

# Globalization Policies and the Crisis in South East Asian Economies (Some Lessons for India)

Dr.Sorab Sadri

## Abstract

*This paper is based on three working premises and one accepted condition. The condition we accept is that globalization is necessary for economic development and can neither be wished away or fought against. The first premise is that export-led- growth is a fallacy. The second is that it is fatal to go in for globalization unless the liberalization process has been substantially completed. The third is that one cannot take international trade as a purely economic phenomenon and afford to overlook the political ramifications of the unipolar capitalist world economy.*

*Based on these three premises the paper examines the South East Asian Crisis, and in the process, the three premises are further strengthened. The integration of the periphery with the core in the capitalist system is only possible through colonialism or through globalization. Since the first option is ruled out the second presents itself as something to be desired. Hence globalization is built into both the form and the content of a capitalist world economy. In a boundaryless universe, globalization is as much an imperative as isolationist autarchy is an exercise in futility. However, the paper*

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*Dr.Sorab Sadri is Research Professor and Director, Dr.Vikhe Patil Foundation's Center for Management Research and Development, Pune.*

*suggests that we tread with caution and use a great deal of circumspection.*

*Finally, the paper converts these three premises into macroeconomic imperatives, which the planners in India can ill-afford to forget. The zeal with which globalization is being pursued needs to be tempered with restraint. We must, the paper argues, not err in throwing the baby out with the bath water, when we dismantle the old system and attempt a new one in its place. The paper takes a firm, liberal-positivist position on the possibilities for growth urging Indian Planners to consciously follow Interventionist Macroeconomics in the immediate future so as to avoid a debacle like the one witnessed in South East Asia and yet pursue realistic globalization policies for bringing about sustained industrial development.*

*You know the older I get the more firmly do I become convinced that there is no such thing as a pip in existence. Again and again I have seen the apparently sure thing go phut, and now it is rarely indeed that I can be lured from my aloof skepticism.*

P G Wodehouse: Very Good Jeeves (1934).

## **Introductory Theorising**

Looking back on the fracas in the periphery of the capitalist world economy the author has every reason to heartily agree with Wodehouse. Cremer and Zepp (1987) had spoken of a crisis brought on due to speculative trading. More recently Paul Krugman in his almost prophetic article 'The Myth of Asian Miracle' (1994) rebutted any claim for the existence of the Asian Miracle. And how right he was proved when starting from 1997,



the South East Asian economies went on a slide. Marxists have all along warned about the crisis of capitalism and their prognosis seems to have come true. Sadri in his paper “The East Asian Financial Crisis: a look back and analysis” (1999) echoes the same theme. As we cross over from the twilight of the last millennium and prepare to set our foot forward into the bright new dawn of the new millennium, it will help if we were to sit back and analyze what actually went wrong. What could have been done to prevent it in South East Asia and what can be done to prevent its reoccurrence in the periphery of the capitalist world economy.

The South East Asian financial crisis is remarkable in several ways. The crisis hit the most rapidly growing economies in the world, and prompted the largest financial bailouts in history. It is the sharpest financial crisis to hit the developing world since the 1982 debt crisis. It is the least anticipated financial crisis in years. The culprits within Asia, the Western media alleges, are the corrupt and mismanaged banking systems, marked by a lack of transparency in corporate governance. Marxists see this as an inherent shortcoming of state-managed capitalism. Schumpeter saw this as the inevitable crisis of capitalist growth. The economic miracle did not end with a bang but fizzled out without even a decent whimper leaving countless people unemployed and several economies in shambles.

At least as much attention, if not more, should be focussed on the international financial system. The crisis is a testament to the shortcomings of the international capital markets and their vulnerability to sudden reversals of market confidence. The crisis has also raised serious doubts about the IMF’s approach to managing financial disturbances originating in private financial markets. Perhaps most importantly, the turmoil demonstrates how policy mis-steps and hasty reactions by governments,

the international community, and market participants can turn a moderate adjustment into a financial panic and a deep crisis.

In this sense, the Asian crisis can be understood as a “crisis of success”, caused by a boom of international lending followed by a sudden withdrawal of funds. At the core of the Asian crisis were large-scale foreign capital inflows into financial systems that became vulnerable to panic. However, this is more than the bursting of an unwanted bubble. Much of the economic activity supported by the capital inflows was highly productive, and the loss of economic activity resulting from the sudden and enormous reversal in capital flows has been enormous.

