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## ISSUE THEME: BUSINESS VISION 2020



Acharya's Bangalore B-School

Bangalore

**EDITORIAL**

We are indeed pleased to place first issue of our Journal-AMBER (Acharya Management Business and Entrepreneurship Review) in your hands. We hope that AMBER will fill a much needed gap in the Research and Publication space for management scholars and practitioners.

ABBS is adjudged as one of the best emerging B-Schools in India in its category. The success story of ABBS is very much inspiring. ABBS has carved a niche for itself in a matter of a few years. While, the learning cycle for the best B-Schools in India has spanned decades. This lesson of rapid learning and growth is valuable to us. We want to repeat this success saga with our Journal too. The Journal would focus on a selected theme in each of its issue. In this issue, we are focusing on 'Business Vision 2020'. India is emerging. The whole world, in particular, the western world is looking at India's growth rate with awe. Rest of the world saw with surprise the way in which India overcame the problem of recession. One billion plus population, with more than 50 percent being blow 30 years are productive and provide huge market. By any standard and estimation, this century would be of countries like India and China. In this point of inflection, the policy makers, management practitioners, academicians should be in a position to understand the business environment by 2020 and beyond. Hence, AMBER has taken the 'Business Vision 2020' as the theme of this issue of the Journal. The issue has carried articles on different management functions under the broad theme of the issue.

Next issue (May 2010-Coctober 2011) would focus on NGO management. Broad themes of the issue include Measuring and enhancing performance of NGOs, Marketing- Branding NGOs, Voluntarism and Professionals , Attracting right human resource for NGOs, NGOs and profit philosophy, Rating of NGOs, New trends/experiments in NGO management-Case study, NGOs partnership with Business organizations, Operational Efficiency , Emerging new domains and role of NGOs, Funding NGOs and Accountability for NGOs. All submissions to AMBER would be blind reviewed by external reviewers.

AMBER team desires to partner with all stakeholders. Readers, subscribers, reviewers and editorial team have to work together to make any Journal great. Come and join us in making this Journal one of the best. I thank Prof. Srikanth Goparaju, , Prof. V.S.Chauhan, Prof.L.R.S.Mani and Prof.R.Venkatarman who associated with me in editing this issue of the Journal.

Dr.H.R.Venkatesha
Chief Editor

# Innovator's Dilemma in the Computer Operating Systems Market – *Strategies for the High Technology Market Space*

**Abstract**

High Technology Products follow a distinct Development and Usage Cycle from Innovators to Laggards. According to Moore the passage from one phase to another is not a smooth movement but is marked by gaps that need to be crossed. A big chasm needs to be crossed before a product is accepted by the majority. Christensen has introduced the concept the Innovator's Dilemma in the face of disruptive technological innovations which have the potential to drive out dominant companies that depend only on sustaining technological innovation. The ongoing confrontation between the high tech giants Google and Microsoft in the Computer Operating System market space provides an interesting study in competitive strategy and this paper presents a framework for evaluating the rationale and consequences of their strategies.

**Key Words**: Cloud Computing, Innovator's Dilemma, Disruptive Technologies, Google Android.

*Basically, our goal is to organize the world's information and to make it universally accessible and useful.—Larry Page, Google*[1]

**Introduction – Important Insights on Strategy**

In the decade following the publication of Michaels Porter's ideas on strategy and competitive advantage, a number of insights were published by leading researchers of strategy that made a major impact on strategic thinking viz. Christensen (1997)[2], Moore (1995)[3], Norman (1999)[4], Hamel & Prahlad (1994)[5], and Kim & Mauborgne(1997)[6]. The first three of these hypotheses were especially directed towards the High Technology Industry and deal with the classic problem technology companies' face in sustaining or expanding their market. However, the collapse of the dotcom bubble in 2000 led to rethinking among corporations as to the extent of their relevance in the actual market space. This paper analyses the strategies being adopted my Google and Microsoft in their attempts to gain dominance in the share of the future market in computing in light of the above mentioned hypothesis.

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[1] Retrieved from http://www.woopidoo.com/business_quotes/authors/larry-page-quotes.htm

[2] Christensen, Clayton M., (1997). *The Innovator's Dilemma*. Harvard Business School Press.

[3] Moore, Geoffrey., (1995). *Crossing the Chasm*. HarperCollins.

[4] Norman, Donald A., (1999)*The Invisible Computer*. M.I.T. Press

[5] Hamel, G. & Prahlad, C.K., (1994). *Competing for the Future*. Harvard Business School Press.

[6] Kim, W. Chan & Mauborgne R., *Value Innovation: The Strategic Logic of High Growth*. Harvard Business Review (Harvard Business School Press): 103–112. January - February 1997

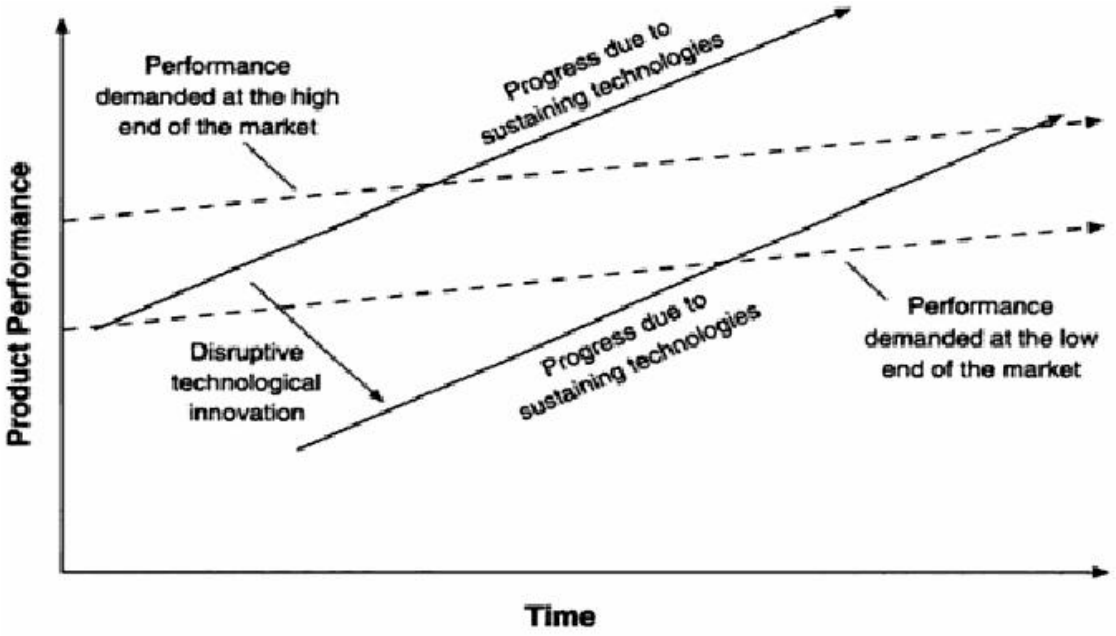
**Innovator's Dilemma (Christensen)**

Christensen deals with the challenge of balancing the needs of existing customers for sustaining technological improvement, on the one hand, with the threat of disruptive innovation on the other. According to his research "the logical, competent decisions of management that are critical to the success of their companies are also the reasons why they lose their positions of leadership" (Christensen, 1997)[7]. This "failure framework" is built upon three findings of his study:

1. Sustaining versus Disruptive technologies: Normally technical innovation focuses on improving the performance and features of a product. These improvements can be incremental (kaizen) or major but as long as they pertain to improving the performance of an existing product or need, they are "sustaining technologies" because they cater to an identified, pre-existing need. In this respect they rarely cause the demise of leading companies because of the latter's ability to retaliate, (we shall revisit the issue of retaliation later in the paper). A good example is the case of Netscape's web browser that captured almost the entire browser market before Microsoft stepped in with its Internet Explorer and all but destroyed the challenger. In fact companies such as IBM and Microsoft, undisputed leaders in theirs fields, have been known to be followers in the technology arena and have prospered because technological innovations have been improvements in existing product/service ("sustaining technologies") in nature, allowing them to strike back at the challenger with all their financial and organizational might. "Disruptive technologies" on the other hand are innovations that result in a product with *degraded* or *worse* features or performance than existing technologies at least in the near term. However they bring a different value proposition to the market that addresses a different need, albeit a small and insignificant one, and, more importantly, of little or no interest to the market leader and its mass customer base. It is this "Trojan horse" that could suddenly capture mass appeal, leaving the leader caught unawares.

**Figure 1. The Impact of Sustaining and Disruptive Technological change (From Christensen - "The Innovator's Dilemma")**

[7] Christensen, Clayton M., (1997)., *The Innovator's Dilemma*. Harvard Business School Press.




2. The growth paths of market need versus technological improvement: The flow of product/technology improvement over time follows the path shown in Figure 1. It starts at the lower end of the performance demanded by the market, progress to the higher end of market expectations of performance and then surpasses it ("overshoot") as sustaining technological innovations continue to throw up better product features. Consequently customers are forced to pay ("overpay") for more than what they generally use, e.g. according to some estimates 90% of MS Excel users utilise less than 10% of its features[8]. A disruptive technological innovation however follows a different path as shown by the lower line in the figure. Initially it compares poorly with the existing technology and therefore may attract only the fringe players in the market (diehard "techies", innovators, early adopters etc). However they soon catch up on the performance requirement and, due to lower price or better appeal can unseat the leader. Retaliation by the leader is difficult, as borne out by the tribulations of IBM as it struggled with the demise of mainframe computer brought about by powerful desktops and "client-server" architecture.

3. Investment Dilemma: Even if leaders have identified or are aware of disruptive technologies on the horizon, investing major resources or aggressively backing them may be a difficult decision at best because a) since disruptive products are simpler and cheaper and generally provide less attractive margins; b) disruptive products initially cater only to the fringe market, i.e. emerging or insignificant markets; c) The

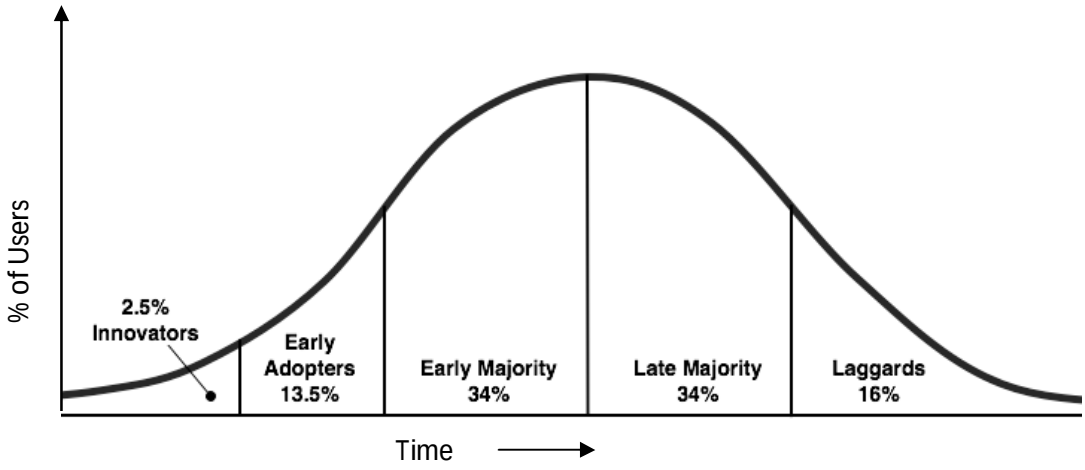
[8] Jelen, B & Syrstad, T., (2007). *VBA and Macros for Microsoft Office Excel 2007* (p.3). Que Publishing. Also retrieved form http://www.kickstartnews.com/reviews/books/speced_usingmsword2003.html

existing customers of the market leaders, who constitute the highest value, would not have any use for the product. Therefore investing in disruptive products would be viewed as a gamble.

**Technology Adoption Lifecycle Model (Rogers)**

The adoption of new technology by a society was studied by Bohlen & Beal[9] in relation to the adoption of new techniques by corn growers. Rogers[10] expanded it further to cover the technology in general. According to the Rogers model the adoption of any new technology by a society follows a bell curve (Fig 2), starting with diehard innovators who are willing to embrace a new technological concept even though it may not be tested or proven. Rogers (1964, p. 134) defined the rate of adoption as the relative speed with which members of a social system adopt an innovation, measured by the length of time required for a certain percentage of the members of a social system to adopt an innovation. Fig 2 gives a depiction of the Rogers model.

**Figure 2. A graph of Rogers Technology Adoption Lifecycle model.**




**Crossing the Chasm (Moore)**

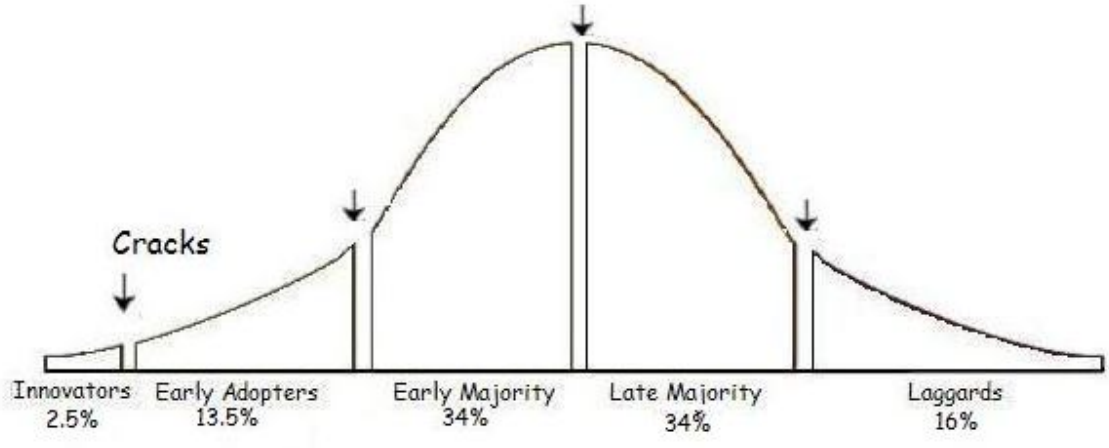
Let us examine this concept a bit further. The traditional Technology Adoption Life Cycle (Fig 2) is a smooth bell curve of (high tech) customers that progresses from Innovators, to Early Adopters, to Early Majority, to Late Majority, and finally ending with the Laggards. Most marketing models for high-tech products are based on this concept which says that the way to develop a market is to work the curve from left to right, progressively winning each group of users, using each "captured" group as a reference for the next. Moore (1995) postulated that the transition from one stage to another was not smooth and there were obstacles (“cracks”) to be crossed at each stage, leading to the problem of bridging the divide between early adoption of an innovative product and its universal

[9] Bohlen, Joe M. & Beal, George M., (May 1957), "The Diffusion Process", *Special Report No. 18* (Agriculture Extension Service, Iowa State College) **1**: 56–77

[10] Rogers, Everett M. (1964)., *Diffusion of Innovations*. Glencoe: Free Press

usage. According to him "the notion that part of what defines a high-tech market is the tendency of its members to reference each other when making buying decisions-- is absolutely key to successful high-tech marketing"[11]. He redraws the traditional product adoption cycle (Fig 3) by introducing cracks between each phase of the cycle, denoting a disassociation between any two groups, representing, in other words, "the difficulty any group will have in accepting a new product if it is presented the same way as it was to the group to its immediate left."

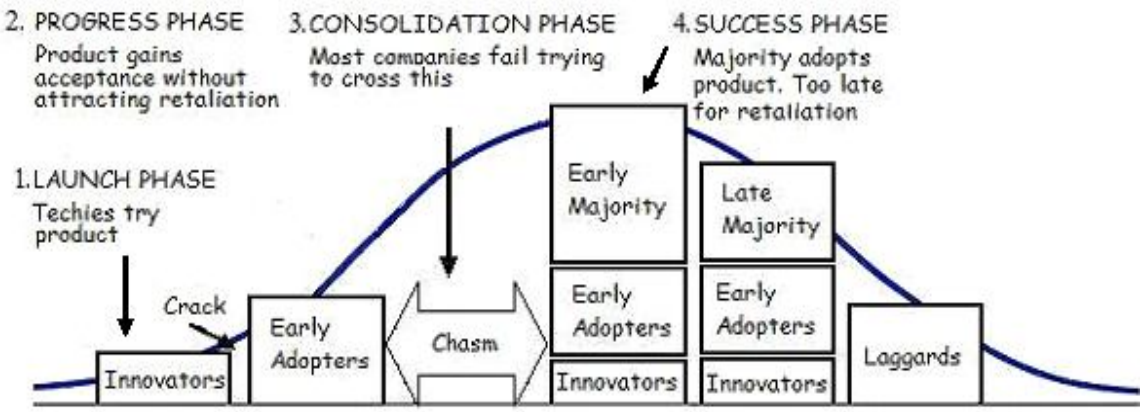
**Figure 3. Moore's adaptation of the Technology Adoption Model**




Moore went on further to state that there is a major hurdle to cross before a new technology becomes accepted by the majority. In his terminology the gap between the Early Adopters and the Early Majority is the largest crack, which Moore calls "the Chasm" (Fig 4). Many, if not most, high tech ventures fail trying to cross this chasm.

**Figure 4 The "Chasm" between early adoption and universal acceptance (Moore, Crossing the Chasm)**

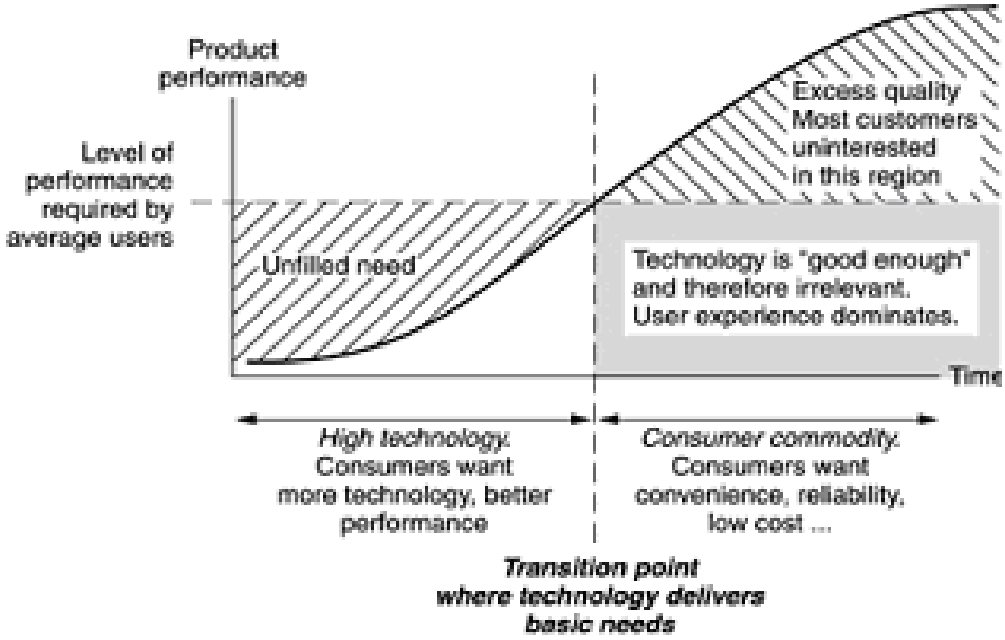
[11] Moore, Geoffrey, (1995)., *Crossing the Chasm*. HarperCollins.




**Human-Centered Design (Norman)**

Norman[12], has added another dimension to the theories of Christensen and Moore. According to him the Innovator's Dilemma shows that products only need a limited amount of performance to be successful in the market before they need to focus on issues such as human-centred design. This human centred design is exactly what businesses need in the tornado phase of the Chasm theory, as they push to simplify their product, i.e. make it more user-friendly, and distribute it to the mass market. Norman sees an interaction between the two theories but only sees this as further justification for his theories of human centred design being critical to serving mass markets. However he does not acknowledge broader possible synergies between the two theories (Figs 5a, 5b, 5c).

**Figure 5a. Norman's perspective on the Innovator's Dilemma**




[12] Norman, Donald A., (1999)*The Invisible Computer*. (chapter 2). M.I.T. Press

**Figure 5b. Norman's perspective on the Crossing the Chasm**

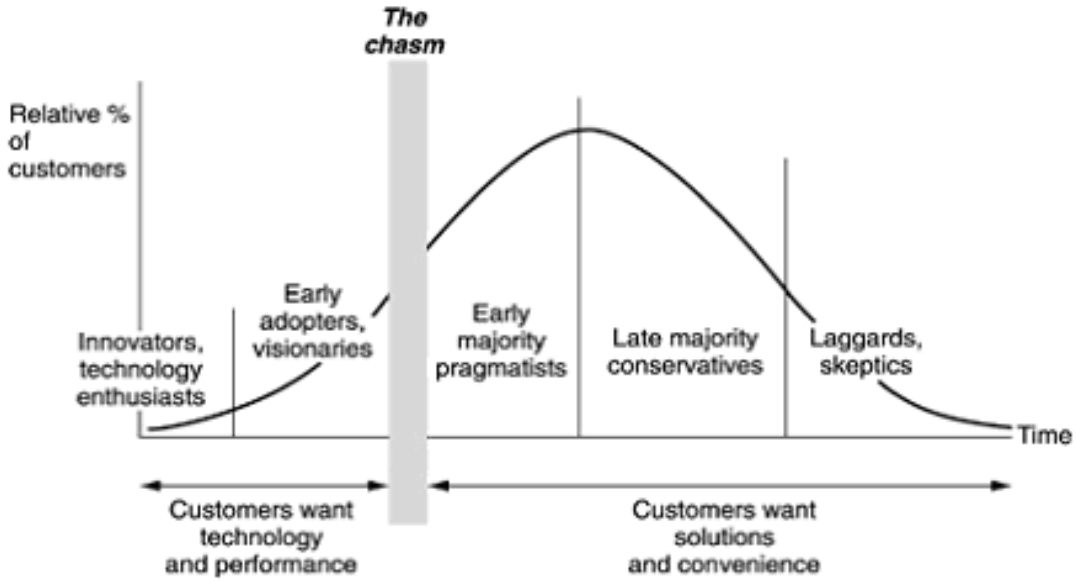
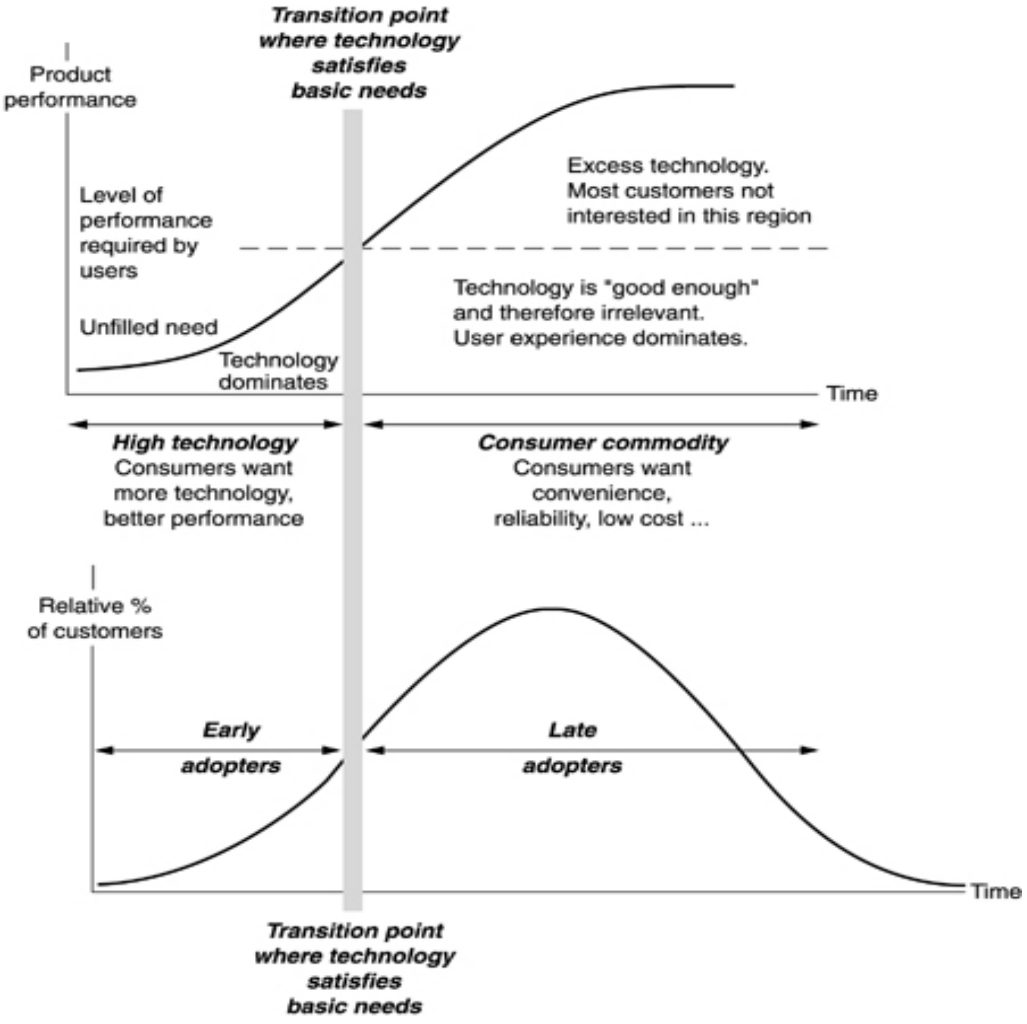



**Figure 6 The Interaction of the Innovator's Dilemma and Crossing the Chasm (Norman 1999)**




Determining the path by which a firm can navigate to a critical mass of customers and achieve mainstream market acceptance is the single most important task facing any technological product introduction. This paper examines the strategies of Google and Microsoft in the Operating System market from the perspectives of Christensen, Moore and Norman. It will attempt to look at how Google intends to cross the chasm and the response of the market leader, Microsoft, which is the dominant market leader with more than 92% share of market (Table 1).

