship management (CRM) as a solution to better communicate to consumers and increase revenue. In addition to providing quality care, NHS, hospitals and healthcare organizations continue to search for ways to increase patient satisfaction and assist patients in proactively managing their overall health.

**Measuring Quality standards**
Standards of care, also called best clinical practices, are one very important aspect of quality. However, hospital patients are usually unaware of whether those are being followed and rarely even know whether to ask about them. Therefore, patient satisfaction usually is not dependent on them, and unless the patient or the family discovers later that a standard was not followed and the patient’s recovery is diminished or the patient dies as a result, patients may never knows whether those standards were followed.

What patients will be aware of are the measurable aspects. Communication with hospital personnel, attention to pain levels, explanations about medications, discharge instructions etc., are the aspects of hospital care that patients experience - or don't experience - that are to be quantified.

To measure the level of satisfaction of the patients regarding the hospital care, patients are surveyed randomly. The survey questions ask patients how satisfied they are with some or all of the following aspects of the hospital care:
- How well nurses communicated with patients
- How well doctors communicated with patients
- How responsive hospital staff were to patients’ needs
- How well caregivers (referring to hospital personnel) managed patients’ pain
- How well caregivers (referring to hospital personnel) explained patients’ medications to them.
- How clean and quiet the hospital was
- How well caregivers explained the steps patients and families need to take to care for themselves outside of the hospital (i.e., discharge instructions).

**Statement of the Problem**
Nowadays, many businesses such as banks, insurance companies and other service providers realize the importance of CRM and they have adopted CRM strategy in order to face keen competition. The health care industry is not an exception to that. Because of stiff competition, the corporate hospitals also have adopted CRM strategy. The hospitals must need an effective CRM strategy for its survival. The
future of hospital rests in the ability to provide service levels that exceed beyond patient expectations. The patients do not want multiple choices out simply expect that their demands be filled up to their full satisfaction. The strength of the hospital largely depends on strength of its relationship with patients. The hospitals may have efficient personnel; they may also have sophisticated amenities and facilities to improve the quality of services, but if they do not find a friendly or conducive environment, the patients cannot be retained. In this study, an attempt has been made by the researcher to study the Customer Relationship Management strategies adopted by the private hospitals in Madurai, Tamil Nadu in India, aimed to analyze the perception and satisfaction of the patients and suggest measure to improve CRM in hospitals.

Research Methodology

Method of Data collection

Both primary and secondary data were used for this study. Primary data relating to the views of hospital executives about the CRM were collected through a well structured interview schedule issued to the hospital staff. For assessing patient satisfaction, a sample of patients were personally contacted and interviewed by the researcher in the hospital premises and out of hospital premises, as per the interview schedule designed for the patients and hospital executives. The secondary data were collected from journals, magazines, publications, reports, books, dailies, periodicals, articles, research papers, websites, company publications, manuals, booklets etc.,

Interview Schedule Design

Interview Schedule was used to collect the primary data. A well-framed schedule comprising of optional type and lickert 5 point scale type questions were used for the study. The interview schedule was divided into 6 major attributes namely Initial services, maintenance, facilities for inpatients and outpatients, loyalty, innovative technology and opinion about hospital executives. The first part consists of optional type questions used to ascertain the details of demographic backgrounds of customer of private hospitals in Madurai city. Another part deals with the CRM attributes. All the CRM attributes are sought on a 5 point scale viz Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree. The scores awarded to the response of each component under attitude head were viz., 5, 4, 3, 2, 1.

Sampling

Simple random sampling technique was used to collect the sample from the respondents. The sample collected for this study covers ten different private hospitals of Madurai Corporation in Tamil Nadu in India. Totally 720 respondents are selected on simple random. Out of the total samples 540 schedules were collected from the patients and remaining 180 were collected from the hospital staff. All the 720 schedules were found suitable for the analysis purpose. Hence, the exact sample size is 720.