There were few, if any expectations, of a sudden break in capital flows. By early 1997, markets expected a slowdown — even a devaluation crisis — in Thailand, but not in the rest of Asia. Indicators as late as the third quarter of 1997 did not suggest a financial meltdown of the sort that subsequently occurred.

To begin with, there were significant underlying problems besetting the Asian economies, at both a macroeconomics and a microeconomics level, especially within the financial sector. This paper explains a liberal diagnosis of the financial crisis in Asia. It builds on existing theories, and focuses on the empirical record in the lead-up to the crisis. The main goal is to emphasize the role of financial panic as an essential element of the Asian crisis. That the economic miracle was founded on political forces and imprudent speculation helped in seeing erstwhile developing economies collapse like a house built by a pack of cards. In the process the three premises on which this argument is founded, get further strengthened.



## Financial Crises

Marx and Engels had spoken of the tendency of the falling rate of profit which would usher in the crisis of capitalism, while Hegel even earlier had argued that every system generates the seeds of its own disintegration. Hansen, Kuznets and Kondratief had written erudite treatises on the business cycle from a liberal standpoint while Lange, Kalecki and Magdoff had signaled the impending doom of the dog eat dog attitude of countries in the capitalist periphery.

The macro budget allocation gives a very good clue of how well the economy is equilibrated. If the allocation made to the current expenses is proportionately more than the budget allocation for capital expenses, the country could be seen as having a heavier superstructure. If the converse were true, the country would have a heavier infrastructure. Clearly, the second alternative is preferred. In technical terms, infrastructure is the economic relationship between the various factors of production. The superstructure then is the social and political relationship built on the economic relationship.

The basic and key industries, telecommunications, roadways and transportation are good examples of infrastructure. State bureaucracy, the civil service, the armed forces and police are equally good examples of superstructure. Sadri, Williamson and Foo in *Oil and Economic Development* (1991) have argued that economies that have an inordinately heavier superstructure, as in the case of Nigeria (1970-86), the inevitable result is retarded development and negative growth. In most of the South East Asian countries, the inordinately high dependence on tourism (Thailand), financial markets (Korea) and the army (Indonesia) point to the fact that a crisis was inevitable. Only the timing of that crisis would be a subject of speculation.

Only a close historical analysis, guided by theory, can disentangle the key features of any particular financial crisis, including the Asian crisis. Growth theory points to the fact that there are five main types of financial crises, which may in fact be intertwined in any particular historical episode. These, in other words, are not discrete phenomena and can co-exist.

- 1) Macroeconomic policy-induced crisis: A balance of payments crisis (currency depreciation; loss of foreign exchange reserves; collapse of a pegged exchange rate) arises when domestic credit expansion by the central bank is inconsistent with the pegged exchange rate.
- 2) Financial panic: In general terms, a panic can occur when three conditions hold: short-term debts exceed short-term assets; no single private-market creditor is large enough to supply all of the credits necessary to pay off existing short-term debts; and there is no lender of last resort.
- 3) Disorderly workout: A disorderly workout occurs when an insolvent borrower provokes a creditor grab race and a forced liquidation even though the borrower is worth more as an ongoing enterprise. It occurs especially when markets operate without the benefit of creditor coordination via bankruptcy law.
- 4) Moral-hazard crisis: A moral-hazard crisis arises because banks are able to borrow funds on the basis of implicit or explicit public guarantees of bank liabilities. If banks are undercapitalized or under-regulated, they may use these funds in overly risky or even criminal ventures. Krugman (1998) similarly argues that the Asian crisis is a reflection of excessive gambling and indeed stealing by banks that gained access to domestic and foreign deposits by virtue of state guarantees on these deposits.



- 5) Bubble collapse: Bubble occurs when speculators purchase a financial asset at a price above its fundamental value in the expectation of a subsequent capital gain. In each period, the bubble (measured as the deviation of the asset price from its fundamental price) may continue to grow, or may collapse with a positive probability. The collapse, when it occurs, is unexpected but not completely unforeseen, since market participants are aware of the bubble and the probability distribution regarding its collapse.