**Table 1. Segment-wise Market share of Google & Microsoft**[13] [14] [15]

[13] Net Applications Inc. *October 2009., OS, Browser and Search Engine Market Share*. Retrieved on 23/11/09 from http://marketshare.hitslink.com/report.aspx?qprid=8&qptimeframe=M&qpsp=124

[14] Business Week – July 3 2009. MS Office. Retrieved on 23/11/09 from http://www.businessweek.com/magazine/content/06_27/b3991412.htm

[15] Campaign Monitor.com. June 2009. Email. Retrieved on 24/11/09 from http://www.campaignmonitor.com/stats/email-clients/

| | OS | SOM | Browser | SOM | Applications* | SOM | Search Engine | SOM | Email | SOM |
|---|---|---|---|---|---|---|---|---|---|---|
| Google | Chrome OS/Android | ~ 0% | Chrome | 3.6% | Google Apps | >1% | Google | 84.5% | Gmail | 5.5% |
| Microsoft | Windows | 92.5% | Internet Explorer | 64.6% | MS Office | 95% | Bing | 3.5% | Hotmail | 15.4% |
| Others | Linux | 1% | Firefox | 24.0% | Open Office | >1% | Yahoo | 6.7% | Yahoo | 15.7% |

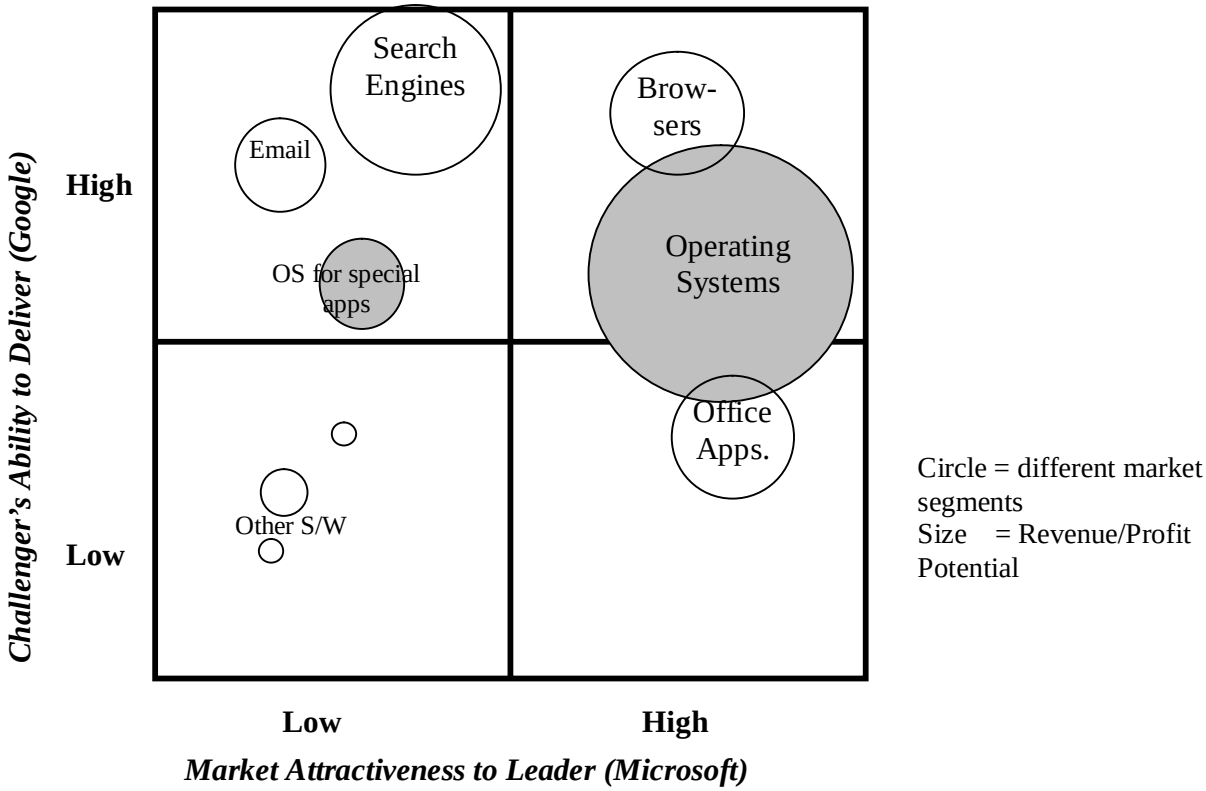
* Figures based on Email clients. MS Outlook family (SOM 34.5%) not considered as it is not an email service

This article examines the Google Operating Systems strategy from the point of view of established thinking on marketing and management strategy for technological products.

**Competitive Response (CR) Matrix**

Here it is pertinent to note that the response of a market leader would not be the same for every action of the challenger. Netscape's browser faced a strong response from Microsoft but Google's Chrome browser has not evoked any substantive response. Fig 6 shows a matrix relating the ability of the Challenger (disruptive innovator) to meet the expectations of the customer, with the Market Attractiveness of that segment to the Market Leader (sustaining innovator). The assumption here is that the more attractive a particular market is to the leader, the more intense will be its response. Microsoft is the current Market Leader and Google the Challenger in the OS market (Table 1). If we plot different market segments (shown as circles) on this matrix, where each segment represents a different software segment, we get the diagram in Fig 6. The size of the circle represents the value of the market in terms of revenue or profitability the leader derives from that market.

**Figure 6. The Competitive Response (CR) Matrix**




In this framework the OS segment (Operating Systems) is the most valuable for the Microsoft and it also represents a fairly high degree of capability of Google to deliver a competing product, given its size and resources. Since the market size is also the most attractive, the natural reaction of a challenger would be to compete in this market space. However such an action would also bring about the most intense retaliation by the market leader, in effect widening the "chasm" that the challenger will need to cross in order to succeed, and making it very difficult to succeed. On the other hand a market segment located in the top left square of the matrix presents a much better entry strategy because it bases itself on the strengths of the challenger in an area which is of little interest to the leader and hence exposed to lesser degree of retaliation. Once established in that segment the challenger can then plan to move to the next phase of the Moore's framework, i.e. targeting the early majority of users (Fig 3).

**Microsoft's (Market Leader) Position**

In the early 1980's the dominant market leader in Data Processing was IBM with its mainframe computers which ran on the OS360 Operating System. Microsoft entered the computer market with a disruptive technology – the DOS operating system for the Personal Computer. It then entered into a sustaining innovation path (Fig 1) with newer and newer and improved versions of their OS culminating with the Windows Vista Operating System (January 2007)[16]

[16] Microsoft Press Release January 2009. Retrieved on 30/11/2009 from http://www.microsoft.com/nz/presscentre/articles/2007/jan07_windowsvistalaunch.mspx

and recently, the Windows 7 OS (2009)[17]. Due to its aggressive and highly effective strategies, by the 1990's it had become the dominant market leader in PC operating systems and even IBM, with their OS2 failed to dislodge them. In the browser market they announced improved versions of their browser, Internet Explorer 7 (2006) and Internet Explorer 8 (2009)[18]. In the Applications segment Microsoft announced the next version of its MS Office suite the MS Office 2007 (2007)[19]. In the Search engine segment it unsuccessfully launched it MSN search engine and has recently (2009) launched its new search engine Bing and remains a challenger to Google which is the clear leader in this segment. Acknowledging the significant shift in computing trends they released the Windows Azure Operating System in 2008[20] for cloud computing and the Windows Mobile OS for mobile computing.

In the framework of this article Microsoft's strategy closely resembles the sustaining technological innovation path in the classic Christensen mould i.e., of announcing improvements in its existing products. This is a direct consequence of the Microsoft mindset about that computer software has to reside in hardware boxes, i.e. sold as a "shrink-wrapped" product[21]. This concept has paid them handsome dividends ever since they were established almost three decades ago. Let us examine this in light of the three findings of Christensen mentioned at the beginning of this paper:

1. Sustaining versus Disruptive technologies: Sustaining technological innovations cater to a pre-existing need. In the OS, Office Applications and Browser markets Microsoft has consistently focussed on improving the performance of an existing product, i.e. sustaining technological innovations aimed at providing better features to their established markets. No one has been able to challenge their dominant position in any of these segments, including Google Apps and Chrome browser. Disruptive innovation brings a different value proposition to the market that addresses a different need, different from mass customer base of the market leader. In the Operating System segment Google has adopted this disruptive technology route: first by announcing Android which was aimed at the mobile handset market and then the Chrome OS aimed at the mobile computing market e.g. the netbook computers. Both these introductions fall in the top left square of the CR Matrix (Fig 3.). Since Microsoft's main customer base is in the desktop and laptop segments these products address a different and non-competing need – mobile and networked computing.

2. The growth paths of market need versus technological improvement: Sustaining technological innovations throw up better product features along the path shown in Fig 1 and eventually overshooting the market expectations. As mentioned earlier less than 10% of the features of MS Excel are used by the

[17] The Windows Blog July 22 2009. Retrieved on 30/11/2009 from http://windowsteamblog.com/blogs/windows7/archive/2009/07/22/windows-7-has-been-released-to-manufacturing.aspx
[18] Microsoft Press Release March 2009. Retrieved on 30/11/2009 from http://www.microsoft.com/presspass/newsroom/windows/factsheets/IE8FS.mspx
[19] Retrieved on 30/11/2009 from http://blogs.msdn.com/microsoft_office_word/archive/2007/01.aspx
[20] Retrieved on 02/12/2009 from http://www.microsoft.com/presspass/press/2008/oct08/10-27PDCDay1PR.mspx
[21] Wharton, University of Pennsylvania. *Why Software Business Models of the Future Probably Won't Come in a Box.* Knowledge@Wharton February 2007. Retrieved on 8/12/2009 from http://knowledge.wharton.upenn.edu/article.cfm?articleid=1651

average user and it would be safe to assume the same for Microsoft Operating Systems – Windows 7 and Windows XP. By contrast, both Android and Chrome OS from Google are much inferior to the features of their Microsoft rivals but the are targeted at an audience that did not exist five years ago and for whom the Windows Operating System would be too cumbersome to adopt.

3. Investment Dilemma: Even if leaders have identified disruptive technologies investing major resources or aggressively backing them may be a difficult decision at best because margins are small, the market is miniscule and caters to the non-mainstream customer base. Microsoft's response to the disruptive technology of Internet in the late 1990s and early 2000s was very bold and decisive. Here is one account of the massive corporate commitment Microsoft had to make in order to address the then disruptive technology called the Internet:

> "On the day of the management announcement, Gates sent (an email) to all employees. He explained that Microsoft's success is built upon its commitment to the graphical user interfaces, or GUIs, in its Windows operating system and the Office applications that work with it. Then he added: "Today we must make a similar bet on using software to improve the way people experience the Internet--an even more important revolution than the GUI." His new title is chief software architect, and he'll guide the technical and strategic transition."[22]

The full import of the Microsoft's decision can be appreciated by the fact that in the quarter ending December 1999 their quarterly net earnings rose 22% from a year ago, to $2.4 billion, on $6.1 billion revenues[23] almost entirely from their existing non-Internet products. In the very next quarter (March 2000), the Internet boom had started unravelling causing a number of Internet companies to close, possibly causing Porter (2001)[24] to state that:

"The time has come to take a clearer view of the Internet. We need to move away from the rhetoric about "Internet industries", "e-business strategies", and a "new economy" …"

Furthermore, a similar technology called ISDN, introduced by the telecom companies in the 1980's, was predicted to be the next standard in networking, but it just did not take hold. In this scenario it would have been understandable for Microsoft to focus on its existing base rather than back the new (internet-oriented) focus that had the potential of destabilising its well-entrenched market position. As Christensen has noted, well-managed market leaders, paying close attention to the needs of their customer base, would generally do exactly that. However it is a testimony of Microsoft's Bill Gates foresight to persist with his decision to continue to back the new disruptive technology.

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[22] Kirkpatrick D., (2000). *The New Face of Microsoft.* Fortune Magazine. Retrieved on 1/12/2009 from http://money.cnn.com/magazines/fortune/fortune_archive/2000/02/07/272829/index.htm

[23] *ibid*.

[24] Porter, Michael E. *Strategy and the Internet.* Harvard Business Review March 2001.

Once Microsoft took the decision to embrace the Internet, that market space became their sphere of interest, i.e. it shifted to the right of the CR matrix (Fig 3). Any challenge in this space therefore faced the retaliatory force of the market leader as evident in the browser segment where Netscape's browser, Navigator, was the victim of Microsoft's retaliation. In the conventional Operating Systems market the Linux OS challenged Microsoft by addressing the niche server segment but has never managed any significant market share because of the latter's dominant position. Therefore, as of 2006 Microsoft's dominant position remained invincible despite the growth of the Internet because of its decision to adopt that disruptive technology.

**Internet and Disruptive Innovation**

If Microsoft had ignored the disruptive potential of the Internet it would have seriously exposed its vulnerability as Internet usage exploded. However by re-engineering their products they have been able to prevent any "Trojan Horse" from eroding its customer base. But has disruptive innovation ended with the Internet 2000? In other words, by addressing the Internet issue has Microsoft weathered the storm? It is the contention of this paper that the Internet has spawned, and continues to spawn, new disruptive innovations – a fact that Microsoft has not fully addressed, thereby exposing itself to potential Trojan Horses.

In the past few years two disruptive technologies have surfaced in the computing scene – 3G mobile connectivity and cloud computing, both of which have evolved around the Internet and identified among the top 10 technology trends according to Gartner's[25], the premier technology tracking company. Mobile phones, which began as communication devices, have gradually morphed into virtual mobile computing devices with the introduction of 3G networks which allow easy and continuous connectivity to the Internet. The 3G devices (hardware) run on a number of different proprietary Operating Systems – a segment largely ignored by Microsoft because it lies in the bottom left side of the CR Matrix ("OS for special apps" in Fig 3). The other disruptive innovation that is gaining ground is cloud computing – a technology identified as the topmost strategic technology for 2010 by Gartner[26]. The recently introduced "Netbook" computers geared to operate with the Internet point towards the gaining importance of cloud computing. Both these technologies break away from the traditional concept of "shrink-wrapped" products in a box, where Microsoft is the undisputed leader.

**Microsoft's Current situation**

It is the contention of this paper that Microsoft's response to disruptive innovation of Internet was successful in the case of the Browser market. However, its strategic position with respect to the Operating Systems market, where it enjoys more than 90% market share, suffers from the innovator's dilemma. It is therefore susceptible to a "Trojan Horse" strategy of a challenger. Let us examine this further.

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[25] Barnard, P. (2009). *Cloud Computing tops Gartner's "Top 10 Strategic Technologies for 2010"*. Retrieved on 02/12/2009 from http://www.tmcnet.com/channels/call-center/articles/70143-cloud-computing-tops-gartners-top-10-strategic-technologies.htm

[26] *ibid*

It has been shown earlier in the paper that the Windows OS offerings of Microsoft have followed the path of sustaining technological innovation typical of the dominant market leader. It's performance has overshot that demanded by the market (Fig 1), and so, as per Norman (Fig 5c), user experience dominates over these additional features, and further technological innovation would produce diminishing returns in terms of customer preference. In Moore's framework, this product has already crossed the chasm and has won mass adoption. Therefore in the computer operating systems market, its traditional base, Microsoft has managed its strategy well and is in no imminent danger.

However, when we examine closely Microsoft's strategy in the disruptive technological environment of cloud computing and mobile applications, we see a typical market leader's approach (dilemma) so well documented by Christensen. In the mobile computing market Microsoft entered as early as 2000 with their Pocket PC and followed it up with newer versions, the latest being Windows Mobile 6.5 introduced in October 2009[27]. However, even after being in the market for nine years it is only fourth in market share[28]. More significantly, Windows Mobile market share declined by 20% in the third quarter of 2009 despite the fact the sale of smartphones increased by 13%[29]. Table 2 gives the market shares in the Mobile market.

**Table 2. Market share in Mobile OS for smartphones[30]**

| | |
|---|---|
| Symbian (Nokia) | 44.6% |
| Blackberry OS | 20.8% |
| iPhone | 17.1% |
| Windows Mobile | 7.9% |
| Google Android | 3.5% |
| Others | 6.1% |

**Google's Challenge**

Ever since its founding in 1998 Google had been announcing a slew of innovative products primarily connected with its stated goal of organising web content and search engine based Internet advertising. However from 2006 onwards

[27] Hamblen, M. *Windows Mobile smartphone sales plunge 20% in Q3*. Computerworld (November 2009). Quoting Gartner's figures. Retrieved on 02/12/2009 from http://www.computerworld.com/s/article/9140761/Windows_Mobile_smartphone_sales_plunge_20_in_Q3?taxonomyId=15&pageNumber=2

[28] *ibid*

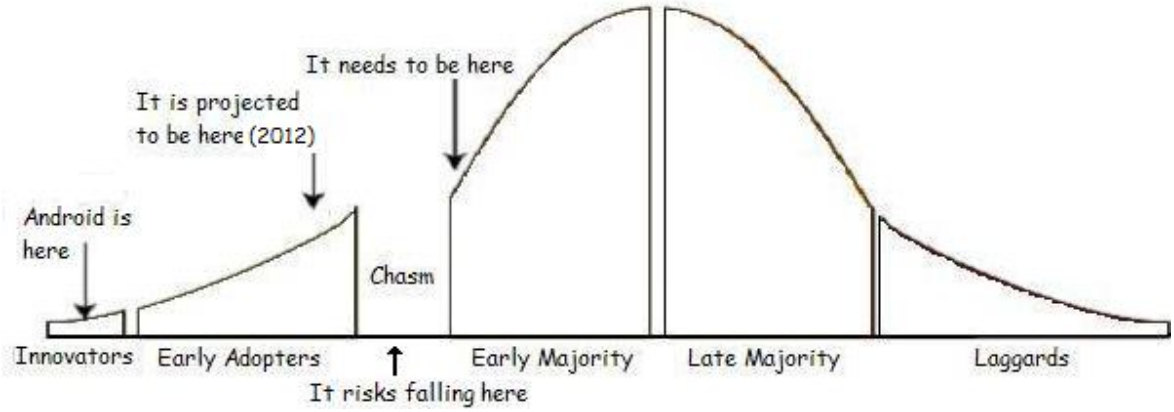
[29] *ibid*

[30] *ibid*

Google, after years of scrupulously avoiding any direct confrontation with Microsoft, began announcing products that directly encroached on the latter's domain. In 2006 it announced the Gmail service and then Google Apps – a direct challenge to the Microsoft Office suite. The same year, without any publicity, it acquired Android Inc. a start-up engaged in making software for mobile applications. In 2007 Google announced through a press release[31] an "Open Handset Alliance" that would use the Android OS for developing applications for mobile phones. The Android, though it could run on netbook computers, was primarily meant to be utilized across a host of devices, from smart phones to set top boxes. In 2008 The Google Chrome browser was officially launched[32] followed by the Google Chrome Operating system (in 2009) primarily aimed at the Internet based computing market[33].

The Android OS has still to gain widespread usage in the OS market. Google's position, in terms of Moore's framework, is depicted in Fig 7. Both Chrome OS and Android target a fast growing but fairly recent segment – Cloud Computing and Mobile Applications. In the CR matrix these products lie in the top left square (OS for Special Apps), i.e. distinct from the main existing markets for Microsoft.

**Figure 7 The Google Android Strategy in terms of Crossing the Chasm**




[31] Google official website. *Industry Leaders Announce Open Platform for Mobile Devices* . Retrieved on 30/11/2009 from http://www.google.com/intl/en/press/pressrel/20071105_mobile_open.html

[32] McCracken, H. *Chrome vs. the World - So Google is now a browser company. What does that mean for the rest of the industry?* PCWorld Tuesday, September 02, 2008. Retrieved on 06/12/2009 from http://www.pcworld.com/article/150586/chrome_vs_the_world.html

[33] Google Official Blog July 07, 2009. *Introducing the Google Chrome OS*, Retrieved from http://googleblog.blogspot.com/2009/07/introducing-google-chrome-os.html.

**Analysis of Google Strategy**

Google's Applications software (Google Apps) and Browser (Chrome) present a challenge to Microsoft in the "OS for Special Apps" category (Fig 6). It lies in the upper left square of the CR Matrix and hence not in the main market space of the market leader. Given Microsoft's vast resources and dominance in the traditional OS segment, what could be the reason for its inability to dominate this market? One indicator could be the fact that this market segment lies in the left side of the CR Matrix (OS for special apps). In fact it has been commented that Microsoft would want to focus on their MS Office software rather than Windows mobile because it is far more profitable[34]. Therefore it should not come as a surprise that Windows Mobile is based on an existing Microsoft product – the Windows CE operating system. In the new and fast growing market for netbooks also Microsoft does not have any specific Operating System, only a watered down version of their Windows XP since Windows Vista is to unwieldy to be installed on netbooks[35]. In the cloud computing segment Microsoft has introduced the Azure (2008)[36] environment, but unlike Google it has chosen to charge for this product[37], which puts it at a disadvantage. Considering that these products (mobile and netbooks) are a precursor to the widespread usage of cloud computing, this is a major weak spot in Microsoft's strategy.

In light of the above it appears that Google has chosen its strategy well. Firstly, it has chosen a segment that lies in the left of the CR matrix hence not in direct competition with the market leader's key markets. Secondly, it has chosen to enter a market segment that is fragmented (Table 2) and fast changing. Therefore there is ample scope for expansion. In fact Gartner's has projected that Android's share will be 18% in 2012[38] from the current 3.5% making it the fastest growing in its segment. It is also an classic disruptive technology in Christensen's framework because:

a. Android does not address a pre-existing need, i.e. the existing OS market for PC's where Windows is dominant

b. The market segment it is aimed at is miniscule as compared to the total OS market and is also very unattractive profitability-wise.

c. It has limited functionality compared to systems such as the Windows Vista and Windows 7.

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[34] Wharton, University of Pennsylvania. *Rivals Set Their Sights on Microsoft Office: Can They Topple the Giant?* , Knowledge@Wharton August 2007. Retrieved from http://knowledge.wharton.upenn.edu/article.cfm?articleid=1795

[35] *Microsoft leads the OS race in Netbooks.* Retrieved on 02/12/2009 from http://www.thefreelibrary.com/Microsoft+leads+the+OS+race+in+Netbooks.-a0197374867

[36] Microsoft Official website. *Microsoft Unveils Windows Azure at Professional Developers Conference Retrieved on 22/12/2009 from* http://www.microsoft.com/presspass/press/2008/oct08/10-27PDCDay1PR.mspx

[37] C-net News July 14, 2009. *Microsoft announces Azure pricing*. Retrieved on 22/12/2009 from http://news.cnet.com/8301-13860_3-10285904-56.html

[38] Hamblen, M. *Windows Mobile smartphone sales plunge 20% in Q3.* Computerworld (November 2009). Quoting Gartner's figures. Retrieved on 02/12/2009 from http://www.computerworld.com/s/article/9140761/Windows_Mobile_smartphone_sales_plunge_20_in_Q3?taxonomyId=15&pageNumber=2

d. In due course, if smartphone technology converges with netbooks and further with the current functionality offered by portable computing (laptops), then it enters the mainstream mode of computing, i.e. it attains the Early Majority Phase. It would then it quickly bring about the demise of the PC based Windows OS.

The scenario of point (d) above is not as futuristic as it seems. Already companies such as Acer, a leader in mobile computing, are using their expertise in netbooks to build better smartphones[39]. For this purpose Acer has acquired a smartphone company and its stated policy is[40]:

> "The company took an 'unpopular' decision -- to stake everything on mobility -- and then organised itself to make this decision work …"

If the above scenario plays out, i.e. smartphones converge with netbooks and replace laptops, Google's decision to position Chrome OS as a cloud computing platform aimed at netbooks provides a reinforcement of its mobile computing strategy. Two other components of Google's strategy aim to cross Moore's chasm and quickly gain majority adoption. The first is their decision to make Android an "open source" product so that it is freely available to application developers without charge and the second is strengthening their ties with mobile phone manufacturers and developers[41].