Statistical tools used for the study

The primary data collected from the respondents were analysed with the help of the Statistical package for Social Sciences (SPSS). The following statistical tools were used to analyse the data. They are Factor Analysis, Cluster Analysis, One-way Analysis of variance, Karl Pearson’s co-efficient of Correlation, t-test and Ranking Analysis.

<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
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<tbody>
<tr>
<td>Curry and Sinclair</td>
<td>(2002)</td>
</tr>
<tr>
<td>Sharma and Chahal</td>
<td>(2003)</td>
</tr>
<tr>
<td>Abd-el-Kader Daghfous, Reza Barkhi</td>
<td>(2009)</td>
</tr>
<tr>
<td>A.Jayakumar</td>
<td>(2007)</td>
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<tr>
<td>Nerilee Hing, Elaine Nuske</td>
<td>(June 2011)</td>
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</table>
Factors of CRM in Hospitals

Factors of Initial Services at Entry into the Hospital

The analysis found that the variables are reduced into 3 predominant factors with total variance 52.441 the individual variances are 19.750, 18.149 and 14.543 respectively. The values are 2.567, 2.359 and 1.891 respectively. These shows that the 3 factors are predominant with these variable loadings, which is identity in located component matrix table. **There are following the four factors**

Figure 1 shows the distribution of the hospitals of initial services at entry into hospital on different aspects of the system. The aspects of (a) fixing appointment/Token system, (b) Handling emergency cases, (c) patient intake procedure, (d) Patients Scheduling, (e) Records maintenance, (f) good and continues communication, (g) Courteous Attitude, (h) Managing relatives of the patients, (i) Arranging formal and informal health education of the patients, (j) Personal touch with patients, (k) Comfortable waiting areas and accessories like books, toys and TV, (l) Pre disease management/ Pain management, (m) Medical Facility profiling-for Patient in the 13 services to the hospitals.

The 1st factor analysts of 3 variables are Managing relatives of the Patients (.854) Arranging formal and informal health education of the patients and their relatives (.744) Personal touch with patients (.741) Therefore this factor is named **Systematic Factors**.

The 2nd factor analyst of 3 variables is Records maintenance (.760). Good and continuous communication (.755), Patients scheduling (.709). Therefore this factor is known as **Maintenance Factors**.

The 3rd factor analysts of 3 variables are Handling Emergency Cases (.860), Fixing Appointment/Token system (.837), Patient intake procedure (.603). Therefore we called as **Normal Factors**.

The 4th factor analysts of 4 variables are Comfortable waiting areas and accessories like books, toys and TV (.780), Pre disease management/ Pain management (.765), Medical facility profiling for patient treatment support and transfer (.552) and Courteous Attitude (-.471) Therefore we called as **Supportive Factors**.
Factors of Facilities for In-Patients and Out-Patients

There are following the four factors

![Figure 2](image)

**Factors for Facilities**

Figure 2 shows the distribution of the hospitals of initial services at entry into hospital on different aspects of the system. The aspects of (a) Availability of medicines and analyzing of medicines supplied, (b) Lift facilities, (c) Availability of diagnostic and treatment equipment, (d) Provision of basic institutional services, (e) Efficient ward management, (f) Meeting personal needs of the patients, (g) Proper records maintenance, (h) Nurse duty room, (i) Arranging formal and informal health education of patients and their relatives, (j) Space for waiting, (k) Registration Procedures, (l) Communication with other department, (m) Seating arrangement the 13 services to the hospitals inpatient and outpatient services.

The 1st factor analyst of 4 variables are Availability of medicines and analyzing of medicines supplied (.789). Lift facilities (.748) Availability of diagnostic and treatment equipment (.520), Provision of basic institutional services (.466). Therefore this factor is named **Paradise Cluster**.

The 2nd factor analyst of 5 variables is Efficient ward management (.795), Meeting personal needs of the patients (.741) Proper records maintenance (.722), Nurse duty room (.666), Arranging formal and informal health education of patients and their relatives (.504). Therefore this factor is known as **Suggestive Cluster**.

The 3rd factor analyst of 4 variables are Space for waiting (.831) Registration Procedures (.701), Communication with other department (.643), Seating arrangement (.586). Therefore this factor is known as **Cores Cluster**.

![Figure 3](image)

**Factors of Maintenance**
Figure 3 it is noted that the distribution of the hospitals of initial services at entry into hospital on different aspects of the system. The aspects of (a) ATM facility, (b) Lift, (c) Fire safety, (d) Visitor room facility, (e) Catering facilities, (f) Ambulance, (g) Pharmacy, (h) Communication facility, (i) Water, Geyser facilities, (j) Toilet facilities, (k) Diagnostic Services, (l) Space for sitting in the lobby, (m) Room facilities, (n) Parking facilities, (o) Ventilation, (p) Banking facilities, (q) Clock Room. 17 services are maintenance to the hospitals.

The 1st factor analyst of 5 variables are ATM facility(.844), Lift(.786), Fire safety(.585), Visitor room facility(.527), Catering facilities(.509) Persist Cluster.

The 2nd factor analyst of 6 variables is Ambulance (.808), Pharmacy (.712), Communication facility (.655), Water, Geyser facilities (.591), Toilet facilities (.440), Diagnostic Services (.428). Therefore this factor is named Horrifying Cluster.

The 3rd factor analyst of 4 variables are Space for sitting in the lobby (.734), Room facilities (.649); parking facilities (.616); Ventilation (.468). Therefore this factor is named Foyer Cluster.

The 4th factor analyst of 2 variables are banking facilities (.855); Clock Room (.774). Therefore this factor is named Scarce Cluster.

Factors of Opinion about the Doctors and Nurses

Figure 4 shows the distribution of the hospitals of initial services at entry into hospital on different aspects of the system. The aspects of (a) Explaining problems in common Terminology and counseling, (b) Experience in relevant field, (c) Expertise in new fields, (d) Prompt in diagnostician and treatment, (e) Justifying the need for diagnostic Tests, (f) Friendly attitude, (g) Confident looking and courteous behavior, (h) Using polite words, (i) Service minded, (j) Handling rush hours, (b) Adequacy of qualified nurses, (k) Response to calls, (l) Caring attitude, (m) Well trained, (n) Efficiency in handling patients, (o) Prompt in their services 17 services are

The 1st factor analyst of 6 Variables is confident (.817), using polite words, (.785), prompt in diagnostician and treatment (.706), friendly justifying the need for diagnostics tests (.691), Seating Arrangements (.569), and Space for Waiting (.514). Therefore this factor is named Gracious Factor.

The 2nd factor analyst of 4 variables are Meeting personal needs of the patients (.728), Efficient ward management (.645), Proper records maintenance (.621), Provision of Basic Institutional services (.556), (.514), and (.464). Therefore this factor is called Proper Expediency.
The 3rd factor analysts of 3 variables are Communication with other Department (.750), Lift Facilities (.738) Availability of Medicines and Analyzing of medicines supplied (.685) Therefore this factor notorious as **Prolific Factor**.

The 4th factor analyst of 1 variable is Communication with other Department (.850). Therefore this factor branded as **Com Factor**.

Influence of Independent Demographic Variables Elements of Patients Relationship must in Hospital

In this research, the significant difference between among the demographic characteristic is an essential segmentation to study the influence the CRM on the patients. In general, older patients tended to report greater satisfaction, and sicker patients tended to be less other patient characteristics that have been significantly related to hospital patient satisfaction include independent demographic analysis gender age, education occupation and income are consider as useful segmentation to study of characteristic feature.