The most brilliant aspect of Google's strategy however, is the fact that its business model is based on controlling data and since all other computer companies offer products that process data, Google essentially controls the medium that is the core of the rest of the industry. If the future is cloud computing then even the proprietary databases that companies other entities own would reside in the cloud, which Google is attempting to dominate. What Google is actually doing is addressing the future i.e. the post PC era where computing would be online, a market space that is still in its early infancy i.e. phase 1 in Moore's framework. When Google announced its Chrome OS it outlined its product philosophy as follows[42]:

> "….the operating systems that browsers run on were designed in an era where there was no web. So today, we're announcing a new project that's a natural extension of Google Chrome — the Google Chrome Operating System. It's our attempt to re-think what operating systems should be…."

This is a disruptive shift in the path of sustaining technological innovation (fig 1).

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[39] Raythattha, M., et al. (2009). *Google Android Strategy*. Retrieved on 06/12/2009 from http://www.mcafee.cc/Classes/BEM106/Papers/2009/Gphone.pdf

[40] Acer Company Website. *A Future of Innovation-Transformation is the essential element of development.* Retrieved on 6/12/2009 from:

http://www.acer-group.com/public/News/corporate_news.htm

[41] Google Press Centre: *Announcement for mobile joint initiative with telecom industry.* Retrieved on 6/12/2009 from http://www.google.com/intl/en/press/pressrel/20071105_mobile_open.html

[42] Google Official Blog July 07, 2009. *Introducing the Google Chrome OS*, Retrieved from http://googleblog.blogspot.com/2009/07/introducing-google-chrome-os.html

**The Innovator's Dilemma**

Microsoft's dilemma therefore is whether is should place its bets on a future based on cloud computing (disruptive technology) or continue to cater to its existing customer base (sustaining technology). Whatever path it adopts, it faces a difficult choice. If it shifts focus away from its present customer base and the technological future evolves differently then it would have needlessly diverted attention and resources away from its core strength and customer base. After all, notwithstanding industry projections, the Android system, (as well as Chrome OS) has till now proved to be only a minor irritant not a major threat. On the other hand, if it stays the course and the future actually unfolds as per current projections, it would be forced into a market space (online computing) where Google is the undisputed leader. Even if neither of these scenarios plays out, and Microsoft is able to attain dominance over Google in the OS marketspace, it would be at a disadvantage. This is because of Google's dominance of the web through its search engine and control off data on the net, and therefore it would be the main beneficiary of anything that makes the web more useful. Therein lies the brilliance of Google's strategy

Microsoft's has products that address all the three segments – Windows 7 for the conventional OS market, Windows Mobile for the mobile market and Azure platform for the cloud computing segment. While its dominance in the first segment is undisputed, it has not shown signs of aggressively attaining dominance in the other segments. If future lies in these two latter segments, then it is faced with a classic innovator's dilemma.

**References**


1. Christensen, Clayton M., (1997). The Innovator's Dilemma. Harvard Business School Press.
2. Moore, Geoffrey, (1995). Crossing the Chasm. HarperCollins.
3. Norman, Donald A., (1999) The Invisible Computer. M.I.T. Press
4. Hamel, G. & Prahlad, C.K., (1994). Competing for the Future. Harvard Business School Press.
5. Kim, W. Chan & Mauborgne R. (1997). Value Innovation: The Strategic Logic of High Growth. Harvard Business Review (Harvard Business School Press): 103–112. January - February 1997
6. Arnold, Stephen E.:
    i. The Google Legacy (2005);
    ii. Google Version 2.0: The Calculating Predator (2007)
    iii. Google: The Digital Gutenberg (2009)

    This three part monograph can be retrieved from: http://www.infonortics.com/publications/index-goog.html
7. Vise, David A., Malseed, M. (2005). The Google Story. Bantam Dell Publishing Group

# Infrastructure Development and Business Attractiveness of Indian Cities by 2020 *


***Abstract***

As the world is becoming more globalized, urban centers are competing with each other to attract business. Indian cities are also influenced by this global trend. Arguably, some cities are endowed with a high quality of infrastructure compared to others. In this context, the paper explores the role played by infrastructural development in ensuring attractiveness of cities of India from the standpoint of conducting business. It examines the various aspects of development of infrastructure within a city.

The paper is concerned with the question of how to make cities more attractive for investment. Finding a suitable infrastructure is a step closer to answer the question. However, the socio-economic and environmental impact of the proposed infrastructural development must be considered. The political dimension of development of cities in pre-planning, implementation, and post implementation phases is also important. All these aspects are discussed in this paper. It concludes with valuable policy implications.



*Keywords: Urban infrastructure, Business attractiveness, Lewin's Force field analysis, Cluster development.*



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## Introduction

Urban infrastructure is a key ingredient in the success of Indian cities in the business world. The Indian government is undertaking a major initiative to renew Indian urban centers[1]. Given this context, the paper explores the key role played by urban infrastructure in the business attractiveness of cities. The emphasis will be on Indian cities with occasional comparisons with international centers as appropriate.

Studies conducted on this subject are only beginning and the data and theoretical underpinnings are rather weak. For example, Greater Paris Investment Agency (2008) conducted a study comparing 15 major 'global cities' on perceived attractiveness (based on investor intentions and city image) and real attractiveness (based on headquarter location of Forbes Global 2000 companies). In comparison, data on Indian cities is substantially weak and the sparse information available is based on studies done by outsourcing firms and consultants in that domain. These studies do point to an emerging competition between 'global cities' for investments. For example, AT Kearney's (2009) indices also compare locations for attractiveness of investment flows but measures data at a country level.

## Objective of the Paper

The objective of the paper is to examine the issue of business attractiveness and urban infrastructure in greater detail. Given that this topic is important and little work has been done in this area, the paper makes a contribution to this subject. Also, a focus on India will customize the research to the Indian conditions.

## Structure of the Paper

The paper is broadly divided into two parts. In the first part (Sections 1 to 5), the emergence of urban centers and the role of infrastructure is discussed. In the second part (Sections 6 to 10), the urbanization process is analyzed and planning approaches for the year 2020 are discussed. A comparison is done with cities internationally and other aspects of development such as political and environmental factors are discussed.

The paper begins with a description of the phenomenon of urbanization and the development of urban centers in India (Sections 1 and 2). In Section 3, the key role played by various aspects of infrastructure in the further advancement of Indian cities is explored. In Section 4, domestic developments are placed in the context of international initiatives in building cities. Other issues related to urban infrastructure and national perspectives are explored in Section 5.

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[1] The Hon'ble Prime Minister of India, Dr. Manmohan Singh, launched the Jawaharlal Nehru Urban Renewal Mission (JNNURM) on 3rd of December, 2005. It is the single largest and one of the most important initiative of Government of India for planned development of key cities of the country. The Mission aims at creating economically productive, efficient, equitable and responsive cities in an integrated framework with focus on economic and social infrastructure, basic services to urban poor, urban sector reforms and strengthening of Municipal Governments and their functioning. One of the Sub-Missions of JNNURM viz. Urban Infrastructure and Governance is to be implemented over a period of seven years. (www.jnnurm.nic.in)

The second part of the paper looks into the future. It begins with a simple force field analysis of the problem of changing Indian cities(Section 6). Section 7 illustrates how innovative thinking can be applied to the problem of urban development. In Section 8, a comparison is made between cities globally. In section 9, the cluster development technique and its promise are presented. Other aspects of development as they relate to social and political factors are described in Section 10. Section 11 deals with certain policy implications and concluding remarks are presented in Section 12.

## Section 1: Urbanization

Urbanization is a phenomenon characterized by the growth of cities and the concentration of economic and industrial activities around these centers. Further, it may be fuelled by migration of large number of people from rural areas. Economic activities in the urban areas are expected to be skewed in favour of manufacturing and service sectors over agricultural occupations. Simon (1947) has argued that increase in industrial productivity has led to change in demographics in the West over the last several decades from rural to urban areas. Through simple models he has shown that differences in income elasticity of demand and the use of tractor can lead to a change in the ratio of urban to rural population. It is generally understood that similar forces are responsible for the urbanization phenomenon in recently industrializing centers.

## Section 2: Urban Centers in India

Census data in India also reveals that there has been a steady increase in population living in cities. Also, as Indian population has increased, the number of urban dwellers has also increased (MoI&B, 2008).It is not clear however, if the growth in urban centers is a good measure of urbanization process itself. The increase in the number of inhabitants in cities has led to urban poverty and creation of urban localities that resemble or are even inferior to poorer rural settings. Lack of wealth creation opportunities in rural areas is possibly the reason for large scale migration to livable urban centers (Bhagat, 2001). Also, the industrialization efforts of the Indian government are partly responsible for this demographic shift over the last few decades.

Whether this trend of migration and growth of cities will continue is difficult to predict (Bhagat, 2001). New technological and social changes of what may be called the ‘third wave’ shifts (e.g., electronic cottage) may result in a process of populations going back to the rural areas (Toffler, 1980). Some of these movements may also be regressive (Toffler, 1990). Still others may be cross border and driven by economics. For example, Chinese traders and merchants numbering over 2,00,000 from the southern provinces of China have migrated recently and have built up Mandalay (north Myanmar) (Storer, 2007). Recent symposia on city planning are recognizing post industrial factors (such as ‘quality of place’ factors, presence of knowledge workers etc.) and their importance (OECD, 2005).

## Section 3: Infrastructure and Business attractiveness

Infrastructure is a key element for the success of any urban center. In India, infrastructure has been linked by many to the economic growth of the country[2].

### 3.1 Business attractiveness

While Infrastructure is important, there are other factors as well that make a city business friendly. World Bank's Doing Business India Report of 2010 lists these factors but doesn't measure urban infrastructure as such (World Bank, 2009). Business attractiveness is a general term that indicates that extent to which a city is attractive for doing business. This can be measured through a variety of methods; the simplest among them would be to measure the amount of fund flows into the city. The Paris study has used investor intentions (Greater Paris Investment Agency, 2008) and location of headquarters. It can be argued that location of headquarters doesn't measure investment as such but rather provides a signal of the importance given to a city by a particular business. A secondary measure could be the amount of new jobs created by the investment. This may be suitable for Indian conditions wherein the societal value of a business initiative has been traditionally measured by the number of new jobs created.

### 3.2 Infrastructure and urban infrastructure

Infrastructure has various dimensions and these have to be measured within the context of the culture and society to which a city belongs (Redman and Jones, 2004). Given that no clear definition of infrastructure exists, the Secretariat to the Committee of Infrastructure has examined this matter in depth. While criteria identified by the committee are comprehensive they apply for infrastructure assessment at the national level. For the present purpose, the infrastructure dimensions for urban centers can best be understood on the basis of the JNNURM document (JNNURM, 2006). The urban infrastructure investments will cover nine dimensions – redevelopment such as road widening and decongestion, water supply, parking lots and transport, protection of soil and water bodies, heritage development, sanitation, sewerage and drains (including for storm water), solid waste management. Telecom, power, health, education, and wage employment schemes are excluded from the list (JNNURM, 2006).

[2] For example see www.chillibreeze.com/articles/Infrastructure-Development-and-Economic-Growth.asp

## Section 4: Global Trends

New cities are being developed by various countries that provide a glimpse of how future cities could emerge. Dongtan in China (situated in Shanghai's Chongming Island) is an eco-city planned for a million plus inhabitants (Bhatia, 2010). Table 1 provides a list of fairly large urban agglomerations (i.e. over 100 square kilometers) that involve high planning, latest technology, and other advanced features of city life.

**Table 1: Examples of Highly Advanced Future Cities**

| S. No. | City Name and Country | Features |
|---|---|---|
| 1. | Tsukuba, Japan | 284 sq. km. with 207,394[3]; attracts half of Japanese science funds. |
| 2. | Lavasa Future City, India | 100 sq. km. a Hill city between Mumbai and Pune[4]. |

Source: Compiled by the author.

UAE's Abu Dhabi emirate is planning 'Masdar City' that builds on the latest energy technologies[5]. New consulting firms are emerging to help cities make the transition to the future[6]. Indians are also thinking of the future by engaging young minds[7].

## Section 5: Other aspects of Infrastructure development within India

Infrastructure when viewed at a national or a supranational level includes power, telecom, air, sea, and road connectivity. In the Indian case, one dimension of infrastructure development is road connectivity – The golden quadrilateral and regional integration with Myanmar and Thailand through road and rail links are recent advances in this area (De, 2008). Another dimension of Indian cities is their categorization in terms of business parameters into mega-cities, boom towns, and niche towns (NCAER, 2008).

These additional aspects of infrastructure development provide the context for development of cities. For example, the business attractiveness of cities in the North East region would depend on changing demographics, purchasing preferences, and location on the Myanmar-Thailand link routes. An understanding of these broader national and international dimensions can explain the attractiveness of various cities.

[3] www.tsukubainfo.jp
[4] www.lavasa.com
[5] www.masdar.ae
[6] Futurecities.org
[7] www.futurecitiesindia2020.com

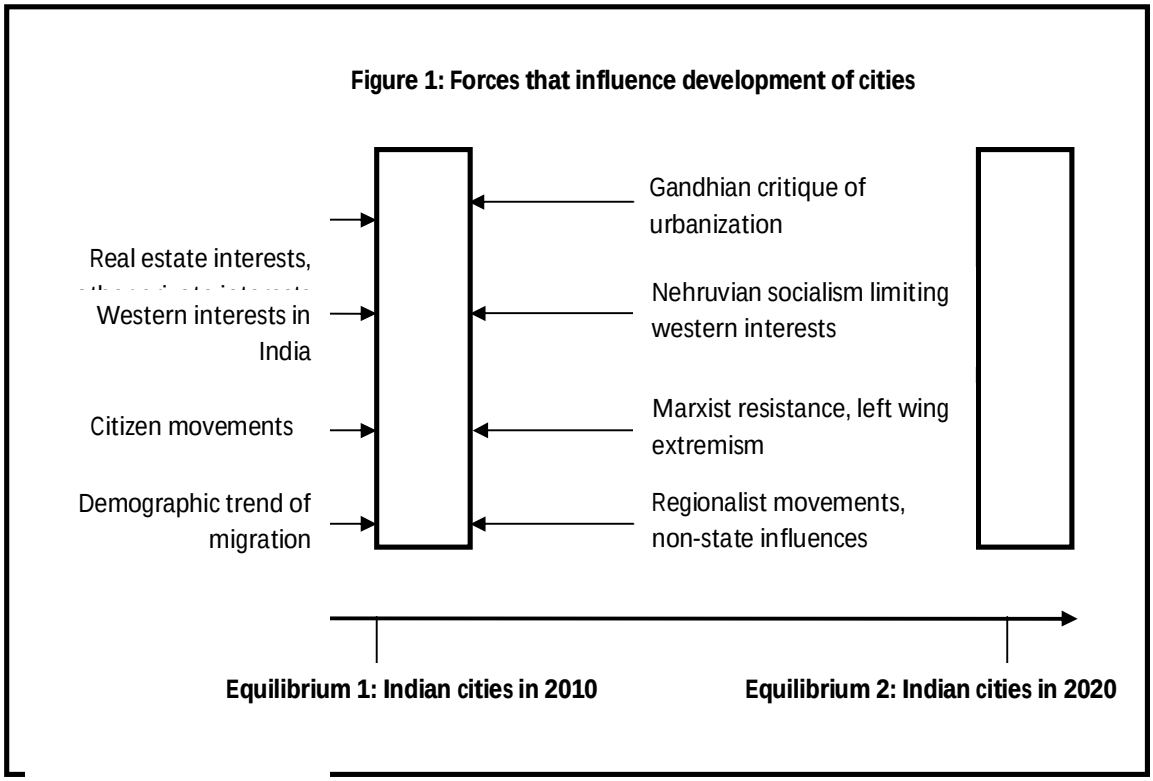
Given this process of urbanization, development of urban centers, and national and global trends, it can be argued that Indian cities will change in the next decade. This process of change will be studied in the next section.

## Section 6: Planning Models

### 6.1. Changing Indian Cities by 2020 – A Force Field Analysis

Lewin's Force field analysis is used by management scholars to study the various factors that influence the process of change in a system. This model is a useful tool of preliminary analysis. More advanced models have been developed by scholars for changing large systems (French, *et. al.* 2006). The constraining and driving forces that influence the development of cities are shown in Figure 1.

**Figure 1: Forces that influence development of cities**




Source: Compiled by the author.

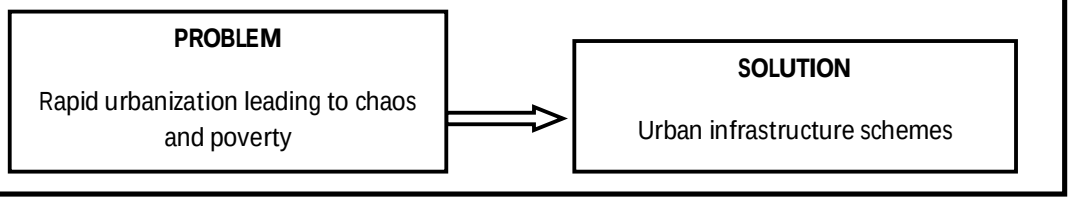
In order to take India into 2020, it will be necessary to increase the driving forces and limit the influence of the resisting forces. However, in the Indian context some of the resisting forces are ideologically wedded to the evolution of the country. The reduction in cold war polarization of the world has created an opportunity to wed Nehruvian State driven industrialization efforts with private and western interests to some extent. Similar such

creative interplay of forces may drive Indian cities into a future equilibrium state. The paper now examines the role of innovative models in managing the change.

### Section 7: Application of Innovative Model

Goparaju and Shome (2009) have suggested that addressing multiple social and economic problems simultaneously can improve the effectiveness of large government schemes. They apply this model to Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) to demonstrate how MGNREGA is an innovative scheme. The problems are juxtaposed in such a way that the positive characteristic of one can compensate for the negative antecedent or consequent of another. The proposed approach of the Indian government in the case of urbanization can be characterized in Figure 2.

**Figure 2: Traditional Model of Urbanization**

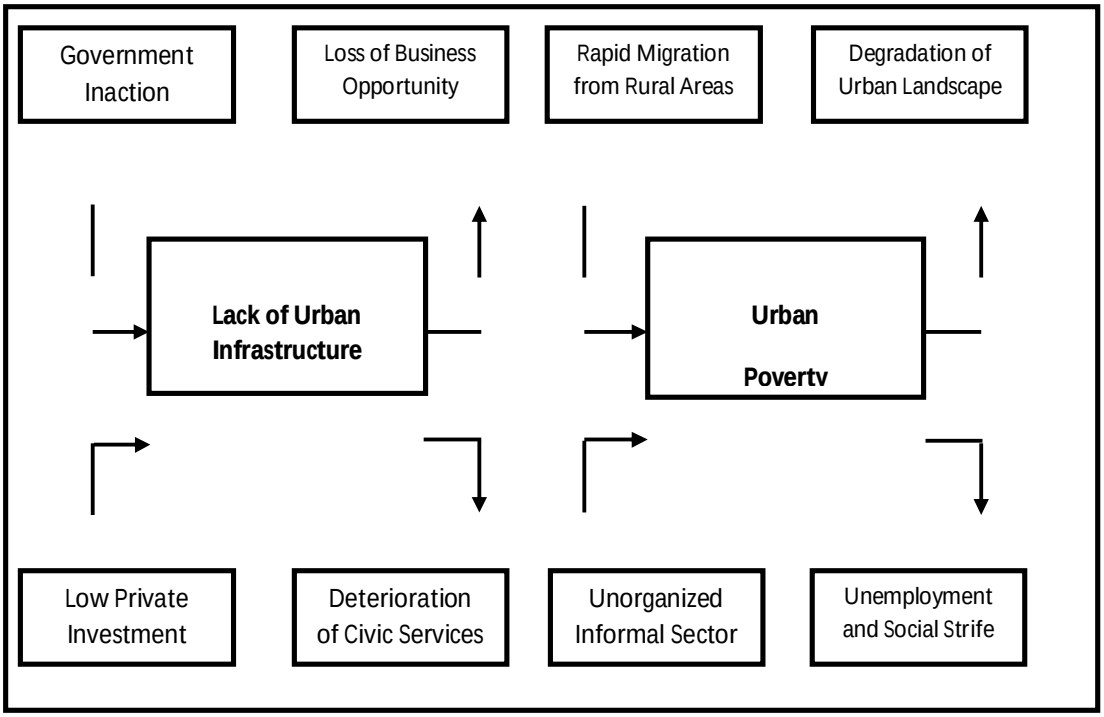



Source: Compiled by the author.

Cyclical feedback loops may disrupt these simple approaches to the problem. For example, sudden migration from one city to another can disrupt and overburden even newly developed urban infrastructure.

A second level approximation of the reality would at least take additional factors into account. Such an innovative model is suggested below (Figure 3).

**Figure 3: Application of the Innovative Model to Two Urban Issues**




Source: Compiled by the author.

An innovative scheme can be formulated in such a way that the antecedent and consequent factors of one problem balance itself off against some of the antecedent or consequent factors of the other. In the above case, lack of urban infrastructure has antecedent factors - low private investment and government inaction. Similarly, as consequences of the lack of urban infrastructure, there is loss of opportunities for businesses. This is because of the delays and difficulties in doing business in the city. A comparison is made in a Finance Ministry report that lack of infrastructure limits Mumbai from leaping into a Global Financial Center status such as New York, London, or Singapore (Ministry of Finance). Similarly, lack of urban infrastructure can result in the deterioration of civic services.

Rapid migration from rural areas and lack of wage control on over unorganized informal sector has been attributed to the increase in urban poverty. Similarly, urban poverty would result in the degradation of urban landscape through the springing up of poorer urban localities. Unemployment and strife may result due to poor living conditions.

An innovative solution would address the problems simultaneously. For example, locally sourced labor working on labor intensive projects to build the city (such as landscaping, gardening etc.) can both reduce urban poverty and help business processes. JNNURM of the government of India envisages some of these dimensions of the socio-economic issues. For example, urban poor are included in the drawing up of city development plans.

**Section 8: Comparison of Cities**

There are a total of 479 cities with a population of 1 million or more with Tokyo being the most populous and Tegucigalpa among the least (Brinkhoff, 2010). A random sample of 40 cities is taken. This sample is presented in Appendix 1. The population figures correspond well with Demographia Report figures (Although the latter are somewhat dated, i.e. up to 2005) (Demographia, 2009).

These cities can then be compared for their business attractiveness and infrastructure facilities. While no such surveys have been conducted so far, several general studies have been made to compare cities globally from a business standpoint. Mercer's annual rankings compare cities on 39 'Quality of Living' indicators and among these 'health and sanitation' and 'public service and transport' have certain factors that relate to our definition of 'urban infrastructure'. Overall there is not even a single Indian city that figures in the top 50 ranked cities when compared with New York (ranked 49) as the base city having an index of 100 (Mercer, 2008). Therefore, Indian cities as of 2010 are not perceived by Western consulting firms to be high on urban infrastructure and also on business attractiveness.

Mitropolitski's (2004) has reviewed research done by Montreal Board of Trade that indicate that there are no apparent links between quality of living (or perceptions of it) and investment plans. In other words, apparent relationships such as those cities that are high on urban infrastructure are also likely to be high on investment inflows may not be empirically supported.

Similarly, a preliminary analysis of data from AsiaBIZ survey reveals that Japanese cities are ranked very high on infrastructure (top 10) but don't rank as well in business friendly environment or economic potential (AsiaBIZ, 2007). In other words, while urban infrastructure and business attractiveness seem to be intuitively related, evidence doesn't exist to support this view. In fact, the few reports on the matter contraindicate.

In Appendix 2, the major mega-cities of India are listed and their corresponding infrastructure gaps are presented. These figures are drawn from the respective city development plans. These gaps are then annualized and calculated per citizen to be comparable. Funds flows into the cities were not available, but could also be included and then compared with the infrastructure gaps. If these two variables are correlated, we can say that infrastructure investments are related to business attractiveness. A similar illustrative comparison is conducted with available data from global rankings in Appendix 3.

In Appendix 3, the top 50 cities in terms of infrastructure (according to Mercer survey) are compared with the top 50 cities in term of FDI inflows (According to data from OCO consulting). Now, a co relational analysis shows the rather weak relationship among the variables. In the case of India, it is quite likely that all the major cities will have a limited variability in terms of infrastructure, and some variability in terms of fund flows. Therefore, within country comparisons may be less insightful in establishing a relationship between the variables. If we can show that cities with low infrastructure will necessarily be low in business attractiveness and cities with high infrastructure will necessarily be high in business attractiveness; then we can establish a clear linkage between the variables. Such a relationship would then justify heavy government investment in infrastructure. However, observations in Appendix 3 provide a rather mixed picture and possibly also set the upper limits of what we can expect in terms of within country comparisons of Indian cities.

The information presented in the three Appendices, therefore, indicates that a thorough and a systematic examination of the relationship are needed from a scientific standpoint. This can be done empirically and must be both within country (to be relevant to the socio-political context) and also between country (to examine the strength of the relationship and whether it exists at all) studies must be encouraged.

### Section 9: Cluster Development Technique

Cluster development is emerging as an important strategy and has many connotations. In the case of the rural development, village clusters (10 to 15 villages) are identified and BPL families in these villages are targeted for development schemes. A number of such clusters are then included in various backward regions of the country in a larger scheme (Hedge, 2006).

Cluster development for medium to small enterprises helps the enterprises by reducing risks and improving access to credit, to markets, and to suppliers. There are various elements of the business process that can be carried out more effectively in a cluster setting (as against small organization managing all these processes all by itself) (Gulati, 2007). Another illustrative example has been that of Arizona, where industry development technique has been studied for its impact on economic development (Waits, 2009).

### Section 10: Other Issues

Social, political, and international issues are key to the development of cities. In the Indian cities, a potential exists to develop Indian Heritage Centers that could become attractive locations for tourism. This may contribute not only to domestic tour operators but also to international and domestic airlines business, hospitality sector, and travel and tourism sector. The cases of Varanasi, Amritsar, and others have been highlighted by the Prime Minister of India (JNNURM, 2006).

The horizontal expansion of cities is a challenge that all cities have to handle. However, the unique elements vary from one city to another. A framework that separates cities into three categories – North American, European, and non-Western has been suggested (Redman and Jones, 2004).

## Section 11: Policy Implications

If we assume that infrastructure is the key facilitator of economic development, then the State could provide greater importance to the issue. Recent efforts have taken an integrated approach to this developmental process. The integrated approach may trigger the process of identifying multiple problems that limit the effectiveness of the scheme. Tools suggested here of combining two or three problems simultaneously to arrive at innovative solutions can be adopted. For example, businesses can invest in infrastructure schemes to create business friendly environments for the future. The government can further encourage such participation.

Another important factor that can attract business is to provide a liberal, attractive, and investor friendly investment climate. Cluster development techniques can be used to boost small and medium scale organizations. Also, these organizations can create jobs in a large scale – a key benefit of any initiative in a country such as India.

While no clear linkage could be established between infrastructure development and business attractiveness, a full fledged study should be conducted with sufficient funding to examine this issue. It is quite surprising that multi billion dollar investments by large democracies is being pledged with limited participation of citizens of those respective countries and without regard to scientific methods and procedures. The paucity of data, of course, is inexplicable.

## Section 12: Conclusion

It can be concluded that infrastructure and business attractiveness of cities is a subject that deserves greater study. It is generally held as ‘common sense’ in business that the process of urbanization is inevitable; that Indian cities will grow and larger sections of Indian citizens will move to cities in the next few decades; and that infrastructure investments by government are key in making Indian cities ready for business. Based on the arguments and information provided in the paper, limited evidence exists to support this line of thinking. While there is little to suggest otherwise, given the nature and scale of investments involved, it is suggested that a more systematic and scientific study with reliable data from government and international sources be carried out to clarify the subject better. The paper makes a contribution by highlighting the factors at play, the role of innovative thinking, and the empirical picture that is likely to emerge as data is gathered and reexamined on this subject.

## Appendix 1

### Random Sample of 40 Cities

The following randomly selected numbers among 1 to 479 are generated on computer:

6,9,15,17,21,40,50,51,67,81,89,99,127,133,140,147,156,158,170,177,192,199,203,244,248,254,291,297,303,324,371,374,389,392,397,399,407,414,425,464

| S. No. | Anglo Name | S. No. | Anglo Name | S. No. | Anglo Name | S. No. | Anglo Name |
|---|---|---|---|---|---|---|---|
| 1. | Mumbai | 11. | Melbourne | 21. | Belem | 31. | Natal |
| 2. | Manila | 12. | Pusan | 22. | Goiania | 32. | Datong |
| 3. | Jakarta | 13. | Fuzhou | 23. | Nanning | 33. | Maracay |
| 4. | Beijing | 14. | Lucknow | 24. | Kharkov | 34. | Grand Rapids |
| 5. | Istanbul | 15. | Campinas | 25. | Columbus | 35. | Ottawa |
| 6. | Johannesburg | 16. | San Juan | 26. | Baotou | 36. | Barquisimeto |
| 7. | Saigon | 17. | Taegu | 27. | Nashville | 37. | Cotonou |
| 8. | Philadelphia | 18. | Manchester | 28. | Yekaterinburg | 38. | Birmingham |
| 9. | Poona | 19. | Katowice | 29. | Kwangju | 39. | Kumamoto |
| 10. | Caracas | 20. | Lanzhou | 30. | Adana | 40. | Mandalay |

## Appendix-2

### Infrastructure Gap and Investment Flows into Indian Cities

| S. No. | City Name | Population | Per citizen gap | Infra (Rs. Cr) |
|---|---|---|---|---|
| 1 | Delhi | 23,200,000 | 1.37 | 44594 |
| 2 | Mumbai and Thane | 22,800,000 | 7.38 | 16843 |
| 3 | Kolkata | 16,300,000 | 0.85 | 6939 |
| 4 | Chennai | 8,200,000 | 5.99 | 34429 |
| 5 | Hyderabad | 7,500,000 | 3.81 | 20017 |
| 6 | Bangalore | 7,800,000 | N/a | N/a |
| 7 | Ahmedabad | 5,950,000 | 1.22 | 5111 |
| 8 | Thane (2005 pop) | 15,44,390 | 4.47 | 4840.66 |
| 9 | Pune | 4,850,000 | 0.46 | 1117 |

Source: Population data from Brinkhoff (2010); Infrastructure funds sought from CDPs of various cities (JNNURM, 2006); Inflows of Pune from CDP, and Industries Directorate.

## Appendix 3

### Comparison of Rankings of Surveys

| S. No. | Infrastructure Rank | City | Index | FDI Rank | No. of Projects |
|---|---|---|---|---|---|
| 1 | 1 | Singapore | 109.1 | 3 | 713 |
| 2 | 2 | Munich | 106.5 | 36 | 140 |
| 3 | 3 | Copenhagen | 106.2 | 26 | 176 |
| 8 | 8 | Frankfurt | 104.8 | 50 | 106 |
| 9 | 8 | Hong Kong | 104.8 | 7 | 541 |
| 10 | 8 | London | 104.8 | 2 | 790 |
| 11 | 11 | Sydney | 104.0 | 32 | 155 |
| 12 | 12 | Tokyo | 103.4 | 10 | 309 |
| 13 | 13 | Paris | 103.1 | 9 | 426 |
| 18 | 18 | Toronto | 101.9 | 44 | 121 |
| 19 | 18 | Vienna | 101.9 | 39 | 134 |
| 23 | 20 | Stockholm | 101.5 | 34 | 146 |
| 26 | 26 | Amsterdam | 101.0 | 41 | 129 |
| 29 | 29 | Berlin | 100.1 | 47 | 109 |
| 32 | 32 | New York City | 100.0 | 17 | 227 |
| 35 | 35 | Dubai | 99.2 | 5 | 660 |
| 37 | 35 | Melbourne | 99.2 | 48 | 108 |
| 44 | 43 | Madrid | 98.1 | 24 | 202 |
| 50 | 49 | Milan | 96.5 | 31 | 162 |

Source: 1. FDI data from ococonsulting.com; 2. Infrastructure ranks and indices from Mercer Rankings

The following observation can be made about the data.

Only 19 cities are common to FDI top 50 and Mercer Infrastructure top 50 lists. This means that there are:

1. Over 30 cities that are high on infrastructure but don't figure in the top 50 FDI destinations.
2. Over 30 cities that are top FDI destinations but don't figure in the top 50 cities based on infrastructure.
3. Among the cities that are reasonably high on both infrastructure and FDI, it is found that correlation is only about 0.35 (We consider index numbers as values that can be correlated with no. of projects). Rank correlation (Spearman's), of course, will be even lesser due to loss of information at 0.2 for the 19 cities.

The following preliminary inferences seem reasonable. Having good infrastructure doesn't automatically ensure high FDI inflows. Second observation above can be attributed to the Asian and East European cities that have become outsourcing destinations. FDI is flowing into weak infrastructure areas due to the phenomenon of outsourcing. Third observation shows that there is no apparent link between the two variables and more empirical work is needed.

## References


1. AsiaBIZ Strategy (2007) "Asian Cities of the Future – 2007 Award".
http://www.attractivecities.com/Asia_ratings.html

2. AT Kearney Report (2009) "The Shifting Geography of Offshoring – The 2009 A.T. Kearney Global Services Location Index".
(http://www.atkearney.com/index.php/Publications/global-services-location-index-gsli-2009-report.html)

3. Bhagat, R. B. (2001) "Urbanization in India: A Demographic Reappraisal", International Union for the Scientific Study of Population Conference.
(http://www.iussp.org/Brazil2001/s80/S83_03_Bhagat.pdf)

4. Bhatia, G. (2010) "Can We Make Clean, Green Cities like China?", The Times of India, pp: 14, Jan 31.
(http://timesofindia.indiatimes.com/home/sunday-toi/all-that-matters/Can-we-make-clean-green-cities-like-China/articleshow/5518501.cms)

5. Brinkhoff, T. (2010) "The Principal Agglomerations of the World".
http://www.citypopulation.de/world/Agglomerations.html

6. De, P. (2008) "Infrastructure Development in India", Chapter 4: pp. 105-130.

7. Demographia (2009) "World Urban Areas and Population Projections", 5th Comprehensive Edition, Revised, April.
http://www.demographia.com/db-worldua.pdf

8. French, W. L., Jr. C. H. Bell and V. Vohra. (2006) "Organization Development", Pearson Education.

9. Goparaju, S. and S. Shome (2009) "Techniques in Innovative Policy Making: Examples from India", Presented in Conference on Regulating for Decent Work, International Labour Organization, Geneva.
http://www.ilo.org/public/english/protection/condtrav/pdf/rdwpaper32a.pdf

10. Greater Paris Investment Agency (2008) "Global Cities Attractiveness 2008".
(http://www.greater-paris-investment-agency.com/pdf/PIDF%20ALL%20RESULT.pdf)

11. Gulati, M. (2007) "Cluster Development Approach How Does It Work on the Ground", Foundation for MSME Clusters, March, UNIDO/ADB presentation, Tokyo.
http://www.adbi.org/files/2007.04.04.cpp.cluster.dev.approach.pdf

12. Hegde, N. G. (2006) "Promotion of Sustainable Livelihood Through Village Cluster Development Approach", BAIF Development Research Foundation.
http://www.baif.org.in/aspx_pages/pdf/Agriculture/Cluster%20development%20.pdf

13. JNNURM, Govt. of India (2006) "Modified Guidelines, Sub-mission of Urban Infrastructure and Governance", pp: 6, September.
(www.jnnurm.nic.in)

14. Mercer (2008) "Quality of Living Global City Rankings 2008".
http://www.mercer.com/referencecontent.htm?idContent=1307990#Top50_qol

15. Ministry of Finance, Govt. of India (undated) "Urban Infrastructure and Governance", Chap. 14: 179-186.

16. Ministry of Information and Broadcasting, Govt. of India (2008) “India Yearbook 2008”, Research, Reference and Training Division. (http://rrtd.nic.in/India_2008.pdf)
17. Mitropolitski, S. (2004) “Quality of Life vs. Business Attractiveness”, International Real Estate Digest, May. http://www.ired.com/news/mkt/nam-qual.htm

18. NCAER (2008) “The Next Urban Frontier: Twenty Cities to Watch”, Monthly Report, X(8), August. http://www.ncaer.org/popuppages/EventDetails/E7Aug2008/Presentation.pdf

19. OECD (2005) “Enhancing City Attractiveness for the Future”, International symposium, 2-3 June, Nagoya Congress Center, Japan.

20. Redman, C. L. and N. S. Jones (2004) “The Environmental, Social, and Health Dimensions of Urban Expansion”, pp: 8, Population-Environment Research Network cyberseminar, 29 Nov-15 Dec 2004. (http://www.populationenvironmentresearch.org/papers/Urban_Expansion_background_paper.pdf)

21. Simon, H. A. (1947) “The Effect of Increased Productivity up on the Ratio or Urban to Rural Population”, *Econometrica*, 15(1).

22. Storer, B. (2007) “Sino-Burmese Relations as Viewed Through Three Lenses”, Brussels School of International Studies, BSIS Journal of International Studies, pp: 74. (http://www.kent.ac.uk/brussels/BSIS/news/journal/archivepage/2007/BSIS%20Journal%202007.pdf)

23. Toffler, A. (1980) “The Third Wave: The Classic Study of Tomorrow”, pp: 194-207, Bantam Books, New York.

24. ---------- (1990) “PowerShift: Knowledge, Wealth, and Violence at the Edge of the 21st Century”, pp: 378, Bantam Books, New York, 1990.

25. Waits, M. J. (2009) “Advantages of the Industry Cluster Approach to Economic Development”, Morrison Institute of Public Policy, Arizona State University. www.nga.org/Files/ppt/ATLANTAFORUM_WAITS.PPT

26. World Bank (2009) “Doing Business India Report 2010”, Comparing Regulation of 183 Economies. (http://www.doingbusiness.org/Documents/CountryProfiles/IND.pdf)

27. www.chillibreeze.com/articles/Infrastructure-Development-and-Economic-Growth.asp

28. www. futurecities.org

29. www.futurecitiesindia2020.com

30. www.jnnurm.nic.in

31. www.lavasa.com

32. www.masdar.ae

33. www.tsukubainfo.jp

# An Empirical Study on Customers' Perception towards On-line Banking adoption in Bangalore city[1]

**Abstract**

The growing popularity of Internet banking has also brought increasing anxiety over whether something as private and personal as a bank account can be fully protected in the relatively unregulated and un policed world of the internet.

A market survey was carried out in specific areas of Bangalore city.

The primary data was collected with the help of a structured questionnaire administrated among 50 respondents from Bangalore city. The statistical tools applied on the data were,

- Chi-square and Factor analysis to identify the important factors affecting on-line banking.

The findings were:

**'Convenience'** and '**saving time'** were the major factor to adopt on-line banking.

**'Security'** and **'privacy'** were two major concerns of customers towards not adopting on-line banking services on a regular basis.

Banks have to work out a model of safety and security of the customers' information and the market penetration in the days to come.

Key words: On-line banking, Technology Acceptance Model, Information privacy, Security

## Introduction

The Banking industry in India has undergone revolutionary changes due to liberalization and globalization measures initiated since 1991. These measures, along with rapid growth in the Indian economy have transformed the banking sector in India, with strong contribution from government, private and foreign banks. Deregulation, entry of private players, increased competition, technological blend and attitudinal transformation among bankers have made them sensitive to customers need and satisfaction.

Since mid-1990's, there has been a fundamental shift in banking delivery channels towards using self-service channels such as on-line banking channel. Banks have traditionally been in the forefront of harnessing technology to improve their products, services, and efficiency. If we look into the modern age of banking, online banking or net banking made things much easier for the people and saves a lot of time. Many banks have begun to offer customers the option of online banking, a practice that has benefits for both parties. The convenience of being able to access accounts at any time, as well as the ability to perform transactions without visiting a local branch, draw many people

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to sign up. It seems like an obvious choice to leave the hassles of traditional money management behind in exchange for this high-tech alternative. Among the major changes, technologies have aided and upscaled the banking operations to greater heights.

**1.1: Online-Banking Perceptions- Theoretical Framework**:

**Online Banking**

Online banking is an internal portal, through which customers can use different kinds of banking services ranging from bill payment to making investments. Online banking allows people access all of their account through a secure bank-created website. Depending on the services chosen, a customer may simply be able to view the day-to-day activity of every account they have with a bank. Another convenient service lets people transfer funds, either between accounts or from electronic transactions. With the popularity of PC's easy access to Internet (WWW), Internet is increasingly used by banks as a channel for receiving instructions and delivering their products and services to their customers. This form of banking is generally referred to as Internet banking, although the range of products and services offered by different banks vary widely both in their content and sophistication. One of the biggest attraction of Internet as an electronic medium is its openness and freedom. It is a public domain and there is no restriction on who can use it as long as one adheres to its technical parameters. This has also given rise to concerns over the security of data and information transfer and privacy.

Broadly, the levels of banking services offered through Internet can be categorized into three types:

- Disseminate information.
- Simple transactional websites
- Fully transactional websites

Some of the distinctive features of Internet banking are –

It removes the traditional geographical barriers as it could reach out to customers of different countries / legal jurisdiction. This has raised the question of jurisdiction of law / supervisory system to which such transactions should be subjected.

It has added new dimensions to different kinds of risk traditionally associated with banking, heightening some of them, and throwing new risk control challenges.

Security of banking transactions, validity of electronic contract, customers' privacy, etc, which have all along been concerns of both bankers and supervisors have assumed different dimensions given that Internet is a public domain, not subject to control by any single authority or group of users.

It poses a strategic risk of loss of business, to those banks who do not respond in time to this new technology - being the efficient and cost effective delivery mechanism of banking services.

A new form of competition has emerging both from the existing players and new players of the market who are not strictly banks.

**2. THE PROS AND CONS OF ONLINE BANKING**

Today, people want to be in a position to better manage their own personal finances. They want access to easy-to-use tools that can help (preferably free ones) and ones that don't make them doubt their own abilities or competence. It is clear that online banking usage and adoption is growing, it is however less obvious how consumers view their current experience when interacting. However, there are potential problems associated with banking over the Internet of which customers may not be aware. Consumers need to weigh the advantages and disadvantages of online banking before signing up. Let's begin with the pros of online banking. The foremost advantage of online banking is that it is convenient for customers. Online banking services have made their way into most homes and it allows people to perform transactions, pay bills and check balances 24 hours a day.

Online banking is fast, efficient and effective. It can be for managing your savings accounts, credit cards, fixed deposit, insurance etc. The majority of banking sites are also compatible with programs like Quicken and Microsoft Money, so as to allow for more effective management of assets. In addition, internet banking is a cost-effective delivery channel for financial institutions.

Online banking saves time and paper. For consumers, the electronic evolution could make banking and bill-paying as easy as clicking a mouse. In fact, for many consumers the bank of the future may not be a building at all, but a personal computer. For bankers and other creditors, it holds the potential of reducing labour and maintenance cost and more importantly, opening new markets.

**Cons of online banking**.

Although the benefits of online banking are undeniable, there are some inconveniences and concern which customers should be aware. The main issue for most people is that of trust. Many people have difficulty on the security of online transactions, fearing the very real possibility of identity theft.

Online banking sites can also take a while to start up and can be difficult to learn at first. Every customer must be aware of the security issues and protect their details from the hackers.

Atul prakash, a professor in the Department of Electrical Engineering and Computer Science and doctoral students Laura Falk and Kevin Borders examined the Web sites of 214 financial institutions in 2006. According to their study at least one design flaw that could make customers vulnerable to cyber thieves after their money or even their identity. The flaws include placing log-in boxes and contact information on insecure web pages as well as

failing to keep users on the site they initially visited. The flaws leave cracks in security that hackers could exploit to gain access to private information and accounts.

While tons of effort and money has been thrown into improving the usability, functionality and general user experience of online banking services, the progress has been very slow in recent years. Clearly, the choice of whether or not to bank online depends on many variables. It simplifies life for some people and for them it is frankly a better way to bank. For others it may be a little more complex and downright intimidating. In light of these two perceptions, more and more banks are offering online banking as a viable option for their customers.

**2. Need for the study:**

One of the most important developments in banking sector has been the growth of the financial industry over the past two decades. The benefits of the financial industry can be seen in the form of large scale industrial developments, increased employment opportunities, higher turnover as well as revenue generation to the government and also increase in export of goods and services.

Banking industry in India has undergone a process of evolution with the passage of time. To count or to depend on a bank merely by the function it is supposed to perform would be insufficient in the world that we live today.

Investments play a vital role on the part of the customers. A real investor does not simply throw his or her money in a random investment; he or she performs thorough analysis and commits capital only when there is a reasonable expectation of profit. Hence they both are interdependent, i.e.it all depends upon the customer. "Customer knows what to expect". Today banks have relationship management approaches with their clients.

Banks are offering more customized solutions to their clients. The need of the hour is not only to introduce more value added products for which the customers are willing to pay here but also to innovate and enter new segments like small business and periodical finance.

Everything revolves around the customer and banks via with their innovative and quality products to suit their clients. Today the bottom line for any customer is convenience, understanding and evaluating the customers perception on the service and products of a bank has without doubt becomes a need, which propels the body to structure itself for better performance and service.

Thus delivering high quality service to clients is just as important as delivering performance that meets or exceeds their expectations. It is in this context that a study is necessary to know about awareness levels on the service provided by the public and private sector banks and the customer perception towards the banks.

**3: LITERATURE REVIEW: ONLINE BANKING ACCEPTANCE STUDIES**

Online banking acceptance has gained special attention in academic studies during the past five years as, for instance, banking journals have devoted special issues on the topic.(e.g. Karjaluoto et al.,2002; Waite & Harrison, 2002; Bradley & Stewart, 2003; Gerrard & Cunningham, 2003; Mukherjee & Nath, 2003). We can find two

fundamental reasons underlying online banking development and diffusion. First, banks get notable cost saving by offering online banking services. It has been proved that online banking channel is the cheapest delivery channel for banking products once established. (Sathye, 1999; Robinson, 2000; Gigtio, 2002). Second, banks have reduced their branch networks and downsized the number of service staff, which have paved the way to self-service channels as quite many customer felt that branch banking took too much time. Cost saving and freedom from place have been found the main reasons underlying online banking acceptance. (Polatoglu & Ekin, 2001; Black et al., 2002; Howcroft et al., 2002).

Several studies indicate that online bankers are the most profitable and wealthiest segment to banks (Mols, 1998; Robinson, 2000; Sheshunoff,2000). On this basis, no bank today can underestimate the power of the online channel. Laxman (1999) for instance estimates that in the near future the online channel reinforces its importance especially in the countryside, where banks have closed many branches. However, there is no supporting evidence on this regional issue. Without the possibility of managing banking affairs directly from home or office, customers easily perceive troubles in managing their financial affairs such as paying bills.

As noted, on line banking offers many benefits to banks as well as customers. However, in global terms the majority of private bankers are still not using online banking channel. There exist multiple reasons for this. To start with, customers need to have an access to the Internet in order to utilize the service. Furthermore, new online users need first to learn how to use the service.(Mols et al., 1999). Second, nonusers often complain that online banking has no social dimensions, i.e. you are not served in the way you are in a face-to-face situation at branches (Mattila et al., 2003). Third, customers have been afraid of security issues. (Sathye, 1999; Hamlet & Strube, 2000; Howcroft et al., 2002).

**On line banking acceptance in the light of Technology Acceptance Model (TAM).**

It has been noted that users' attitudes towards and acceptance of a new information system have a critical impact on successful information system adoption. (Davis, 1989; Venkatesh & Davis, 1996; Succi & Walter, 1999). If users are not willing to accept the information system, it will not bring full benefits to the organization. (Davis, 1993; Davis & Venkatesh 1996).The more accepting of a new information system the users are, the more willing they are to make changes in their practices and use their time and efforts to actually start using the new information system.

One of the most utilized model in studying information system acceptance is the Technology Acceptance Model (TAM) (Davis et al., 1989; Mathieson, 1991;Davis & Venkatesh, 1996; Gefen & Straub, 2000; Al- Gahtani; 2001) in which system use (actual behaviour) is determined by perceived usefulness (PU) and perceived ease of use (PEOU) relating to the attitude toward use that relates to intention and finally to behaviour. The primary goal of TAM is to predict information system acceptance and diagnose design problems before users have experience with new system.TAM suggest that when users encounter new IS technologies the two main factors influence how and when they will use the system. These two main constructs of TAM are perceived usefulness (PU) and perceived ease of use (PEOU).

Perceived usefulness is defined as "the degree to which a person believes that using a particular system would enhance his or her job performance "(Davis 1989). PEOU is defined as the degree to which the prospective user expects that potential system to be free of effort (Davis et al., 1989). According to Dehone & Mclean (1992) system use as the dependant variable is acceptable, if system usage is not compulsory. Although the TAM has been tested widely with different samples in different situations and proved to be valid and reliable model explaining information system acceptance and use (Mathieson, 1991; Davis & Venkatesh, 1996), many extensions to the original TAM have been proposed. (E.g. Venkatesh & Speier; Venkatesh & Davis, 2000). TAM proposes these two particular constructs, that are of primary significance for IS/IT acceptance, perceived usefulness (PU) and perceived ease of use (PEOU) effect user's attitude towards using the information system. Attitude directly relates to user's intention, which will in turn determine usage of the system. TAM has much strength, including its specific focus on IS usage, the validity and reliability of instruments and its parsimony. (Mathieson et al 2009).

TAM is based on the Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975; Ajzen & Fishbein, 1980) which is concerned with the determinants of consciously intended behaviors (Ajzen & Fishbein, 1980; Davis et al., 1989) appears to be the most widely accepted among information system researchers.(Venkatesh & Davis, 2000; Wang et al 2003; Gefen et al 2003; Cheng et al 2005). TRA has proven successful in predicting and explaining behaviour across a wide variety of domains. TRA is based on the assumption that consumers' behave rationally and that they collect and evaluate systematically all of the available information. Additionally, TRA assumes that people also take into account the effect of their possible actions and based on this reasoning make decisions on whether or not to take action. (Ajzen & Fishbein, 1980).

## 4. OBJECTIVES OF THE STUDY:

To understand the perceptions of customers towards online banking.