<table>
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<tr>
<th>Variable</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
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<td>Initial</td>
<td>.728</td>
<td>1</td>
<td>.728</td>
<td>1.391</td>
<td>.239</td>
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<tr>
<td>Facilities</td>
<td>1.429</td>
<td>1</td>
<td>1.429</td>
<td>3.656</td>
<td>.045</td>
</tr>
<tr>
<td>Maintenance</td>
<td>1.552</td>
<td>1</td>
<td>1.552</td>
<td>1.723</td>
<td>.190</td>
</tr>
<tr>
<td>Innovation</td>
<td>.923</td>
<td>1</td>
<td>.923</td>
<td>1.056</td>
<td>.305</td>
</tr>
<tr>
<td>Opinion</td>
<td>.000</td>
<td>1</td>
<td>.000</td>
<td>.001</td>
<td>.981</td>
</tr>
<tr>
<td>executives</td>
<td>.192</td>
<td>1</td>
<td>.192</td>
<td>.322</td>
<td>.570</td>
</tr>
</tbody>
</table>

From the above table is it is find that there is no significant difference between male and female patients regarding initial services, facilities, maintenance, innovation, opinion (doctors & nurses) and executives.

From the above table it is found that facilities differs significantly F=3.656 (0.45). From the descriptive table it is found that female patients well appreciated the services offered in the private hospitals where as the male patients express moderate satisfaction regarding facilities in private hospital

In the case of CRM elements male and female patients have same opinion about initial services, maintenance, and research, innovate and have optimistic opinion about nurses and doctors as far as executives are concern.

**Findings of the Study**

- In Age-Wise Classification 43.9% respondents are in the category of 31-40.
- Next 22.8% respondents are in the category of 41-50.
• 15.7% respondents are in the category of below 20.
• 13.5% respondents are in the category of 21-30.
• Remaining 4.1% respondents are in the category of 51 and above.
• In Consultation wise classification, Mostly 84.4% respondents are able to consult the doctors and nurses whenever patients feel the need. Remaining 15.6% respondents are not able to consult the doctors and nurses in emergency situations.
• In Sympathetic wise classification, Mostly 74.1% respondents are articulating that doctors are sympathetic and kind towards patients. Remaining 25.9% respondents are revealing the doctors are not sympathetic and kind towards the patients.
• In Nurses Performance Wise classification, Mostly 92.4% respondents are articulating, the nurses are skilled in their performances and 7.6% respondents saying the nurses are not skilled in their performances.
• In Treatment wise classification, Mostly 62.6% respondents are articulating, that nurses are explaining the reasons for medication; treatment and diagnostics procedure. 37.4% are saying nurses not explaining about it.
• From the factors table it is found that the variables are reduced into 3 predominant factors with total variance 52.441 the individual variances are 19.750, 18.149 and 14.543 respectively. The values are 2.567, 2.359 and 1.891 respectively. These show that the 3 factors are predominant with these variable loadings, which is identified in located component matrix table. So these factors called Initial Convenience, Perpetual Factor, and Responsive Factor respectively.

Suggestions

Waiting Time
The hospital should take steps for reducing the waiting of the patients. Even if it is not possible because of the huge crowd, it should try to reduce the medium of waiting. To do this, the hospital should provide some reading materials or other forms of relaxation to entertain the patients and their companions to while away the time of waiting.

Voluntary Communication
The hospital management should develop some means of voluntary communication between the hospital staff and the patients. They should develop a helping attitude towards the patients. The existence of a helping attitude of the staff towards the patients depends on the express policy of the management of the hospital. The importance of a sympathetic attitude towards the patient showing respect for dignity of the patient should be emphasized on the whole and the patients should be shown a great deal of love and affection.

Ambulance
It is an essential function in every hospital regardless of its size, sophistication and means of transportation. But most of the sample township hospitals do not have ambulance facility. To provide maximum satisfaction and for better relationship with the patients they have to make an arrangement for this.

Adequacy of Nurses
The requirement of nursing staff in an ICU is one nurse per bed throughout the day. A ration of 1:3 in the night is recommended by experts for a 30 bedded hospital. At least 70% of nurses should be trained in ICU care.