To understand the factors which support or reject adoption of on-line banking.

### 4.1 Hypothesis:

H0—there is no association between personal profile (age and Income) and perception towards online banking.

## 5. RESEARCH DESIGN:

The study is based on exploratory research design and involved administering a structured questionnaire to collect the responses on different factors leading to on-line banking adoption. The study was carried out in the month of Dec/Jan 2010.

In order to fulfill the objective of the study, the data was collected from both primary and secondary sources.

Primary data was collected by means of structured questionnaire

Secondary data was collected from Internet resources, journals and magazines.

**5.1 Sample size:**

The sample size was agreed on to be 75 users of on-line banking facilities on areas of central Bangalore,

But only 68 questionnaires were usable as the other seven questionnaires were not completed appropriately. So the total sample taken for the study were 68 respondents using online banking facility.

The sampling design was Simple Random Sampling, any person who availed on-line baking services. Participation in the study was on voluntary basis, respondents were provided with assurance of confidentiality.

**5.2. Limitations of the study:**

**T**he study was confined to only a small area of Bangalore which would not represent the whole population.

We being teachers, majority of the respondents of the study were students who used online banking services.

The finding of this study cannot be extrapolated to other areas.

**5.3: Data Analysis**:

Data collected from the study was analyzed by using SPSS applications. Chi-square test was advocated to find out the association between Age and Income classification with customer's perception towards on-line banking.

Factors analysis was done to identify the most important factors.

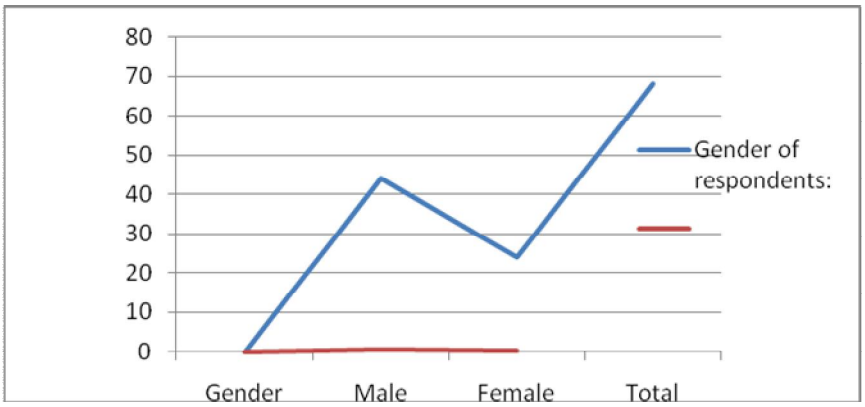
**6. FINDINGS**

The mean age of the respondents is 22.4 years, which is an indication that online banking is very popular among youngsters.

Demographic profile of respondents is represented as:-

**Table-1 Demographic profile of the respondents**

| | **Gender of respondents**: | |
|---|---|---|
| Gender | No .of respondents | Percentage. |
| Male | 44 | 65% |
| Female | 24 | 35% |
| **Total** | 68 | |




**Age of respondents:**

| Age | No. of respondents | Percentage: |
|---|---|---|
| Below 25 | 18 | 26% |
| 25-35 | 28 | 41% |
| 35-45 | 10 | 14% |
| 45-55 | 10 | 14% |
| Above 55 | 2 | 5% |

**Income range of respondents**:

| Income level | respondents | percentage |
|---|---|---|
| Less than 15,000 | 12 | 17% |
| 15,000-25,000 | 20 | 29% |
| 25,000-35,000 | 8 | 11% |
| 35,000-45,000 | 12 | 17% |
| 45,000 and above | 16 | 23% |

**Table -2: Presents the respondents popular online banker**:

| Online banker | No of respondents | percentage |
|---|---|---|
| SBI | 22 | 32% |
| ICICI | 20 | 29% |
| HDFC | 06 | 9% |
| Bank of India | 02 | 3% |
| Corporation bank | 02 | 3% |
| Axis bank | 06 | 9% |
| Others | 10 | 14% |

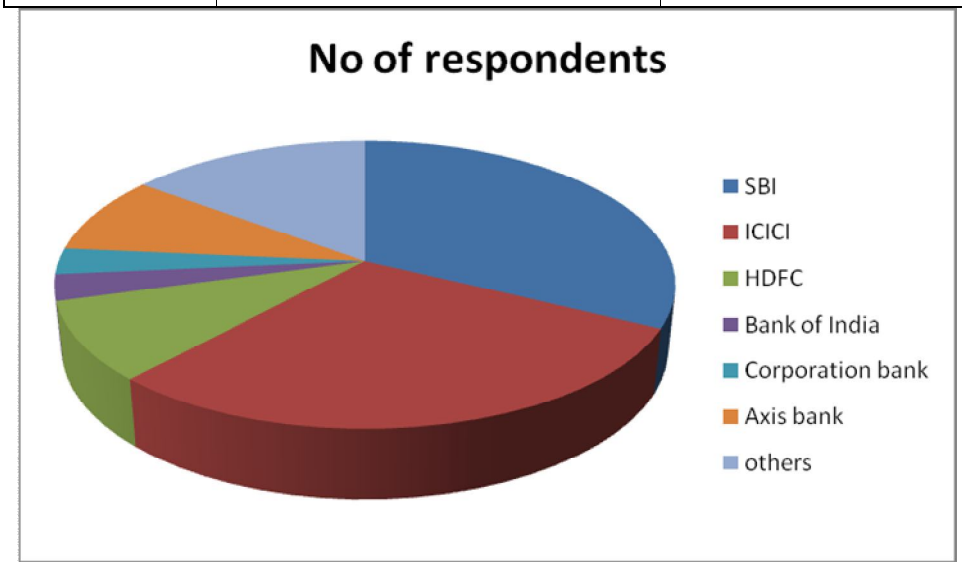



**Table-3: Tenure of using online banking:**

| Duration | No of respondents | percentage |
|---|---|---|
| 1-6 months | 12 | 17% |
| 6-12 months | 24 | 35% |
| More than year | 32 | 47% |

Table 3 depicts majority of the respondents have been using online banking services for more than a year.

**Table-4: Reasons for choosing an online banker**

| Sl.No | Reasons | Number of respondents |
|---|---|---|
| 1 | Traditional account | 22 |
| 2 | Excellent services | 19 |
| 3. | Brand name | 06 |
| 4. | Prompt service | 10 |
| 5. | Support staff | 05 |
| 6. | Well informed | 02 |
| 7. | Others | 04. |

The table 4 can be inferred as 'having traditional accounts- i.e. customer loyalty is one of the major factor to choose an online banker, the next best reason is excellent services rendered to the customers, which makes their errands to the banks minimum.

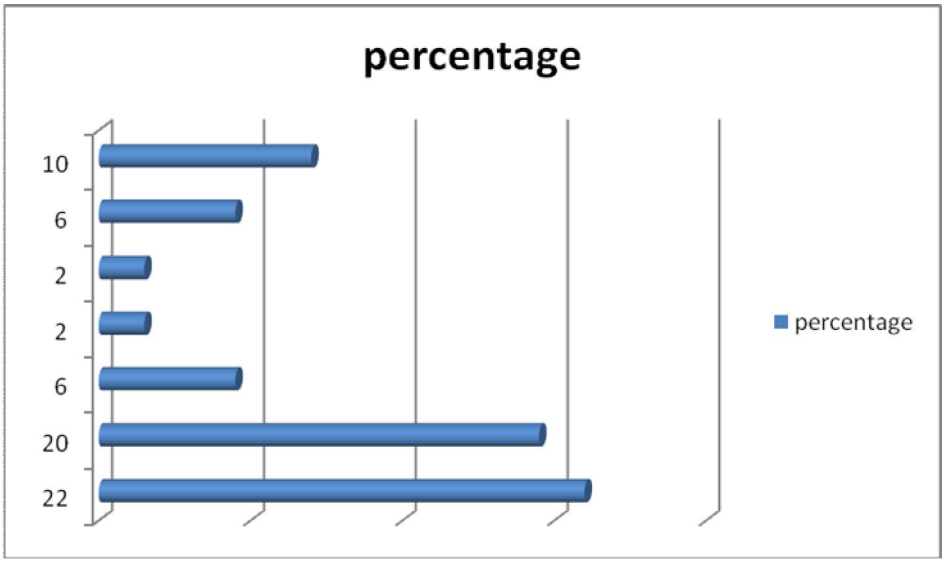



**Table-5: The online banking services commonly used by respondents are: (multiple choices):-**

| Sl.no | Online services | Number of respondents. |
|---|---|---|
| 1. | Seeking product information | 27 |
| 2 | Calculate loan payment | 16 |
| 3. | Download bank documents (app) | 16 |
| 4. | Check balances on-line | 32 |
| 5. | Apply for consumer loans | 12 |
| 6. | Inter-accounts transfers. | 35 |
| 7. | On-line bill payments. | 36 |
| 8 | Tax filing | 12 |
| 9. | Others. | 21 |

This table 5 indicates: most common services that are availed by the customers are:

Online bill payment,

Inter-account transfers,

Checking balances on-line.

**Table-6: Banking service that is user friendly**

| Sl. No | User-friendly Banking service | Number of respondents. |
|---|---|---|
| 1. | Internet banking | 34 |
| 2. | Telephone banking | 18 |
| 3. | ATM services | 51 |
| 4. | Traditional banking. | 21 |

Table 6 can be inferred that ATM services of the bank is considered as a most popular and user friendly mode of banking.

**Table-7 : Suitability of on line banking**

| **Sl.no** | **category** | **Number of respondents:** |
|---|---|---|
| 1 | Businesspeople/working professional | 32 |
| 2. | Students. | 21 |
| 3. | Travelers | 18 |
| 4. | Pensioners/retired people. | 12 |

**Table:8: Opinion regarding factors for not adopting online banking:**

| Sl no | Factors | Strongly agree | Agree | Neutral | Disagree | Strongly disagree. |
|---|---|---|---|---|---|---|
| 1. | Difficult to use | 14 | 07 | 03 | 24 | 18 |
| 2 | No privacy | 27 | 25 | 4 | 12 | 0 |
| 3. | Unsafe | 19 | 17 | 14 | 16. | 03 |
| 4. | Unsure/tension | 18 | 16 | 14 | 13 | 06 |
| 5. | No knowledge | 08 | 14 | 28 | 16 | 07 |
| 6. | Unnecessary cost | 14 | 09 | 14 | 19 | 14 |
| 7. | Too slow service | 12 | 16 | 16 | 14 | 08. |

It can be inferred from the table 8 that the major factors that prohibit customers' from adopting online banking in full swing are:-

Unsafe, unsure and the tension it creates in the mind of customers, This psychological fear has to be removed by the fool-proof system, which ensures user-friendly website, double linked passwords to open the webpage etc.

No privacy – the fear of hacking of accounts, leakage of information is another factor avoiding customers' patronage.

Slow services which could mean due to technological problems which could not be avoided by bankers.

**6.1 Hypothesis Testing:**

H0: Customers' perception towards the factors is independent of Age.

Chi-square was done to find the association between Age and Income classification with Customers' perception towards Online banking (table 8 and 9)

From Table 8 it is inferred that consumer's perception towards variables such as convenience, Low service charges, easy lifestyle are independent of Age factor, Ease to use, speed of use, and safety and security is dependent on Age factor.

**Table 9:** Age-wise consumers' perception towards On-line banking

| S.No. | Factors | Calculated values | Remarks. |
|---|---|---|---|
| 1. | Convenience | 12.6 | Accepted |
| 2. | Ease of use | 23.6 | Rejected. |
| 3. | Speed of use | 21.2 | Rejected. |
| 4. | Safety and security | 32.3 | Rejected. |
| 5. | Low service charges | 16.9 | Accepted |
| 6. | Makes life easier | 14.0 | Accepted |

Calculated values – (at 5% level significant)=18.30.

H0: Customer perception of factors is independent of Income:

**Table-10**: Income classification of customer perception towards online banking.

| Sl.no | Factors | Calculated values | Remarks. |
|---|---|---|---|
| 1. | Convenience | 12.6 | Accepted. |
| 2 | Ease of use | 17.2 | Accepted |

| | | | |
|---|---|---|---|
| 3 | Speed of use | 13.4 | Accepted |
| 4 | Safety and security | 16.7 | Accepted |
| 5 | Service charges | 21.3 | Rejected. |
| 6. | Makes life easy | 19.4 | Accepted. |

Calculated values – (at 5% level significant)=18.30.

Table 9 can be inferred that consumers' perception towards factors such as convenience, ease of use, speed of use, safety and security, making life easier are all independent of income of the respondents, only Service charges is dependent on income factor.

**6.2 Major factors influencing consumers' Perception towards Online banking:**

Factor analysis is done here to deduce the data and summarize the factors influencing the consumers towards online banking:

**Table11 Total Variance Explained**

| | Initial Eigen values | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|---|---|---|
| Component | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 5.319 | 66.484 | 66.484 | 5.319 | 66.484 | 66.484 | 4.744 | 59.300 | 35.930 |
| 2 | 1.798 | 22.472 | 88.956 | 1.798 | 22.472 | 88.956 | 2.372 | 29.656 | 48.896 |
| 3 | .637 | 7.964 | 96.920 | | | | | | |
| 4 | .246 | 3.080 | 100.000 | | | | | | |
| 5 | 3.107E-16 | 3.884 | 100.000 | | | | | | |
| 6 | 2.190E-16 | 2.738- | 100.000 | | | | | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 7 | 1.058E-16 | 1.323 | 100.000 | | | | | | |
| 8 | -1.192E-16 | -1.490 | 100.000 | | | | | | |

Extraction Method: Principal Component Analysis.

Table-11: The Eigen values represent the total variance explained by each factors. Percentage of the total variance was attributed to each factor. For Exploratory factor analysis, principal component analysis is used where the total variance in the data is considered to determine the minimum number of factors that will account for the maximum number variance of data.

The table depicts that first two factors contribute 48% of the variance in factors.

loadings on each factors facilitates interpretation of factors.

From the following table it can be inferred that Usefulness, and 'convenience' are very important factors for adopting online banking in the first set of factors and 'Ease to use and 'safety' of transactions and accounts are some major factors that affect the perception of customers on online banking facilities of banks.

**Table 12.**

**Rotated Component Matrix**

| Factors. | Component | |
|---|---|---|
| | 1 | 2 |
| convenience | .937 | .037 |
| usefulness | .968 | -.089 |
| speed | .577 | .769 |
| ease | .270 | .925 |
| prestige | .906 | .345 |
| safety | -.151 | .798 |

| | | |
|---|---|---|
| security | .930 | .135 |
| charges | .903 | .378 |

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

## 7. FINDINGS

1. Majority of respondents were male.
2. 41% of respondents were of the age group of 25-35.
3. Most of respondents were within the income group between 15,000- 25,000 followed by 45,000 and above group.
4. As far as occupation is concerned there was representation from major areas like students, working professionals, business.
5. SBI was most popular on-line banker among the respondents of this study.
6. 47% of respondents were operating online transactions for more than one year.
7. ATM services are the most popular and user-friendly banking services according to the respondents of this study.
8. 'Business people' followed by 'Travelers' are considered to be most suitable for online banking model.
9. 'Ease to use' and 'speed of use' is considered as Age -dependent factor towards online banking.
10. Fear of hacking, unsafe and 'No privacy' are the major causes for not adopting online banking regularly.
11. 67% of respondents expressed satisfactory attitude towards their bankers.
12. '**Convenience'** and '**Usefulness'** is the major factor influencing the adoption of on-line banking.
13. **'No privacy'** and **'Unsafe'** are the two major causes for not adopting online banking habits.

**Recommendations**

1. Increasing the security of Information, by providing the foolproof system of double log-in and double log-out passwords will help in increasing the safety of transactions.
2. Sending SMS, or an alert system to customers after any transaction online will boost the level of confidence of customers'.
3. User friendly web-pages which performs the services adequately.
4. Transparent services charges- respondents feel there a lot of disguised services charges which can be structured.

**Scope for Further Research**

This study can be carried forward in these areas:

- Understanding customers' perception towards online banking service on a national scale.
- Challenges and opportunities of introducing online banking services in Rural India
- A study on advantages and demerits of on-line banking in relation to Traditional banking practices can be conducted.

**Conclusion**

On-line banking facility is no doubt a boon to customers who can perform the banking transactions a click away, but it has to be very secure and fast enough to gain the trust and confidence of a common man. The pockets of growth and development in India, lack of adequate infrastructure does not allow on-line banking services to penetrate in rural India effectively. But there is a slow upscale into traditional banking methods with the latest technology related benefits serving today's knowledgeable banking customer.

**References**


1. Ajzen, I. and Fishbein, M. (1980),Understanding Attitudes and Predicting Social Behavior, Prentice – Hall, Englewood Cliffs, NJ.
2. AL –Gahtani, S (2001), "The applicability of TAM outside North America: an empirical test in the United Kingdom", Information Resources Management Journal, July-September, pp. 37-46.
3. Black, N.J, Lockett,A., Winklhofer, H., and Mckechnie, S. (2002), "Modelling Consumer Choice of distribution channel: an illustration from financial services", The International Journal of Bank Marketing, Vol.20, No.4, pp. 161-73.
4. Bradley . L, & Stewart, K. (2003),"A Delphi study of the drivers & inhibitors of Internet banking", The International Journal of Bank Marketing, Vol.20, No.6, pp.250-60.
5. Davis, F. D. (1993), "User acceptance of Information technology, system characteristics, user perceptions and behavioral impacts", International Journal of Man-Machine Studies, Vol. 38, pp. 475-87.
6. Davis, F. D., Bagozzi, R. P. and Warshaw, P.R. (1989), "User acceptance of computer technology: a comparison of two theoretical models", Management Science, Vol.35, No.8, pp. 982-103.
7. Davis, F.D., and Venkatesh, V. (1996), "A critical assessment of potential measurement biases in the technology acceptance model; three experiments", International Journal of Human-Computer Studies, Vol. 45, pp. 19-45.
8. Delone, W.H., and Mclean (1992), "Information systems success: the quest for the dependent variable"
9. Fishbein, M., and Ajzen, I. (1975), Belief, Attitude, Intention, and Behaviour: An Introduction to Theory and Research, Addison – Wesley, Reading, MA.
10. Gerrard, P., and Cunningham, J. B. (2003), "The diffusion of Internet banking among Singapore consumers", The International Journal of Bank Marketing, Vol. 21, No.1, pp.16-28.
11. Gefen, D., and Straub, D. (2000), "The relative importance of perceived ease of use in IS adoption: a study of e-commerce adoption", Journal of the Association for Information System, Vol. 1, No.8, pp.1-28.
12. Giglio,V. (2002), "Privacy in the world of cyber banking: emerging legal issues and how you are protected", The Secured Lender, March/April, pp. 48-60.

13. Howcraft B., Hamilton, R., and Hewer, P. (2002), “Consumer attitude and the usage and adoption of home-based banking in the United Kingdom”, The International journal of Bank Marketing, Vol.20, No.3, pp. 111-21.
14. Hamlet, C., and Strube, M. (2000),”Community banks go on line”, ABA Banking Journal’s 2000 White paper /Banking on the Internet, March, pp.61-65.
15. Karjaluoto, H., Mattila, M., and Pento, T. (2002), ”Electronic banking in Finland – Consumer beliefs and reactions to a new delivery channel”, Journal of Financial Service Marketing, Vol.6, No.4, pp. 346-361.
16. Mattila. M., Karjaluoto, H., and Pento, T. (2003), “Internet banking adoption among mature customers: early majority or laggards”, Journal of Service Marketing, Vol.17, No.5, pp.514-26.
17. Mols, N.P. (1998), “The behavioral consequences of PC Banking”, The International Journal of Bank Marketing, Vol.16, No. 5, pp. 195-201.
18. Mols, N. P., Bukh, P.N.D., and Nielsen, J.F. (1999)” Distribution channel strategies in Danish retail banking”, International Journal of Retail and Distribution Management, Vol.27, No.1, pp.37-47.
19. Mathieson, K. (1991),”Predicting user intentions: comparing the technology acceptance model with the theory of planned behavior”, Information system Research, Vol.2, No.3, pp. 173-91.
20. Polatoglu V. N. and Ekin. S. (2001), ”An empirical investigation of the Turkish consumers’ acceptance of Internet banking services”, International Journal of Bank marketing, Vol.19, No.4, pp. 156-65.
21. Robinson, T. (2000), “Internet banking: still not a perfect marriage”, Informationalweek.com, April 17, pp. 104-6.

# Marine Exports From India To USA And Japan

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**Abstract**

The study focuses on the trends of export of marine food products of India to its major importers USA and Japan. Various macro economic factors of the importing countries like GDP, population, unit price of marine product, exchange rate of importing country and total production of marine products in India have been considered. The paper focuses among these factors that constitute of the total demand from importing nations. The results show that the factors like population and exchange rate of the currencies has a positive effect on the export demand and the extent of demand varies significantly in USA and Japan primarily due to different food requirements and the segment of products being exported. The US primarily imports the crustacean and specialty segment whereas the exports from India to Japan are all inclusive in nature.

**Keywords:** marine exports, India, USA, Japan

## Introduction

***Exports*** sector in ***India*** constitute a larger portion in the total trading of the nation. The faster rising exports sector in India is largely fuelled by the agriculture commodities. Marine products have emerged as one of the major constituent of agricultural export. India's seafood exports which stagnated few years back are likely to touch over $3.5 billion from the current level of $2.2billion by 2010 provided the key thrust area include value addition, expansion of aquaculture, technological up gradation and tapping unexplored resources. Marine products from India have potential to accelerate faster in view of their growing demand in trading blocs like EU, Middle East, China, Canada, Tunisa, Puertorico and Russia [ASSOCHAM, 2008].

Rapid investment has taken place in India in the form of mechanization of indigenous craft, introduction of mechanized fishing vessels, improvement of fishing implements, establishment of infrastructure facilities for preservation, processing, storage and transportation of fish, fishery products and landing and berthing of vessels [Rao, 1983; Srivastava and Reddy, 1983; Rao, 1988]. Most of the studies have shown that a significant development of this sector occurred so far as quantity of catch is concerned and has recommended for more and more investment in this sector without giving any attention to the overfishing problem. However, some studies report that overfishing is taking place in different parts of the country (George et al., 1980; James, 1988).

The export of marine products in India mainly consisted of dried items like dried fish, dried shrimp, shark fins and fish maws *etc*. However, later there was a decline in the export of dried marine products, and subsequently the exports of processed items continued to make steady progress in marine trade. The markets for Indian marine foods were initially confined to Singapore, Sri Lanka and Myanmar to a great extent. When frozen and canned items

figured increasingly in the export basket, USA, Japan, France, Canada and Australia became the important markets for Indian marine products [Indian Marine Trade and Services, 2004].

Looking at this fast movement of US and Japan markets to import fish from India, in the present paper we aim to explore the opportunities for the Indian markets. The paper tries to study the trend in export demand for Indian seafood in Japan and USA and to identify the important parameters that affects the marine exports from India to these markets. We have designed the following hypothesis for our study:

Null Hypothesis (Ho): There is no relation between the exports of Marine Products from India to the US and Japan and the macroeconomic factors of their economies.

Alternate Hypothesis (Ha): There is a relation between the exports of Marine Products from India to the US and Japan and the macroeconomic factors of their economies.

**Methodology**

The secondary data information of marine exports from India to US and Japan has been collected from IMF World economic outlook, Indian Statistical Data, Reserve Bank of India and Marine Products Export Development Authority (MPEDA). We have collected information from 1998 to 2007 for our analysis. We have used linear multiple regression techniques in order to find the impact of the importing countries demand for Indian marine products (US and Japan) on India. The data has been collected for the following variables along with their terminologies:

Dependent Variable (Y):

The quantity of Marine products export from India is taken as the Dependent Variable. We will form two linear regression equations to estimate the quantity of marine products exported to USA and Japan, therefore we will be accessing the value for the dependent variable for US and Japan.

Independent Variables (X's):

The independent variables are the factors whose effect we are researching quantitatively on the dependent variable. The intent is to find out to what extent the independent variable explains the change in the dependent variable. Below are the independent variables selected for the current study:

*GDP of Importing Country:* The GDP of the country which is importing the marine products from India is taken to be a factor while estimating the demand quantity. The GDP of Japan and the USA has been considered for a period of 10 years.

*Population of Importing Country:* Seafood and other agro marine products being the primary food of Japan and a major food source for USA the population of the country is considered to be a major factor while estimating the demand.

*Exchange rate of Importing Country:* The exchange rates for the importing country with respect to India have been taken into account as an independent variable. The exchange rate for the US dollar is taken year wise and has been averaged over a period of 12 months. Similarly, for the Japanese Yen ¥ however the Japanese yen is 100¥ conversion to rupee.

*Unit Price of Marine Product:* We have considered the unit price of the marine product in Rs/Kg. Even though the price of different products is different since the distribution of prices is assumed to be almost equal, we are taking an average of unit price for all products.

*Total Production of Marine Products in India:* The total production of marine products including the dried, the cut fish and the crustacean variety has been taken as an independent variable.