Total Hospital Charges
The patients felt that the cost charged for the items sold in the canteen and pharmacies are very high. It has also been found that consultation fees and total hospital charges are also very high. Hospital managements should consider reasonable rates because now-a-days even below, middle income group
prefer private hospitals for treatment than Government hospitals.

**Feedback Procedures**

To measure the patient satisfaction, routine (Standard) feedback forms must be used by the hospitals. These forms can be given to the patients at the time of discharge and responses may be collected by the duty nurse, so that the patients can express their ideas about the hospital services and healthcare providers can rectify the problems faced by the patients and can do still better service to the patients.

**Discussion and Conclusion**

There are possibilities of benefits in the form of speedy decisions, inexpensive justice, simple procedures, relief to the victim in the form of the compensation, improved quality of patient care and doctors becoming more careful on the other hand, there are possibilities of adverse effects which include increased cost of treatment, defensive medical practice, refusal to attend serious patients, especially in case of emergency and deterioration in the ‘humane’ relationship between doctors and patient and so on.

The medical care is still far from what patients expected as ideal. The main reason indicated include: non-communication on the part of doctors, behavioral attitude of the staff and delay in treatment. It has also been revealed that consumer awareness, though presently less, is on the increase of in India review of the studies conducted abroad has revealed that patients wanted to be involved in the decision making process about their care and treatment. Further it is indicated that it was the fear of litigation and payment of huge compensation that compelled doctors to indulge in defensive medical practices. Basically, these steps were seemingly resorted to by medical professional just to protect themselves. However on the positive side, it has also been found that doctors were becoming more careful and they took interest in writing elaborate patient’s records, tried to give more information to the patients and involved them in treatment process. However, there has been lack of Indian studies on this subject and no major study has so far been conducted either by government or by the management of private health institutions.

The patient-doctor relationship is central to the patient satisfaction and to the positive health outcomes. The most crucial healing element is not medicine or surgery, but a patient-doctor relationship, which provides hope, confidence and a healthy environment. Effective communication between the doctor and the patient is central Clinical function. The relationship between the patient and the doctor should be based primarily on faith, confidence and holistic approach.

The topic CRM in private hospital is a novel idea, which has not so far been taken and there are ample opportunities for future research. For such studies, if the present study were of a little help, the researcher would feel amply rewarded. The researcher concludes with fond hope that many more such research studies will be undertaken in this important activity catering to the well being of humanity.

**Research Limitations and Direction for Further Research**

The study is based on the Primary data collected through interview method, which generally suffers from recall bias. Even though adequate care has been taken at every stage to eliminate the error through cross out, the quality of services provided out CRM in private hospital, the result and final implications of this study have to be generalized with caution. This study covers only individual patients and their existing Patients. The major limitation of the study is the researcher ignored the services of Government hospitals and the health schemes and facilities provided by the state and Central Governments. However, the future research can focus on the following areas:

1) CRM in state & central Government Hospitals.
2) CRM in Rural Health Centres.
3) CRM policy interventions by state & Central Government.
4) “Health for All” – A strategy through CRM to Reach out Health Care.
5) CRM in hospitals in Tribal Area – Issues and Concerns.
References


Some of the dynamics of International Trade
Procurement
Corruption
Insurance
Origins
Tariffs & Customs
Carbon footprint
Outsourcing
Exchange rates
Globalization
Piracy
Smuggling
Exports
Imports

International Conference on the Restructuring of the Global Economy (ROGE)
1st & 2nd February, 2011
Pune, India.

Corporate Governance and Business Conference (CGBC)
14th & 15th July, 2011
Boston, USA.
International Trade & Academic Research Conference (ITARC)
7th–8th Nov, 2011
London UK

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Zehra Özdemir
Stewart Peter Kaupa
Adnan Riaz
Jesus Garcia De Madariage
Fon Sim, Ong
MENG Xue
Fatma Ulucan Özkul
Kok Wei, Khong
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