The multiple linear regression equations have been used for the study. The regression equations for USA and Japan used are as follows:

*The regression equations for Japan*

$$Y_{Japan} = \beta_0 + \beta_1 Pop_{Japan} + \beta_2 Exchg_{Japan} + \beta_3 GDP_{Japan} + \beta_4 UnitVal_{Japan} + \beta_5 TotQuan + U_t$$

*The regression equations for USA*

$$Y_{USA} = \beta_0 + \beta_1 Pop_{USA} + \beta_2 Exchg_{USA} + \beta_3 GDP_{USA} + \beta_4 UnitVal_{USA} + \beta_5 TotQuan + U_t$$

Where $Y_{Japan}$ = Quantity Demanded in Japan, $Pop_{Japan}$ = Population of Japan, $Exchg_{Japan}$ = Exchange rate of Japanese Yen (Rs/100¥), $GDP_{Japan}$ = Real Gross Domestic Product of Japan, $UnitVal_{Japan}$ = Unit value of Marine Product exported to USA Rs/Kg, TotQuan = Total production of Marine products for the year; and $Y_{USA}$ = Quantity Demanded in USA, $Pop_{USA}$ = Population of USA, $Exchg_{USA}$ = Exchange rate of US Dollar (Rs/$), $GDP_{USA}$ = Real Gross Domestic Product of USA, $UnitVal_{USA}$ = Unit value of Marine Product exported to USA Rs/Kg, TotQuan = Total production of Marine products for the year.

**Data Anaysis**

***Marine exports in India:***

The export of marine products from India set an all time record of 612641 tonnes of value Rs. 83.6353 billion or $2.14 billion and US Dollar 1852.93 million during 2006-07. Nevertheless, marine products exports have shown an increase of 19.62% in quantity, 15.43% in Ruppes value and 12.69% in dollar terms during 2005-06 to 2006-07. The export of marine products from India recorded a growth of 11.29 per cent at 602835MT valued at Rs.8607.94 crore for the period 2008-09. In terms of export earnings, Frozen Shrimp continued to be the largest export item (54% in Value), followed by Fr. Fish (17%), Cuttlefish (10%), Squid (7%), dried items (2%) etc. The export of tuna fish contributed highly to export earnings. Tuna fish exports are targeted to reach 400 million dollar by 2010. Andaman and Nicobar Island have been identified as holding 25-30% of tuna potential in the country.

India’s major export items include frozen fish, cuttlefish, squid and dried items.

States like Andhra Pradesh, Tamil Nadu, Kerala, Maharashtra, West Bengal, Gujarat and Orissa have huge marine products potential which needs to be harnessed in a manner that can enhance India’s export potential, provided all possible incentives and encouragement in terms of policies & finance is given to exporters [ASSOCHAM, 2008].

***Marine imports in Japan***

The Japanese market for foreign foods products has opened up rapidly in recent years, due to the inability of domestic producers to satisfy internal demand, and as the tastes of Japanese consumers have become more internationalized. In particular Japan's current state of seafood resources and the resultant declining domestic production in fishing, trawling and aquaculture, provides expanding import opportunities in the seafood sector in Japan, which are supported by improved and developed distribution technologies in air transportation and freezing [Food Products trends in Japan, 2007]. The superior quality and taste of Indian products create advantages in this sector particularly for products such as live abalone and fresh sea urchin, which are high-class seafood in Japan.

***Marine imports in USA:***

The overall U.S. seafood consumption continues its positive trend, with increase of per capita consumption. Since 2001, consumption has increased by 1.8 lbs. (0.82 kg) to 16.6 lbs. (7.5kg). Imports play an increasingly important role for the U.S. and today represent approximately 88% of U.S. seafood consumption. The trade balance of seafood decreased by 375 million pounds (170m metric tons) to 2.14 billion pounds (970m metric tons). However, in value it continues to grow, representing a trade deficit of USD 7.8 billion today. The leading trading partners for the U.S. are India, Japan, Canada and Thailand. Consolidation in the primary and secondary sector of the U.S. seafood industry continues to be necessary, with enormous pressure on the main players and a continuing consolidation on the customer side of the industry, both in retail and food service. The continuing weakness of the U.S. dollar still supports the primary sector, but makes life difficult for the secondary sector [USA Sea Food Industry, 2007].

***Marine exports from India to USA and Japan***

The Marine products Export Development Authority (MPEDA) acts as a coordinating agency with different Central and State Government establishments engaged in fishery production and allied activities. The following analysis indicates the existing importance of marine products trade from India to Japanese and American markets.

*Macro Factors of Japanese Economy and Total Marine products exported from India:*

Table 1 indicates the macro factors of Japan and India’s marine exports to Japan during 1998 to 2007. The table shows that the Population of Japan has grown by 1.21% and the GDP of the country has increased by 6.11% from 1998 to 2007. The exchange rate of rupees per 100yen has increased by 11.17% and the marine products export from India to Japan has increased by 12.69% during 1998-2007. This major improvement in India’s exports

to Japan has been due to the improvement in the technology and infrastructure requirements and mainly due to globalization policies of India.

Table 1: Macro Factors of Japan and Marine exports from India

| Year | $Pop_{Japan}$ | $Exchg_{Japan}$ Rs/100Y | $GDP_{Japan}$ million$ | TotQuan lakhTonne | $UnitVal_{Japan}$ Rs/KG | $Y_{japan\ Tonnes}$ (Quantity Exported) |
|---|---|---|---|---|---|---|
| 2007 | 127,777,178 | 35.21 | $4,302 | 60 | 1221812 | 67373 |
| 2006 | 127,771,546 | 39.02 | $4,367 | 64 | 1119170 | 67437 |
| 2005 | 127,768,457 | 40.10 | $4,514 | 66 | 1125638 | 67277 |
| 2004 | 127,787,234 | 41.89 | $4,426 | 63 | 1056388 | 66990 |
| 2003 | 127,546,746 | 40.20 | $4,125 | 64 | 1025979 | 68983 |
| 2002 | 127,432,765 | 38.87 | $3,873 | 62 | 996255 | 64905 |
| 2001 | 127,043,756 | 38.87 | $4,147 | 60 | 1067087 | 54916 |
| 2000 | 126,926,870 | 41.73 | $4,746 | 57 | 1137419 | 50020 |
| 1999 | 126,765,756 | 38.00 | $4,537 | 57 | 1193885 | 57832 |
| 1998 | 126,242,875 | 31.67 | $4,054 | 53 | 1280125 | 59785 |

The result of the regression equation is shown in Eq1. The coefficient of all macro-economic variables selected for the study are showing positive but insignificant impact on the marine exports from India to Japan except the GDP of Japan which is negative but again insignificant. This shows that none of the factor identified in the study is statistically significant. Only the F- value is significant at 5% level of significance. This implies that there may be some other factors which show an impact on India's marine products to Japan.

Equation 1

Yjapan = 0 .0048POPjapan+ 9394.69Exchgjapan--89.91GDPjapan+1298.89TotQuan+0. 34UnitValjapan-

$R^2$ = 0.9045 Multiple R = .95107 Adjusted R square = .7852 Standard Error = 3016.67 Observations = 10

986066.16

*Macro Factors of USA Economy and Total Marine products exported from India:*

Table 2 indicates the macro factors of USA and India's marine exports to USA during 1998 to 2007. The table shows that the Population of USA has grown by 10.1% and the GDP of the country has increased by 28.63% from 1998 to 2007. The exchange rate of rupees per US dollar has depreciated by 9.75% and the marine products export from India to USA has increased by 6.20% during 1998-2007. This growth in India's marine exports to USA has been due to the opening of the Indian economies with the rest of the World and also because of improvement in technology and infrastructure required for the rise in exports from India.

Table 2: Macro Factors of USA and Marine exports from India

| Year | $Pop_{USA}$ | $Exchg_{USA\ Rs/\$}$ | $GDP_{USA}$ million $ | TotQuan Lakh tonnes | $UnitVal_{USA}$ Rs/Kg | $Y_{USA\ Tonnes}$ |
|---|---|---|---|---|---|---|
| 2007 | 302,532,272.00 | $45 | 11663 | 60 | 2617957 | 36,612 |
| 2006 | 299,398,484.00 | $45 | 11413 | 64 | 2517203 | 43,758 |
| 2005 | 296,410,404.00 | $44 | 11003 | 66 | 2495102 | 55,817 |
| 2004 | 293,655,404.00 | $45 | 10676 | 63 | 2355831 | 50,045 |
| 2003 | 290,809,777.00 | $47 | 10301 | 64 | 2211379 | 53,153 |
| 2002 | 287,578,864.00 | $49 | 10049 | 62 | 2067684 | 61,703 |
| 2001 | 284,747,546.00 | $47 | 9891 | 60 | 2096122 | 49,041 |
| 2000 | 281,421,906.00 | $45 | 9817 | 57 | 2184463 | 41,747 |
| 1999 | 277,747,239.00 | $43 | 9470 | 57 | 2199572 | 36,645 |
| 1998 | 274,747,475.00 | $41 | 9067 | 53 | 2197158 | 34,472 |

The result of the regression equation is shown in Eq2. The coefficient of all macro-economic variables selected for the study are showing positive except GDP of USA but insignificant impact on the marine exports from India to USA. The coefficient of total quantity supplied from India to USA has a positive and statistically significant impact on the total marine exports from India to USA. The ANOVA analysis shows that the F- value is significant at 5%

level of significance. This implies that with the increase in the demand of total quantity of marine products in USA will increase its imports of marine products from India.

Equation 2

**Yusa = 0.00053POPusa+32996.178Exchgusa-58.09GDPusa+2089.92TotQuan+0.66UnitValusa-1597311.8**

$R^2$ = 0.9567 Multiple R = .9781 Adjusted R square = .9025 Standard Error = 2850.211 Observations = 10

***Comparative Study for the Export demand for USA and Japan:***

The macro –economic indicators of USA and Japan with respect to total marine exports of India to these countries can be interpreted as below:

1. *Population Factor*: From the equations we access that the population co-efficient for Japan is around ten times that of the USA. Even though the population factor is low but usually the change in population is the range of 100,000 or over the co-efficient becomes significant. The difference in factors occurs because of the primary source of food in Japan is considered to be seafood and dried marine food products whereas in the USA even though the population is much higher the primary source of food is not seafood. Moreover the USA also gets large quantities of marine products from nearby Carribean and the Hawai islands.

2. *Exchange Rates:* There is a large difference in the co-efficient of exchange rates. Meaning it is far more profitable for India and also the USA to import marine products from India when the Indian currency depreciates against the USA dollar as compared to depreciation of Indian rupee against the Japanese Yen.

3. *GDP:* The GDP of both countries comes as a negative coeffient for both US and Japan. The probable reason for this could be that during the last 2 time periods even though the GDP is decreasing the corresponding change in the imported quantity has not lowered significantly.

4. *Total Quantity Produced in India:* The quantity produced in India is also a significant factor since more produce is exported from India. The coefficient is higher for the US since it is more profitable to export to the US overall and the same is reflected in the equation.

5. *Unit Value*: The unit value is more significant in the US than for Japan although its overall contribution is not very large. This can be interpreted by understanding that either the price is too les to be of consequence or the quality of products exported from India is very high. Hence, price is not a major factor. In the US the exported products are usually expensive products like Crustacean, shrimps, Sardine and Tuna hence not effected largely by change in prices.

**Conclusion**

It is evident that the trends have distinct features for the two countries that have been considered. It can be said that with respect to the population factor, Japan has a stronger demand for Indian seafood, in spite of a much smaller population, because of the eating preferences of the Japanese people. As far as Rates of Exchange are concerned, it is quite clear that it is a win-win situation for both USA and India to transact on marine products between each other. The Indian marine exports industry should not worry about the economic indicators like GDP of Japan and USA, because the negative correlation coefficient underlines the non-reliance of GDP on India's marine export quantities. The total quantity of production is a significant factor with respect to both the countries, more so with respect to USA. Factors like high quality of Indian marine exports are underlying reasons for the relative insignificance of the unit value factor. On an introspective note, one factor, namely the high level of multi co linearity between the various factors considered can be looked at as a potential drawback of this analysis.

**Recommendations**

Export items like Frozen Shrimp continue to contribute healthily to the export percentage (54 %). Tuna fish, a relatively small contributor to this percentage till now has shown remarkable progress and scope of further exploitation. Andaman and Nicobar Islands has been identified as holding 25-30 per cent of tuna potential in the country. An effort to rationally tap this option will go a long way in improving the marine export scenario, especially with respect to a more niche US market. Export to Japan showed a positive growth. However, export to USA showed a negative trend. This is one issue that needs immediate attention because all these countries, especially USA have immense potential as importers of Indian seafood. Other than that, steps like creation of fisheries related infrastructure, cold storage chain, fish processing units, setting up training facilities for skill building and trade development should also be undertaken.

**References**


1. Bain, S. (1986) In Management and Development of The Australian Fishing Zone Fisheries Development: 2000 AD (Ed.) K. K. Trivedi, Oxford and IBH Publishing Co., New Delhi.

2. Clark, C. W. (1976) Mathematical Bioeconomics: The Optimal Management of Renewable Resources, Wiley-Interscience, New York.

3. Das, T. K., Neogy, R. and Chakraborty, D. (1996) Technology choice under risk in marine fishing, Fishery Technology, 33(2).

4. Das, Tuhin K., Neogy, Rajyasri, Chakraborty, Debesh (2000), Sustainability of marine fishing: a case study of West Bengal. By:, Applied Economics Letters, 13504851, Nov2000, Vol. 7, Issue 11

5. Garcia, S. and Newton, C. (1994) Current situation, trends and prospects in world capture fisheries, Conference on Fisheries Management: Global Aspects, Seattle, Washington.

6. George, M. J. Suscelan, C., Thomas, M. M. and Kurup, N. S. (1980) A case of overfishing: depletion of shrimp resources along Neendakara Coast, Kerala, The Marine Fisheries Information Service, CMFRI, Cochin.

7. Gulland, J. A. (1964) The reality of catch per unit effort as a measure of abundance of The North Sea Tran Fisheries. On The Measurement of Abundance of Fish Stocks. Cons. Intern. Expl. Mcr. Rapp. et Proc. Verb. Des Reunions.

8. James, P. S. B. R. (1988) A review of the existing regulations in the maritime states of India in relation to exploitation of fishery resources and their conservation and management, Symposium on Tropical Marine Living Resources, CMFRI, Cochin.

9. Kmenta, J. (1986) Elements of Econometrics, Macmillan Publishing Company, New York.

10. Pope, J. G. (1975) Measurement of fishing effort, Cons. Intern, Expl. Mer. Rapp. et Proc. Verb. Des. Reunions.

11. Prais, S. J. and Houthakker, H. S. (1955) The Analysis of Family Budgets, Cambridge University Press, New York.

12. Rao, P. S. (1983) Fishery Economics and Management in India, Pioneer Publishers and Distributors, Bombay.

13. Rao, S. (1988) Mechanisation and Marine Fishermen: A Case Study of Vishakapatnam, Northern Book Centre, New Delhi.

14. Rothschild, B. J. (1977) Fishing effort, in Fish Population Dynamics (Ed.) J. A. Gullard, Wiley-Interscience, New York.

15. Srivastava, U. K. and Reddy, M. H. (1983) Fisheries Development in India, Concept Publishing.

16. World Resources 1996-97 (1996) Oxford University Press, New York.

*Websites:*

1. Food Products Trends in Japan (2006) - Tokyo International Foods Office – www.bento.com/tokyofood. - last assesed on August 28, 2009.

2. Foreign exchange rates - **Error! Hyperlink reference not valid.** last assessed on August 13, 2009.

3. Indian statistical data - www.indiastat.com – last asses on August 4, 2009

4. IMF world economic outlook – http://imf.org/external/pubs/ft/weo/2009/02/index.htm - last asses on August 25, 2009.

5. Marine Products Export Development Authority (MPEDA )- www.mpeda.com – last assesd on August 6, 2009.

6. Indian Marine Trade & Services (2004) , Reserve bank of India - www.rbi.org.in – last assesd on August 24, 2009

7. Union Budget and economic survey http://indiabudget.nic.in/ - last asses on August 1, 2009.

8. USA Sea Food Industry - National Fisheries Institute - http://www.aboutseafood.com/ - last assesd on August 27, 2009.

# A future power - Is it a “G” marketing

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## Abstract

Current practice in Green marketing does not equate with the demands of the theoretical perspective. G marketing has focused on marketing green products and addressing the environmental concerns of consumers. It has failed to relate to the theory of G marketing which perceives the dominant social paradigm of industrial societies, rather than particular behaviours, to be the agent of environmental crisis. G marketing strategies with this perspective would consider holistic issues and sustainability and would be aware of the limitations of the prevailing dominant social paradigm.

Generally people focused on attitudes and behaviour of the environmentally-conscious consumer. G marketing is an initiative process of delivering products and services that are based on environmental benefits. The main idea that revolves around the concept of G marketing is that, most of the products are environmentally or ecologically friendly.

The green products that are sustainable should be more durable, cheaper, healthier, and thoughtful as it brought to the social communities. The green business, together with its products and services should make the future in a creative and thrilling way.

A leader who is concerned with the environment and thinks of other strategy must face the environmental problems and challenges that the business will meet. The involvement of redesigning in completing the task and responsibility for the environment is emphasized, and in return the business will gain great opportunity to spare the environmental resources in various good reasons.

In order to achieve the overall competency, the business should improve the resource productivity to meet the efficiency expectation. The business will face many environmental risks and costs but still they have to acquire the knowledge in managing and controlling these aspects. As the marketing concept and perspective, the business should definitely meet the customers various environmental needs, for that they can build loyalty towards the customers and can promote value innovation and a chance to develop a breakthrough product. With this mindset, it would be interesting then to investigate environment as its driving theme.

**Introduction:**

Green marketing has not lived up to the hopes and dreams of many managers and activists. Although public opinion polls consistently show that consumers would prefer to choose a green product over one that is less friendly to the environment when all other things are equal, those "other things" are rarely equal in the minds of consumers. For example, when consumers are forced to make trade-offs between product attributes or helping the environment, the environment almost never wins, and hopes for green products also have been hurt by the perception that such products are of lower quality or don't really deliver on their environmental promises. And yet the news isn't all bad, as the growing number of people willing to pay a premium for green products from organic foods to energy-efficient appliances attests. How, then, should companies handle the dilemmas associated with green marketing? They must always keep in mind that consumers are unlikely to compromise on traditional product attributes, such as convenience, availability, price, quality and performance. It's even more important to realize, however, that there is no single green-marketing strategy that is right for every company. The companies should follow one of four strategies, depending on market and competitive conditions, from the relatively passive and silent "lean green" approach to the more aggressive and visible "extreme green" approach with "defensive green" and "shaded green" in between. Managers who understand these strategies and the underlying reasoning behind them will be better prepared to help their companies benefit from an environmentally friendly approach to marketing.

The **GREEN** code for environmental market research:

**G eneralize with care** Consumer behavior will not necessarily be consistent across different product types, and particular market segments may respond to certain issues on the green agenda but not others.

**R emember,** the validity of a piece of market research is not related to the degree to which it supports your preferred option.

**E xplore** the context from which market research data comes. Be clear on the nature of the sample used, the questions asked, the way in which responses were recorded and the time and place from which the responses come.

**E nsure** that where market research is crossing international borderlines, that the terminology and interpretation remains consistent. Terms like ‘environment’, ‘green’ and ‘conservation’ do not always translate precisely between languages.

**N eutrality** is important. Ensure that when the company pose questions to consumers, that they can make any response without being made to feel guilty or uncomfortable, and ensure that the consumers’ own preconceptions about the green agenda (such as an assumption that green products will cost extra) are not encoded within the questions.

**The Research Objectives**

The concept of green marketing is yet to gain recognition, popularity and acceptance to the full extent. In view of growing concern over the environmental issues across the world the marketers are attempting to address the green issues by way of increased attention to 'cradle to cradle' products instead of 'cradle to grave' products. Though the shades of green are different, the marketers are constantly addressing the concept. Successful marketing strategy needs to be customer centric and so also the green marketing strategy.

Among other things it is the positive perception, attitude, interest awareness and preference of consumers towards the green products that ensure sustainable success. These pertinent aspects are yet to be explored with much vigor. Against this background this study has been attempted with the following objectives:

- To capture and categorize the respondents on the basis of their level of eco friendliness and to understand their profile.
- To study the level of awareness, source of awareness, preference and level of satisfaction

  with respect to select eco friendly products.
- To study the influence of select demographic variables on the perception of eco friendly

  products.
- To explore the difference in the perception regarding eco friendly products among the various categories of respondents.
- To offer suggestions based on the findings.

**Methodology**

The study assumes the characteristics of both exploratory and descriptive research. The study was based mainly on the primary data captured through a specially designed questionnaire. The questions designed in the interview schedule aims to explore (1) the profile of the respondent in terms of age, gender, education etc., (2) awareness level of green products (3) knowledge base pertaining to green products (4) Preference towards green product category (5) Loyalty rating (6) Attitude towards green products. For the purpose of measuring attitude. 45 variables explaining awareness, preference, behavior, switch over behavior, satisfaction and the like have been developed and the responses were obtained in Likert's five point scales. This database is used to categorize respondents into different category of green consumers. A sample of 60 respondents distributed equally between male and female.

**Categorization of Respondents on the Basis of Eco Friendliness:**

The respondents were categorized on the basis of the perception towards eco friendly aspects. The respondents are classified into four categories viz., 'Aspirants', 'Addicts', 'Adjusters' and 'Avoiders'. A brief description of the categories of respondents is given below:

Aspirants are aware of the ecological imbalance and its damaging effects. They wish to consume eco friendly products and feel that eco friendly products render value for price paid. Addicts have a very strong favorable attitude towards eco friendly products. They buy only eco friendly products, feel that the eco friendly products are good for health and are fully satisfied with the same. They always recommend eco friendly products and wait for the availability of the same instead of buying the alternatives. Adjusters don't feel much difference between eco friendly products and non eco friendly products and are happy with any product that fulfills their needs. They are not very specific about the eco friendliness and go by product availability, price and quality. Avoiders feel that ecological imbalance is bound to happen and as an individual they cannot contribute to avoid the same. They feel that eco friendly products are yet another marketing gimmicks, they don't deliver what they promise and that they are costly. They also feel that eco friendliness does not enable to upgrade quality and the products do not have world class quality.

The classification of the respondents as per the findings is reported in Table 1.

Table 1: Respondents on the Basis of their Level of Eco Friendliness

| Category | No. | % |
|---|---|---|
| Aspirants | 35 | 58.3 |
| Addicts | 12 | 20.0 |
| Adjusters | 9 | 15.0 |
| Avoiders | 4 | 6.7 |
| **Total** | **60** | **100** |

The above table shows that majority (58.3%) of the respondents are 'aspirants', 20 % are 'addicts', 15% are 'adjusters' and only 6.7% fall in the category of 'avoiders'.

**Profile of the Respondents:**

The above categories of respondents are further explored on the basis of demographic variables. Result is shown in the following table:

**Profile of the Respondents**

| | Aspirants | | Addicts | | Adjusters | | Avoiders | |
|---|---|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % | No. | % |
| GenderMaleFemale | 15 | 42.9 | 7 | 58.3 | 5 | 55.6 | 3 | 75.0 |
| Age<br>Below 20 years | - | - | 1 | 8.3 | - | - | - | - |
| 21 to 30 years | 3 | 8.6 | 1 | 8.3 | - | - | - | - |
| Education<br>School level | 18 | 51.4 | 7 | 58.3 | 5 | 55.6 | 2 | 50.0 |
| Under graduation | 12 | 34.3 | 3 | 25.0 | 3 | 33.3 | - | - |
| Family M onthly Income<br>Below Rs.10,000 | 5 | 14.3 | 3 | 25.0 | 2 | 22.2 | 2 | 50.0 |
| | 18 | 51.4 | 4 | 33.3 | 1 | 11.1 | 1 | 25.0 |
| Occupation Business<br>Professional Employed<br>Housewife | 10 | 28.6 | 5 | 41.7 | 5 | 55.6 | 2 | 50.0 |
| | 3 | 8.5 | - | - | - | - | - | - |
| Family Size<br>TwoThreeFour | 4 | 11.4 | 3 | 25.0 | - | - | - | - |
| Above four | 10 | 28.6 | 2 | 16.7 | 2 | 22.2 | - | - |
| No . of Earning M embersin the Family<br>OneTwoThreeFour | 20 | 57.1 | 6 | 50.0 | 5 | 55.6 | 4 | 100 |
| Place of Origin<br>Rural | 6 | 17.1 | 3 | 25.0 | 2 | 22.2 | 3 | 75.0 |

**Level of awareness:**

The level of awareness regarding eco friendly products in select category of products viz., is explored and the result is shown below:

Table 3: Level of Awareness of Eco Friendly Products

| Products | Fully | | Partially | | Not at all | |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % |
| Food products | 32 | 53.3 | 28 | 46.7 | - | - |
| Cosmetics | 17 | 28.3 | 43 | 71.7 | - | - |
| Medicine | 29 | 48.3 | 31 | 51.7 | - | - |
| Furniture | 27 | 45.0 | 26 | 43.3 | 7 | 11.7 |

It can be seen from the above table that majority (53.3%) of the respondents are 'fully' aware of the eco friendly food products. In case of cosmetics and medicine, majority of the respondents are only 'partially' aware of the eco friendly products. In case of furniture category most (45%) of the respondents are 'fully' aware of eco friendly products however it is to be noted that 11.7% are not aware of the same.

**Source of awareness of eco friendly products:**

The following table shows the source through which the respondents came to know about the eco friendly products.

Table 4: Source of Awareness of Eco Friendly Products

| Products | Television | | Press | | Users | | Friends/ | | Other | |
|---|---|---|---|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| Food products | 25 | 41.7 | 9 | 15.0 | 11 | 18.3 | 15 | 25.0 | - | - |
| Cosmetics | 24 | 40.0 | 19 | 31.7 | 10 | 16.7 | 6 | 10.0 | 1 | 1.1 |
| Medicine | 10 | 16.7 | 9 | 15.0 | 19 | 31.7 | 14 | 23.3 | 8 | 13.3 |
| Furniture | 8 | 13.3 | 11 | 18.3 | 8 | 13.3 | 26 | 43.3 | - | - |

**Level of eco friendliness Vs Perception**

In order to explore whether the various categories of respondents viz., 'aspirants', 'addicts', 'adjusters' and 'avoiders' differ in their perception towards eco friendly products, the following hypothesis is postulated: There is no significant difference in the perception regarding eco friendly products among the various categories of respondents. The above hypothesis is tested through Analysis of variance technique and the 'F' value along with the level of significance is shown in the Table 5:

**Table 5: Level of Eco Friendliness Vs Perception**

| Issues | 'F' Value | Significance | Issues | 'F' Value | Significance |
|---|---|---|---|---|---|
| Awareness | | | Preference | | |
| Food products | .704 | .553 | Food products | 1.647 | .189 |
| Cosmetics | .362 | .780 | Cosmetics | .362 | .781 |
| Medicine | .487 | .693 | Medicine | 2.445 | .033 |
| Furniture | .207 | .891 | Furniture | .645 | .589 |
| Source | | | Satisfaction | | |
| Food products | 1.261 | .297 | Food products | .336 | .799 |
| Cosmetics | .056 | .982 | cosmetics | 1.570 | .026 |
| Medicine | .105 | .957 | Medicine | .007 | .999 |
| | | | Furniture | .660 | .580 |
| Furniture | .258 | .855 | Willingness to recommend | 1732 | .002 |

Table 5 shows that eco friendly categories viz., the 'aspirants', 'addicts', 'adjusters' and 'avoiders' differ significantly as regards the preference for eco friendly medicines and satisfaction regarding eco friendly cosmetics. The above said categories also significantly differ in their willingness to recommend eco friendly products to others.

**IMPLICATIONS OF THE FINDINGS**

The study findings indicate that few respondents are 'avoiders' and 'adjusters' of eco friendly products. On the other hand majority of them are aspirants. This conveys a positive signal to the marketers to further activate the attempts

towards coming out with eco friendly marketing mix. Further, customer segment specific strategic attempts are to be explored for conversion of 'avoiders' of eco friendly products into 'aspirants' and 'aspirants' into 'addicts'. There is a likelihood of more and more eco friendly food product to pour into the market as the concern for eco friendly food product is higher as compared to others. This has a greater implication on the product mix strategy of the concern. Government can come out with advertising and publicity campaign through television media as it appears to be the popular medium in generating awareness about the eco friendly products. Further, government should come out with policy measures to invest as much as possible to build awareness about eco friendly products and render incentives to the organizations committing themselves in the generation and distribution of green products. The society at large would be benefited by healthy green products as there would be competition among organizations in developing and sustaining competitive edge on account of capturing the niche segment pertaining to green products. From the academic perspective studies of this nature are at the budding stage. Further studies in active collaboration with agencies concerned with green marketing will yield much more meaningful results that would provide input for strategic decision making for the overall improvement in the corporate performance. The bottom line is preserving and making effective use of rare resources for the betterment of the present and the future generation.

**SUGGESTIONS**

The following suggestions emanate from the study:

1. It is encouraging to note that majority of the respondents fall in the category of 'aspirants'. This green signal shows a ripening market for eco friendly products which can be explored by marketers.
2. Profile of the respondents belonging to various categories viz., 'aspirants', 'addicts', 'adjuster' and 'avoiders' will enable to frame customer segment specific strategies to reach and engage the consumers.
3. Majority of respondents in the case of eco friendly cosmetics, medicine and furniture are only 'partially' aware of the same. Hence vigorous steps should be taken to increase the awareness.
4. In case of eco friendly food products and cosmetics television is identified as the major source of information. In case of medicine it is 'existing users' and as regards eco friendly furniture it is the 'friends/ relatives/neighbors'. These sources can be further explored to a greater extent to create awareness and preference.
5. In order to enhance the market opportunities marketers can concentrate on the demographic variables highlighted in the study so as to influence the awareness, preference and satisfaction.
6. The study shows that the perception of respondents towards eco friendly products differs. Also the paper has highlighted the variables discriminating the category of respondents which enables to develop customized strategies to address specific category of respondents.

7. The ecological imbalance is causing serious implication and the issue is gaining more attention in the global scenario. Among other constituents of the society, marketers have an indispensable role to play in safeguarding the environment by designing, developing, delivering socially responsible marketing mix.

This paper mirrors the mindset of eco friendly consumers and thereby provides the knowledge base required to equip the marketers to face the task of creating a safe world for present and prospective consumers. The findings would enable the marketer to arrive at appropriate green marketing strategies and thereby scale new heights in the less explored terrain.

**REFERENCES**


8. Chen, C. (2001) 'Design for the environment: A quality based model for green product development", Management Sciences, 47:2, 2001.250-263.

9. Crane, A. (2000) 'Facing the backlash: Green marketing and strategic orientation in the 1990s', Journal of Strategic Marketing, 8:1, 277-296.

10. Fitchett, J.A. and Prothero, A. (1999) 'Contradictions and opportunities for green commodity', Advances in Consumer Research, 26, 272-275.

11. Gins berg, J.M. and Bloom, P.N. (2004) 'Choosing the right green marketing strategy', MIT Sloan Management Review, 46:1, 79-84.

12. Groved, S.J., Fisk, R.P. Picket, G.M. and Kangun, N. (1996) 'Going green in the service sector. Social responsibility, issues, implications and implementations', European Journal of Marketing, 30:5, 56-66.

13. Journal of Services Research, Volume 7, Number 1 (April - September 2007)

14. Mintu, A.T. and Lozada, H.R. (1983) 'Green marketing education: A call for action', Marketing Education Review, 3:Fall, 17-23

15. Peattie, K. (1999) 'Trapping versus substance in the greening of marketing planning', Journal of Strategic Marketing, 7:2, 1999, 131-148.

16. Schuwerk, M.E. and Hagius, R.L. (1995) 'Green or non green consumers? Does type of appeal matter when advertising a green product?', Journal of Advertisment, 24:2, 45- 54.

17. Shamdasani, P, Chan-cin, G.O. and Richmond, D. (1993) 'Exploring green consumers in an oriental culture: Role of personal and marketing mix', Advances in Consumer Research, 20, 488-293.

18. Shrum, L.J., Mc Carty, J. and MCowrey, T. (1995) 'Buyer characteristics of the green consumers and their implications for advertising strategy'', Journal of Advertising, 24.pp.71-90.

19. Zinkhan, G.M. and Carlson, L. (1995) 'Green advertisement and the reluctant consumer', Journal of Advertising, 24 (2), 1-6.

# Employee Perceptions of Performance Appraisal System in Foreign MNC BPOs Operating in India - An empirical study

**Abstract**

This paper is based on an empirical study of five foreign MNC BPO firms operating in India, ranked among the top 100 by the International Association of Outsourcing Professionals (IAOP) for the year 2009. The data was collected using both qualitative and quantitative methods from seven HR executives of these five BPOs and 163 employees constituting 1% of the population under study. The present study finds that, on an average, the level of satisfaction among the respondents towards the performance appraisal system is at 69.94 per cent. Regression analysis, using a significance level of 5 per cent, shows that the variables of the objectivity in the appraisals, the accuracy of the previous appraisals and viewing appraisals as a motivating tool are significantly influencing the satisfaction of the respondents towards the performance appraisal system and all the other variables have emerged as the insignificant variables.

**Key Words:** Employee Perceptions, Performance Appraisal System, Foreign MNC BPO.

## Introduction

Over a short span of a decade or so, the business process outsourcing (BPO) industry has emerged to be a key contributor to India's rapid economic growth. The projected developments in this sector are very promising. The export revenues are expected to touch $30 billion by 2012 and the number of people employed in the sector is expected to rise dramatically to two million by the end of 2012 (Mishra, 2008). Given the rapid growth and the people-driven nature of this industry, efficient management of human resources (HRs) is bound to play a critical role in these organizations. A survey among the BPO firms in India revealed that human resources and organization-related challenges are the most critical issues (Mehta, 2006). Among all the HR problems, the employee attrition has emerged as the biggest malaise of Indian BPO industry (Sengupta, 2007). One of the reasons for this attrition is said to be the performance appraisal system. Interestingly, in the words of Shivani (2006), the attrition rate is very high after the 'assessment cycle' is completed and the ratings are released. She says, "if you see the industry average attrition of 20+%, at least half of that could be due to dissatisfaction over ratings". However, the academic literature contains few studies that highlight the dynamics of people management systems, especially the performance appraisal systems in BPOs operating in India. This article makes an attempt to provide an insight into the performance appraisal system in foreign MNC BPOs operating in India and analyze the perceptions of the employees with regard to the performance appraisal system being followed in these BPOs.

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**Objectives of the Study**

This empirical study of the perceptions of the employees about the performance appraisal system in foreign MNC BPOs operating in India has the following objectives:

To provide an insight into the performance appraisal system being adopted by the BPO industry in India.

To study the HR perspectives with regard to the performance appraisal system of the foreign MNC BPOs operating in India

To study and analyze the perceptions of the employees with regard to the performance appraisal system being practiced by the foreign MNC BPOs operating in India

To analyze the satisfaction of the employees of the foreign MNC BPOs towards the performance appraisal system.

**Review of the Literature**

De (2004), based on a sample survey of BPO employees (n=462), reported that more than 61% of the respondents under his study felt that the appraisal system in BPOs was transparent, and slightly fewer than 55% felt that it was fair and more than 63% gave thumbs up to the fact that special initiatives and efforts were duly recognized at the time of appraisal. Rani and Mahalingam (2003), based on a sample survey of BPO employees (n=544) across the country, reported that the BPO is an industry where performance is almost entirely metrics- driven and it is also an industry where metrics and the pressure to deliver on them have emerged as significant causes of stress. Yet - by the very fact that the metrics are automatically generated and cannot be argued with - there was comparatively less angst on the appraisal system in the BPO industry than in the IT industry. As per their study, the overall satisfaction score for the ITeS employees was at 8.3 (or 83.0 per cent) on a scale of 10. Babu (2004) has opined that the performance of the BPO employees is linked with incentives in cash and kind; and the annual increments in salary as well as the vertical mobility of the agents in the BPO firms are also linked to their ratings. Linking performance with incentives and/or punitive actions forces the agents to stress continuously. Shivani (2006) observes that the performance appraisal in BPOs means a hurried 5-minute session for the HR manager who, many a time, is very badly prepared for the session and sometimes the employees get to meet their managers and interact with them only during this time. The number of ratings to be given under various categories are fixed, following a bell-curve distribution and the ratings depend on 'quota'! Awards are mostly given as ad hoc measures to temporarily satisfy the employees and most often do not influence the final ratings, which are also often ad hoc! What further complicates affairs is that the ratings also determine whether the person will be eligible for a promotion in the next 12 months. According to her, such practices demotivate the employees. Ramakrishna (2002), a senior human resources executive suggests that clearly enunciating the performance management system is very critical for an employee to know what is expected out of him and what the performance parameters are. Bhaduri (2008) opines that if one wants to manage attrition, one should start by looking at the performance management system of the organization. In his opinion,

every manager should be adequately trained to give candid feedback and also to coach the players in his team. These studies indicate that all is not well with the appraisal system in the BPO firms. In this context, an attempt has been made to understand the system of performance appraisal in the BPOs and the perceptions of the employees with regard to this system.

**Research Methodology**

The study mainly depended upon the primary data. However, some secondary sources of data were also consulted for the purpose of gathering background information supporting the study. Relevant primary data was collected using the combination of both qualitative (interview) and quantitative (sample survey through questionnaire) methods. The data was collected from a total of five foreign MNC BPO firms operating in India and these five firms were selected based on the rankings announced by the International Association of Outsourcing Professionals (IAOPs) for the year 2009 as "The 2009 Global Outsourcing 100". The study covered the units of these MNCs located in Bangalore, considered to be the Silicon Valley of India. Access to these BPO firms was secured through contacts and through networking technique. Altogether, we collected data from seven HR executives and 163 employees. These 163 employees constitute 1 per cent of the population under study. The awareness about the performance appraisal system is measured on a scale of 'yes/no/can't say' and the perceptions of the respondents on the twelve statements are measured on a scale of 'strongly disagree…… strongly agree', the scale in quantitative terms being: 0 - 20 per cent: 'strongly disagree', 21 - 40 per cent: 'disagree', 41 - 60 per cent: 'not sure', 61 - 80 per cent: 'agree', 81 - 100 per cent: 'strongly agree' and the satisfaction of the respondents towards the performance appraisal system is rated on a scale of 'highly dissatisfied……. highly satisfied', the scale in quantitative terms being: 0 - 20 per cent: 'highly dissatisfied', 21 - 40 per cent: 'dissatisfied', 41 - 60 per cent: 'not sure', 61 - 80 per cent: 'satisfied', 81 - 100 per cent: 'highly satisfied'. The results of a multiple regression analysis being made to identify the variables influencing the satisfaction of the respondents towards the performance appraisal system is presented at the end of the paper.

**Performance Appraisal System in the BPOs – an Insight**

All the BPOs in India have a formal and structured approach to the performance appraisal system and they have a structured format and a clear set of parameters for appraisals (Budhwar et. al., 2006). In the BPO processes, there are two basic types of performance parameters – quantitative measures (such as Average Handling Time - AHT, number of calls completed) and quality measures (Upadhya and Vasavi, 2006), Most BPOs have an individual-based performance appraisal system, though some also go for a group-based system. Performance appraisals in all the BPOs always emphasize results. Thus, targets are fixed for each metric, and the performance of individual workers and of teams is evaluated against these targets. In addition to the quantitative measures, the quality of work performed is tracked and evaluated, and these assessments are fed into the performance appraisal process. Quality measures include parameters such as tone of voice, language (grammar), accent, problem solving, customer satisfaction, etc. Almost all the firms use some kind of rating scales, grading, or ranking system and the set targets for appraisals. The BPOs usually follow a five-point rating system to appraise the performance (Babu, 2004).

Typically, the ratings given are: Needs Improvement (I), Meets Expectations (M), Exceeds Expectations (E) and Significantly Exceeds Expectations (S). (Shivani, 2006). Although different companies use different acronyms for the ratings, the basis largely remains the same. The hikes/ incentives are given based on the ratings given to each employee. e.g., a S rated employee gets about 20% hike as compared to an E rated employee getting up to 10%, while an M may get nothing at all. Although ratings are given on a point scale, the evaluation is rather subjective: the evaluator must decide whether the call was completed satisfactorily, whether the customer appeared to be satisfied, whether the agent was clear, the accent correct, and so on, and assign scores to each parameter. Although the trainers describe the system as very 'system-driven', leaving no scope for subjectivity in ratings, clearly the judgments made by the evaluators cannot be completely 'objective' (Upadhya and Vasavi, 2006). The weightage that is given to different aspects of quality depends on the Service Level Agreements (SLA); for instance, some projects may emphasize accent, whereas others may place a higher value on customer service. Some companies also conduct periodic customer surveys to evaluate the performance of agents. The overall computation of quality is expressed as a percentage. The target for quality performance is fixed according to the SLA or the company's own requirements. All of these metrics are measured on a daily and weekly basis and are computed together, using a complex 'matrix' system, to come up with an overall score for each agent, usually expressed as a consolidated percentage on the two basic parameters (AHT and quality). This monitoring is used to give feedback to agents (usually on a monthly or quarterly basis) in order to improve their performance. The performance appraisal system also determines salary and even retention. Good performance is encouraged both through positive reinforcement, such as monetary incentives, and negative measures, including dismissal. Based on the worker's rating, he/she may receive an increment for good performance or may be listed as an 'underperformer' and targeted for additional training, or even lose his/her job. Good performance is rewarded with various prizes, awards, and 'incentives', or eventually with promotion. Salaries also include a performance-linked component, which means that the salaries of good performers rise faster than those of average and poor performers. Performance ratings are used to distribute awards in the various competitions such as 'consultant of the month', 'team of the month', etc. (Upadhya and Vasavi, 2006).

As a procedure, the general trend is that the immediate supervisor appraises the employee and gives his/her report to the employee. After the employee reads the appraisal, it must be signed before submission to the section head. If required, adjustments are made by involving the section head. At times, the section head also appraises his section employees. A number of issues related to future movement or cross-functional movement within the company as well as training needs identification, key performance areas, and possible targets to be achieved are analyzed. Budhwar et. al. (2006) quote the comments of an HR manager from an UK-based BPO which sums up the appraisal system in Indian BPOs: "It is formal and target-based, you have a generic appraisal form and you then have slip-ins for every target and every level, you have a job description which is given to you at a join-up. You have key result areas which are measurable for a given period of time". For managers, many firms use techniques such as the 360-degree method. According to Budhwar et. al. (2006), the appraisal system, which appears to be quite comprehensive, has some drawbacks. In this context, they quote the comments of an HR manager from a U.S.-based software company which summarizes the problems associated with the system: "What happens is that

implementation of appraisal is something which nobody likes; it is almost like a necessary evil that everyone has to see. So we have to, at times, give the bad news or we have to be tough, which people do not like doing. So, no matter how objective it becomes, how transparent it becomes, doing the tough part of evaluating a person is something that people do not like. That is the bad part of the whole thing". Keeping this insight in mind, an attempt is made to understand the perspectives of the HR executives with regard to the performance appraisal system in their respective firms.

**Performance Appraisal System in the BPOs – HR perspectives**

The data was collected from seven HR executives of these five BPOs under the study with regard to their perspectives on the performance appraisal system. The responses of the HR executives are considered as the views of the foreign MNC BPOs under the study and hence, the sample size is taken at five only (and not as seven).

**Table 1: HR Perspectives on the Performance Appraisal System**

| Variable | Yes | No | Can't say | Total |
|---|---|---|---|---|
| The job duties are clearly given out | 05 (100%) | - | - | 05 (100%) |
| Employees know what is expected of them in their job | 05 (100%) | - | - | 05 (100%) |
| The performance appraisal system is timely, participative, objective and transparent | 04 (80%) | - | 01 (20%) | 05 (100%) |
| Good measures/parameters of individual or group performance exist | 04 (80%) | - | 01 (20%) | 05 (100%) |
| Special initiatives and efforts are recognized at the time of appraisal | 05 (100%) | - | - | 05 (100%) |
| Appraisal policies go in tandem with promotion, reward and transfer policies, etc | 03 (60%) | - | 02 (40%) | 05 (100%) |

**Source: Survey data**

As per Table 1, all the five (100 per cent) foreign MNC BPOs under the study report that the duties of the employees are clearly given out, the employees know what is expected of them in the job, and that the special initiatives and efforts of the employees are recognized at the time of appraisal; while four (80 per cent) of these BPOs report that the performance appraisals are timely, participative, objective and transparent, and that good measures/parameters of individual or group performance exist to evaluate the performance of employees, only one (20 per cent) of these BPOs reports that it can not say anything precisely on these issues; and while three (60 per cent) of these BPOs report that the appraisal policies go in tandem with promotion, reward and transfer policies, etc. only two (40 per cent) of these BPOs express their inability to say anything on this issue.

**Table 2: HR perspectives on the Statement: Appraisal System is viewed as a Motivating Tool**

| Variable | Somewhat Agree | Strongly Agree | Total |
|---|---|---|---|
| Appraisals in our company are mostly seen as a motivating tool | 02 (40%) | 03 (60%) | 05 (100%) |

Source: Survey data

With regard to a statement that the appraisals are viewed as a motivating tool (Table 2), three (60 per cent) of the BPOs 'strongly agree' that the appraisals are mostly seen as a motivating tool and two (40 per cent) of the BPOs 'somewhat agree' on this issue.

**Table 3: HR perspectives on the Effectiveness of the Appraisal System in Retaining and motivating the employees**

| Variable | Not sure | Somewhat effective | Highly effective | Mean | S.D. | % Mean |
|---|---|---|---|---|---|---|
| The appraisal system is effective in retaining and Motivating the employees | 01 (20%) | 01 (20%) | 03 (60%) | 4.40 | 1.030 | 88.00 |

**Source: Survey data**

Finally, on the proposition that the performance appraisal system of the organization is effective in retaining and motivating the employees (Table 3), three (60 per cent) of the BPOs report it to be 'highly effective', one (20 per

cent) of them reports it to be ‘somewhat effective’ and one (20 per cent) of the BPOs reports to be ‘not sure’ on this issue. Thus, the perspectives of the HR are very much in line with the overall policy of the ITES- BPO industry with regard to the performance appraisal system.

**Performance Appraisal System in the BPOs – Employee Perceptions**

The perceptions of the respondents with regard to the performance appraisal system are presented here.

**Table 4: Awareness of the Performance Appraisal System among the respondents**

| Are the respondents aware of the performance appraisal system in the BPOs under study | Yes<br>% | No<br>% | Total<br>% |
|---|---|---|---|
| Total | 87.1 | 12.9 | 100 |

**Source: Survey Data**

As per Table 4, an overwhelming majority of 87.1 per cent of the respondents under the study report that they are aware of the performance appraisal system in their respective firms and only 12.9 per cent of the respondents report that they are not aware of the system.

The views of the respondents on twelve statements being used to study their agreement towards those statements are presented in Table 5. On our scale, the respondents under the study ‘strongly agree’ on three of the statements, that is, (a) my duties are clearly given out (the level of agreement = 80.20 per cent), (b) I know what is expected of me in the job (the level of agreement = 84.54 per cent), and (c) the appraisal system is timely (the level of agreement = 80.37 per cent), and the respondents ‘agree’ on eight of the statements, that is, (a) the performance appraisal system is transparent (the level of agreement = 73.74 per cent), (b) the performance appraisal system is participative (the level of agreement = 75.21 per cent), (c) the performance appraisal system is objective (the level of agreement = 73.62 per cent), (d) good measures/parameters of individual or group performance exist (the level of agreement = 79.02 per cent), (e) the special initiatives and efforts are recognized at the time of appraisal (the level of agreement = 75.46 per cent), (f) my last performance appraisal accurately reflected my performance (the level of agreement = 70.67 per cent), (g) appraisal policies go in tandem with promotion, reward and transfer policies (the level of agreement = 69.69 per cent) and (i) the appraisals are mostly seen as a motivating tool (the level of agreement = 78.16 per cent), and interestingly, only on one of the statements, that is, the performance appraisal system is often invalid, unfair, discriminatory and is based on favoritism the respondents report that they are ‘not sure’ on this issue (the level of agreement = 56.20 per cent).

**Table 5: Employee Perceptions of the Performance Appraisal System**

| Variable | 1 % | 2 % | 3 % | 4 % | 5 % | Mean | S.D. | % Mean |
|---|---|---|---|---|---|---|---|---|
| My Duties are clearly given out | 2.5 | 4.3 | 14.7 | 47.9 | 30.7 | 4.01 | .923 | 80.20 |
| I know what is expected of me in the job | 1.2 | 7.4 | 7.4 | 35.6 | 48.5 | 4.23 | .958 | 84.54 |
| Appraisal system is transparent | 3.1 | 6.1 | 27.6 | 45.4 | 17.8 | 3.69 | .940 | 73.74 |
| Appraisal system is timely | 1.8 | 5.5 | 14.7 | 44.8 | 33.1 | 4.02 | .933 | 80.37 |
| Appraisal system is participative | 6.1 | 4.9 | 17.8 | 49.1 | 22.1 | 3.76 | 1.047 | 75.21 |
| Appraisal system is objective | 2.5 | 11.7 | 22.1 | 42.9 | 20.9 | 3.68 | 1.010 | 73.62 |
| Good measures/parameters of individual or group performance exist | 1.2 | 2.5 | 23.9 | 44.8 | 27.6 | 3.95 | .852 | 79.02 |
| Special initiatives are recognized at the time of appraisal | 3.1 | 9.2 | 19.6 | 43.6 | 24.5 | 3.77 | 1.020 | 75.46 |
| Last performance appraisal accurately reflected my performance | 6.1 | 13.5 | 21.5 | 38.7 | 20.2 | 3.53 | 1.140 | 70.67 |
| The appraisal system is often invalid, unfair, discriminatory, and based on favoritism | 22.7 | 18.4 | 22.7 | 27.6 | 8.6 | 2.81 | 1.298 | 56.20 |
| Appraisal policies go in tandem with promotion, reward and transfer policies | 3.7 | 16.6 | 24.5 | 38.0 | 17.2 | 3.48 | 1.074 | 69.69 |
| Appraisals are mostly seen as a motivating tool | 1.2 | 12.3 | 15.3 | 36.8 | 34.4 | 3.91 | 1.047 | 78.16 |

(Note: 1 - strongly disagree, 2 - disagree, 3 - Not sure, 4 –agree, 5 - strongly agree)

Source: Survey data

The study findings (Table 6) indicate that, on an average, the level of satisfaction among the respondents towards the performance appraisal system is at 69.94 per cent, which implies, on our scale, that the respondents are 'satisfied' with the performance appraisal system of the BPOs for whom they are working at present.

**Table 6: Satisfaction of the respondents towards the Performance Appraisal System**

| Variable | 1<br>% | 2<br>% | 3<br>% | 4<br>% | 5<br>% | Mean | S.D. | % Mean |
|---|---|---|---|---|---|---|---|---|
| The respondents are satisfied with the performance appraisal system | 8.6 | 12.3 | 14.1 | 50.9 | 14.1 | 3.50 | 1.141 | 69.94 |

(Note: 1 – highly dissatisfied, 2 - dissatisfied, 3 - Not sure, 4 – satisfied, 5 - highly satisfied)

Source: Survey data

The present study supports the findings of De (2004), and Rani and Mahalingam (2003) on the perceptions of the BPO employees with regard to the performance appraisal system being adopted by their employers and it does not find any significant evidence to prove the findings of Shivani (2006).

**Factors influencing the satisfaction towards the Performance Appraisal System**

A regression analysis was made to identify the variables influencing the satisfaction of the respondents towards the performance appraisal system of the foreign MNC BPO firms under study (Table 7). A significance level of 5 per cent was used for our analysis. The result of the regression analysis shows that the variables of the objectivity in the appraisals ($p = .028$), the accuracy of the previous appraisals ($p = .017$), and viewing appraisals as a motivating tool ($p = .002$) are significantly influencing the satisfaction of the respondents towards the performance appraisal system and all the other variables like my duties are clearly given out ($p = .422$), I know what is expected of me in the job ($p = .248$), transparency in the appraisal system ($p = .976$), timeliness of the appraisals ($p = .110$), employee participation in appraisal system ($p = .686$), existence of good measures/parameters of individual or group performance ($p = .354$), recognition of special initiatives and efforts at the time of appraisals ($p = .069$), the performance appraisal system is often invalid, unfair, discriminatory and is based on favoritism ($p = .266$), and appraisal systems go in tandem with promotion, reward and transfer policies ($p = .550$) have emerged as the insignificant variables.

**Table 7: Factors influencing the satisfaction of the employees towards the Performance Appraisal System**

| | Unstandardized Coefficients | | standardized Coefficients | | |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | T | p |
| (Constant) | -.757 | .520 | | -1.455 | .148 |
| My duties are clearly given out | .094 | .116 | .076 | .805 | .422 |
| I know what is expected of me in the job | -.130 | .112 | -.109 | -1.160 | .248 |
| Appraisal system is transparent | .003 | .101 | .003 | .030 | .976 |
| Appraisal system is timely | .169 | .105 | .138 | 1.606 | .110 |
| Appraisal system is participative | .040 | .100 | .037 | .404 | .686 |
| Appraisal system is objective | .235 | .106 | .208 | 2.224 | .028 |
| Good measures/parameters of individual or group performance exist | .100 | .108 | .075 | .930 | .354 |
| Special initiatives are recognized at the time of appraisal | .168 | .091 | .150 | 1.833 | .069 |
| Last performance appraisal accurately reflected my performance | .188 | .078 | .188 | 2.417 | .017 |
| The appraisal system is often invalid, unfair, discriminatory, and based on favouritism | .067 | .060 | .076 | 1.117 | .266 |
| Appraisal policies go in tandem with promotion, reward and transfer policies | -.048 | .081 | -.045 | -.598 | .550 |
| Appraisals are mostly seen as a motivating tool | .258 | .082 | .237 | 3.150 | .002 |

The variables of the objectivity in the appraisals (Standardized Beta Coefficient = .208), the accuracy of the previous appraisals (Standardized Beta Coefficient = .188), and viewing appraisals as a motivating tool (Standardized Beta Coefficient = .237) are positively associated with satisfaction of the respondents. The variable of viewing appraisals as a motivating tool contributes more towards satisfaction of the respondents with 23.7 per cent (Standardized Beta Coefficient = .237), followed by the objectivity in the appraisals with 20.8 per cent (Standardized Beta Coefficient = .208), and the accuracy of the previous appraisals with 18.8 per cent (Standardized Beta Coefficient = .188).

**Model 1**

| Model | R | R Square | F | p |
|---|---|---|---|---|
| 1 | .653 | .426 | 9.280 | .000 |

However, as per the Model 1 above, all the variables used in the study collectively account for 42.6 per cent of the satisfaction of the respondents towards the performance appraisal system.

**Conclusion**

Considering the nature of the ITES-BPO industry, one can surely be convinced that the performance appraisal system is inevitable and that over a short period of time the employees of these firms have to either accept it as a fact of life or quickly adapt. Although the respondents report positively on the various variables being used to study their perceptions, there certainly appears to be a scope for improvement in the existing system within the Indian BPO industry. The present system may be made simple and supportive of the employees' personality development and learning, it may provide a basis for factual feedback for the future development of the employees. The appraisal needs to be developmental, and not just evaluative. It may not be confined just to the examination and analysis of the past performance, rather, it may identify the weaknesses and strengths as well as the opportunities for improvement and skill development of the employees so that he can develop as a better performer in the future and may make a career for himself in the industry. Again, the individual employees may be involved in the process of their goal setting and also in discussions on his/her career prospects. Perhaps, a more participative approach in this direction could be beneficial in improving the present performance appraisal system in the Indian ITES-BPO industry.

**References**


1. Babu P. Ramesh (2004), "Cyber Coolies in BPO", Economic and Political Weekly, Vol. 39, Issue 5, pp.492-497
2. Budhwar, Pawan S., Luthar Harsh K., and Bhatnagar, Jyotsna (2006), "The Dynamics of HRM Systems in Indian BPO Firms", Journal of Labour Research, Vol. XXVII, Issue 3, pp. 339-360

3. Sengupta, Snigdha., Singh, Shelley, and Moses, Nelson Vinod (2007), “BPO Industry Report”, Business World, ABP Pvt. Ltd., p. 74.
4. Upadhya, Carol and Vasavi, A.R. (2006), “Work, Culture and Sociality in the Indian IT industry: A sociological study”, Bangalore: National Institute of Advanced Studies.
5. Mehta, Anju., Armenakis, Achilles, Mehta, Nikhil, and Irani, Feruzan, (2006),“Challenges and Opportunities of Business Process Outsourcing in India”, Journal of Labour Research, Vol . 3, pp. 323- 338.

Ramakrishna, Get the Basics Right, October 2002; Cyber Media, http://dqindia.ciol.com
Rani, Sarita & Mahalingam, T.V., The Young and the Restless, October 2003; Cyber Media, http://dqindia.ciol.com
Shivani, My BPO Loves Me. My BPO Does Not. Will I Get Promoted?, June 2006; Techgoss., www.techgoss.com
Bhaduri, Abhijit, Arresting Attrition -Learning From BPOs, September 2008; Abhijit Bhaduri, www.abhijitbhaduri.com
Mishra S.C., BPO's losing their charm?, September 2008; TimesJobs., www.indiajobsite.blogspot.com
De Rajneesh, The Young and the Restless - BPO Employee Survey 2004, November 2004; Cyber Media, http://dqindia.ciol.com

CASE STUDY

# "Quest To Go Global: NTT DoCoMo's Global Business Strategic Alliances: A Case Study"

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**Abstract:**

*"Change, it is said, is the only constant in life; and business, it seems, is no exception to this rule."*

Despite of the economic changes constantly taking place on the global platform, business organizations are striving for sustainability with the help of various strategies. As companies continue the trend towards becoming not only international but transnational companies, strategic alliances are becoming more critical to business operations.

According to Wikipedia, a strategic alliance is defined as "a mutually beneficial long-term formal relationship formed between two or more parties to pursue a set of agreed upon goals or to meet a critical business need while remaining independent organizations". In the business sense, it is "a synergistic arrangement whereby two or more organizations agree to cooperate in the carrying out of a business activity where each brings different strengths and capabilities to the arrangement."

There are several reasons a company should create a strategic alliance. Businesses use strategic alliances to achieve advantages of scale, increase market penetration, enhance competitiveness in domestic and/or global markets, and enhance product development. The main reasons why most companies create an alliance are to have the ability to access new capital for growth, for development of new products or services, or for entry into new lines of business. Another important reason to form a strategic alliance is the access to international markets.

When the last decade has witnessed mergers and acquisitions, now-a-days strategic alliance is the need of time. With the rapidly increasing global competition, organizations find strategic alliance a tool for sustainability in the global market. After the saturation in the national market, the organizations focus on expansion in different countries and strategic alliance can be a good option for the same.

**What are the drivers for the strategic alliances?**

Varadarajan and Cunningham [1995], in their article, summarize the motives for alliance formation. The reasons for getting into an alliance have been mainly for market growth and/or profit growth. Varadarajan and Cunningham [1995] approach the formation process from the competitive approach viewpoint. The authors mentioned the following motives for formation:

**Market entry in the international arena:** Due to increase in global competition, firms tend to enter foreign markets in order to improve their profitability as well as their market share. Strategic alliances benefit firms that seek complementary resources in a foreign partner.

**Evade barriers to entering new international markets:** New international markets, especially developing country markets, are often difficult to enter due to government regulations regarding full ownership of a subsidiary. Strategic alliances can be helpful in circumventing these barriers to enter new international markets.

**Protection of the home market competitive position:** By entering international markets through alliances, firms force foreign competitors at home divert their resources away from expansion into the international markets, thus protecting the home market.

**Broaden product line/fill product line gaps:** Firms often enter alliances to increase the product line or fill gaps in the existing product line. Lack of technology or high cost of production may force a firm to seek a foreign partner to fill their product lines.

**Enter new-product market domains:** Firms that operate in stagnant or mature industries often enter alliances to gain a foothold in emerging industries.

**Reduce potential of future competition:** By entering into an alliance with another organization, firms tend to reduce future competition potential of that organization.

**Raise entry barriers:** Raising entry barriers by joining forces with other organizations is a powerful motive to enter into alliances. However, firms have to be careful not to violate the anti-trust laws of any other nation or the US.

**Enhance resource use efficiency:** Alliances allow firms to lower their manufacturing costs, achieve efficiencies in the production process, and allow them to gain experience effects.

**Resource extension:** Firms that lack the resources to grow enter into strategic alliances. Small firms often enter into alliances in order to acquire R&D resources, which could be capital or equipment.

Acquire new skills: Knowledge acquisition is an important element in formation of alliances. Partners in an alliance often attempt to learn as much as possible from the other partner while guarding their distinctive skills.

**Table 1: Classification of motives for formation**

| Transaction Cost Approach | Organization Theory Approach | Competitive position Approach |
|---|---|---|
| Enhance resource use efficiency | Acquire new skills | Entry into new markets |
| Resource extension | Entry into new product market domains | Circumvent barriers to enter new markets |
| | | Protect competitive position in home market |
| | | Broaden product lines/ fill gaps |
| | | Reduce future competition threat |
| | | Raise entry barriers |

In this context, this paper focuses on the strategic alliances as a tool for competitive advantage. The researcher aims to study the topic with special reference to NTT DOCOMO, a Japanese Telecommunication giant through case study.

## INTRODUCTION

A **Strategic Alliance** is a formal relationship between two or more parties to pursue a set of agreed upon goals or to meet a critical business need while remaining independent organizations.

In the strategic alliance two or more organizations agree to work towards some shared interest. This happens when two companies team up for a research effort. They may create a third entity, called a joint venture, or they may simply agree to work together on some limited basis. A merger or acquisition results in one or more organizations simply disappearing.

The strategic alliance partners may provide the strategic alliance with resources such as products, distribution channels, manufacturing capability, project funding, capital equipment, knowledge, expertise, or intellectual property. The alliance is a co-operation or collaboration which aims for a synergy where each partner hopes that the benefits from the alliance will be greater than those from individual efforts. The alliance often involves technology transfer (access to knowledge and expertise), economic specialization, shared expenses and shared risk.

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Companies are continually striving to gain access to new markets and new supply sources, capitalize on technology, use assets better, and become more profitable. They commonly use three methods to achieve these objectives: internally developing physical assets and company skills, acquiring these assets and skills, or *agreeing with other companies to pool physical and human resources. The latter is commonly known as a strategic alliance or joint venture*. Although the distinction is not important for our purposes, and the terms will be used interchangeably, the two forms of partnership between companies differ. Joint ventures entail creating a third-party legal entity, whereas strategic alliances do not. In addition, as a general rule, strategic alliances focus on projects that are smaller in scope than joint ventures.

**OBJECTIVES**

- To study the selected strategic alliances, acquisitions and joint venture activities by NTT DOCOMO Group in past 3 years (more specifically between the period from yr.2006-2009).
- To study analytically these selected strategic alliances, to see if NTT DOCOMO as a Group of Industries generates a trend in the area of strategic alliances.
- To study the drivers of strategic alliances by NTT DOCOMO.

**3. SCOPE**

As noted earlier, strategic alliances are not new phenomena. India too has witnessed tremendous increase in the number of alliances, in sectors varying from IT, Telecom to manufacturing. NTT DoCoMo, a Japanese company, the world leader in mobile Internet services has become the most valuable mobile telecommunications company in the world and was poised to capitalize on its enormous global expansion opportunities.

This paper is an attempt to study the drivers of strategic alliances by NTT DOCOMO over the globe.

**INDUSTRY PROFILE-** ***About NTT DOCOMO***

DoCoMo is the world's most valuable cell-phone company and once the largest single-country cell-phone operator with a total of 35.5 million subscribers. NTT DOCOMO is Japan's premier provider of leading-edge mobile voice, data and multimedia services. With more than 55 million customers in Japan, the company is one of the world's largest mobile communications operators.

DOCOMO also is an influential force in the continuing advancement of mobile technologies and standards. Way back in 1999, DOCOMO launched i-mode™, the world's most popular platform for mobile Internet services including e-mail, browsing, downloading and more. Over 48 million DOCOMO subscribers now use i-mode. In 2001, DOCOMO introduced FOMA™, the world's first 3G commercial mobile service based on W-CDMA, which has transformed the mobile landscape in Japan while bringing the DOCOMO brand global recognition. The role of mobile phones as "lifestyle tools" was cemented when DOCOMO launched Osaifu-Keitai™, a mobile wallet platform enabling quick, contactless transactions for cash, credit, ID, and more.

More than 35 million phones equipped for Osaifu-Keitai services are now in use. Building on a solid foundation of research and development, and guided by its customer-first philosophy, the company leverages the power of mobile communications to enable customers to enrich their lives. DOCOMO is expanding its global reach through offices and subsidiaries in Asia, Europe and North America, as well as strategic alliances with mobile and multimedia service providers in markets worldwide.

**Quick Facts**

President and CEO: Ryuji Yamada

Headquarters: 2-11-1 Nagata-cho, Chiyoda-ku, Tokyo, Japan 100-6150

Capital: 949.68 billion yen

Employees: 22,865 (NTT DOCOMO Group)

**DOCOMO’s Strategic Alliance with Telefonica**

In May 2009, NTT DoCoMo and Telefonica, a Spanish company announced their strategic alliance introducing windows mobile handset model of Toshiba company in their respective Japanese and Spanish markets as a part of a plan for various joint undertakings by the two mobile operators. The two companies are now considering various other initiatives to mutually strengthen corporate competitiveness and customer satisfaction in their respective markets, including a joint study of possible services and applications for new technology handsets, etc.

DOCOMO Senior Vice President and Product Department Managing Director Kiyohito Nagata said: “DOCOMO looks forward to working with global operators such as Telefonica to jointly develop mobile services and applications for mutually enhanced global competitiveness. At the same time, we would be pleased if such efforts have the added effect of supporting Japanese mobile phone manufacturers in their attempts to expand handset sales overseas.”

***Telefonica*** is one of the most important telecommunication companies in the world as for market capitalization. Its activities are basically centered in landline and mobile operations, as well as broadband services as the key for the development of both endeavors. Telefonica has offices in 25 countries and a customer base of 261+ million accesses in the world. It is a strong player in Spain, other countries of Europe and Latin America where it is concentrating its developing efforts. It's completely privately owned company with more than 1.5 million shareholders. Its capital is currently divided in approx. 5,000,000,000 shares in the Spanish stock markets, Madrid, Barcelona, Bilbao, and Valencia, as well as stock exchanges in London, Tokyo, New York, Lima, Buenos Aires and Sao Paulo.

**DOCOMO's Strategic Alliance with Avex Entertainment to Provide Mobile Video**

In Sept. 2008, NTT DOCOMO formed a strategic alliance in the form of joint venture with Avex Entertainment Inc., (AEI) a subsidiary of Avex Group Holdings Inc., and Avex Broadcasting and Communications Inc. for production of and on-demand distribution of video content packaged for the mobile phone environment.

***Avex Entertainment Inc., (AEI)*** is one of Japan's biggest music and movie entertainment companies, with operations involving production, packaging, sale/ distribution (including web) and rights management of music and visual content not only in Japan but other markets of Asia as well. With this strategic alliance, DOCOMO provided its IT infrastructure, advanced mobile technologies and vast experience in providing mobile customers with popular video content. AEI contributed its expertise in the fields of content creation, artist management and services centered on intellectual property.

**7. Strategic Alliance of NTT DOCOMO and Sharp in Sept. 2008**

NTT DOCOMO and Sharp Corporation jointly developed a mobile phone capable of functioning as an intelligent key for automobiles- a world's first. The device incorporates Nissan's Intelligent Key system, a standard feature in Nissan's vehicles already. Sharp Corporation, a world known electronics manufacturer, and Nissan, a global name in automobile sector joined together with NTT DOCOMO to integrate the technologies of electronics, mobiles into automobiles, who expected users to appreciate the seamlessly integrated features of their new handset.

**8. Strategic Alliance of NTT DOCOMO with Irish Maritime Wireless Systems Provider**

NTT DOCOMO, in Sept. 2008 announced that it has invested 10 million US $ to acquire an 11.5 % stake in Blue Ocean Wireless (BOW) an Irish company providing GSM communications system to the merchant maritime sector.

The acquisition is the latest joint endeavor between DOCOMO and its affiliate Phillippine Long Distance Telephone Company (PLDT) including PLDT's wholly owned mobile subsidiary Smart Communications Inc., one of BOW's shareholders. As part of the strategic arrangement DOCOMO intends to assist BOW's management in adding value to its services for global maritime carriers.

BOW provides GSM connectivity for seafarers by setting up satellite antennas, GSM base stations and conversions devices on vessels, which enable users to make and receive voice calls and send and receive SMS text messages

using their existing handsets. DOCOMO believed that BOW's effective use of bandwidth, low cost systems and privacy protection measures would give the company distinct competitive advantages over conventional satellite communication services.

**DOCOMO's partnership with Google in Mobile Internet Services**

In Sept. 2008, NTT DOCOMO (Japan) and Google Inc. (USA) formed a partnership that included providing search services, search related advertisements and potential applications to i-mode users. The two companies would also collaborate to enhance the user- friendliness of i-mode services by making various Google services easier to access through i-mode handsets. The default pre-loading of Google Maps application into upcoming DoCoMo i-mode handset was one of the initial initiatives discussed. Google's innovative search technologies connect millions of people around the world with information every day. Google today is a top web property in all major global markets. Google is headquartered in Silicon Valley with offices throughout America, Europe and Asia.

**DOCOMO's strategic alliance with TATA in Nov. 2009**

In November 2009, DOCOMO joined hands with TATA Teleservices Ltd., for management and provide know-how on helping the company develop its GSM business in India. The launch of the TATA DoCoMo brand marks a significant milestone in the Indian telecom landscape, as it stands to redefine the very face of telecoms in India. TTSL alongwith NTT DoCoMo, (which acquired 26% stake in Tata Teleservices, in 2008, for $ 2.7 bn) jumped onto the GSM bandwagon with the launch of its GSM services, under the brand-name 'Tata-DoCoMo'. This was the biggest deals in Indian Telecom Space. TATA DOCOMO has also set up a 'Business and Technology Cooperation Committee' comprising of senior personnel from both companies. The committee is responsible for the identification of key areas where the two companies will work together.

Tata Teleservices (TTSL), a TATA Group company, in telecom sector, having its existence in the CDMA again adopted a strategic business alliance with NTT DoCoMo, world's leading mobile operator and provider of advanced mobile services. TTSL's CDMA brand has already established its presence and is the fastest- growing pan-India operator. Incorporated in 1996, Tata Teleservices Ltd., is the pioneer of the CDMA 1* technology platform in India. TTSL alongwith TTML, serves over 37 million customers in more than 320,000 towns and villages across the country offering a wide range of telephony services including mobile services, wireless desktop phones, public booth telephony and wire line services.

The launch of the TATA DoCoMo brand marks a significant milestone in the Indian telecom landscape, as it stands to redefine the very face of telecoms in India. Tokyo-based NTT DoCoMo being one of the world's leading mobile operators in the Japanese market, the company is clearly the preferred mobile phone service provider in Japan with a 50% market share.

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**Analysis of Strategic Alliances by NTT DoCoMo**

| Strategic Alliance with | Country | Year | % of Stake Acquired by DOCOMO | Strategic Driver |
|---|---|---|---|---|
| Avex Entertainment Inc. | Japan | Sept. 2008 | 30% | Benefit of AEI's expertise in media for DoCoMo mobiles |
| Sharp | Japan | Sept. 2008 | Not available | Technological alliance |
| Ocean Wireless (BOW) | Ireland | Sept. 2008 | 11.5 % | Entering the seafarers market with technology base of BOW |
| Google | USA | Sept. 2008 | Not available | Google search and G-map on i-mode handsets |
| Telefonica | Spain | May 2009 | 15% | Expansion of markets in Europe |
| TATA Telecom | India | Nov. 2009 | 26% | Market expansion in India |

- These alliances are only examples. There are many and many are in pipeline. The common factor observed while studying the numerous strategic alliances by NTT DoCoMo, is the company's strategic planning is very strong and it was not affected at all by the global economic slowdown. Rather it must have worked as an opportunity for expansion of markets over the globe.

- The analysis of possible strategic drivers, expanding in international market, broadening product line, entering new product market using the technological expertise and strong market presence of the strategic alliance partners are highlighted in the above case study.

- NTT DOCOMO being at number one position in Japan in mobile services, it doesn't limit itself in that sector. It is seen that the company has tried to come up with innovative services with its mobiles and uses the technological expertise of its strategic alliance partners to expand its market to automobile sector as well.

- Entering emerging markets through strategic alliances is looked at as a successful strategic tool by multinationals. (MNCs).

**STRATEGIC ALLIANCES FOR FUTURE**

- Based on the case study of NTT DOCOMO, it can be said that mergers and acquisitions, are no more looked as failure of merging firm to make profits.

- Strategic alliances in the form of M & As, Joint Ventures are strategic tools for sustaining in the competitive markets, which can be looked at as an opportunity to expand globally by multinationals if any of the above said drivers exist.

- Today's economies can be referred to as knowledge economies driven by systematic innovation and technology. Strategic Alliances are a key for such fast growing technology driven firms who intend to expand in the global markets.

- NTT DOCOMO is expanding radically throughout the world once it found saturation in the Japanese mobile market. It is investing in the alliances for a return to be gained in the future.

- Strategic alliances represent a medium that can create scale and scope advantages necessary to be competitive on a global basis. Alliances allow firms to conserve their resources as compared to forming a wholly owned enterprise. The advantages and disadvantages of alliances have to be carefully weighed by each organization before making a decision to enter an alliance.

**REFERENCES**


1. India knowledge@ Wharton (2008) "NTT DoCoMo's Tata Deal: Why Global Telecom Firms Want to Dial India", November 27.
2. Larry D Qiu. (2009)''Cross-Border Mergers and Strategic Alliances'', School of Economics and Finance, The University of Hong Kong, Pokfulam Road, Hong Kong, Nov.15.
3. Takag Katsuyiki (2004), "Globalization at NTT DOCOMO: Implementing global business management strategies", MIT Sloan University
4. The NTT DOCOMO (2009), NTT DOCOMO and Tata Group Agree on Strategic Alliance in India: November.
5. The T|NTT DoCoMo, "DoCoMo's Change & Challenge", October 31, 2008.
6. The NTT DoCoMo newsletter, Mobility, October. 2009
7. Varadarajan, P. Rajan, and Cunningham, Margaret H.(1995). Strategic Alliances: A Synthesis of Conceptual Foundations, Journal of the Academy of Marketing Science, 23.pp 282-296.

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www.wikipedia.com

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