The right of center but liberal view of the crisis, like the position taken by Paul Krugman, is that there was a panic and a concomitant inability of the market mechanism to cope with that panic. The view adopted by this paper is liberal no doubt but also left of center, being based on the works of Baran, Sweezy, Mandel and Amin. It argues that the causes are much deep rooted and should be found in an examination of the political economy of development. It points to Amartya Sen's concerns for Economic Equality and Jagdish Bhagwati's caution to avoid Immiserizing Trade.

### **Globalization and South East Asian Growth**

Let us clear a few cobwebs and get a few fundamentals straight. Management gurus argue that what India needs is a spurt of learning organizations. The culture of this learning organization is by its very definition open and globalized thereby enabling the free flow of ideas and processes. Indeed, it is eclectic since it takes the best from every other culture and indiginizes it to suit the local environment. Hence, the HR specialist should shy away from managers being a kupa munduk, or a frog in the well.

They should be open to new ideas and be both willing and able to embrace new strategies without feeling in the least threatened. This is possible only

if the manager concerned is sure of his core competency. Such a manager uses globalization to leverage his core competencies and hone his competitive edge. Globalization has a major impact on organizational cultures.

Globalization brought about competition in the product market and forced management to look upon core competency and quality related issues with more concern than they had hitherto done under a protected environment. This would have been easier for organizations if the liberalization process was allowed to be completed before globalization was started. However, that was not to be since the IMF conditionalities of 1989-90 forced the hand of the government.

Often globalization is perceived as a chimera or a many-headed monster that bodes ill for the nationalist cause. We advise the student of HR in general and political economy in particular to temper his observations with restraint. If one were to study the history of economic science at some length, globalization throws up three extremely significant issues:

1. Globalization is not a new phenomenon at all. It is at least as old as the fifth century AD. The Indian mathematicians had laid claim to discovering the concept of zero, a claim that is strongly contested in some recent studies in the history of mathematics. In any case, what was more important was the concept of decimals, which sprang from it. The Arab mathematicians had the intellectual honesty to acknowledge the debt to the Indian scholars when they took these ideas across the world along with the spread of Islam. Hence globalization benefited Indian thought by default.
2. Studies in the origin of words (etymology) shows that there was free flow of thought between the Indian, the Persian and the Chinese people



as far back as third century BC. Indian scholars like Arya Bhat had a great following in China and the guru of Fa Hien, a Chinese scholar chronicled the development of Nalanda, Rajgir, and Pavapuri. Indeed there was a vibrant trade in culture, goods, and ideas throughout this part of the then developed world. What else could this signify but globalization?

3. Globalization is indeed a very old phenomenon as seen by the manufacturing of iron that predated Christ by centuries. The iron pillar opposite the Qutub Minar in Delhi bears adequate testimony to this fact. The cannons used in war show that there was an exchange of technology between India and other countries. The wheelbarrow, the clock, and the magnetic compass are other instances of technology crossing geographical boundaries.

The bogey of globalization raised from time to time by micro nationalists is patently misleading and false. Amartya Sen in his Dorab Tata Memorial Lecture entitled *India and the World* (20.02.2001) pointed out:

Globalization in Maths as well as Science and Engineering played a major part in the revolution of thought and social organization that transformed Europe into its present shape.

Globalization of technology unfortunately is resisted but globalization of ideas is not. This mistaken sense of nationalism is yet another evidence of petit bourgeois false consciousness on the part of the ideologues on the one hand. On the other hand, those politicians who cry out against globalization but who are actually playing to the gallery show this trait. There is little ideological about it.

In fact, even this false consciousness is globalized, as is its ideology. The learned Nobel laureate went on to say that the ideological resistance to and protests against the recent WTO summit shows the immutable fact that :

Globalized political resistance has tended  
to confront globalized economic relations.

This was indeed unfortunate. Protestors and governments seem to be missing the woods for the trees. The basic economic issue and primary political concern should be to ensure an equitable distribution of income and wealth on the one hand and eschew uneven development of people and economic sectors on the other. Self-appointed guardians of national identity and culture miss this moot point. How far does the economic environment go in ensuring this process of enriching the security of employment, productivity of factors and the quality of work life within the organization should be a major policy concern.

Let us get one more thing absolutely clear. There is no such thing as Export Led Growth. Export is a dependent variable and so the term is an oxymoron. What is more acceptable is the existence of a Growth Led Export. The basic difference is political rather than economic.

This creation of wealth, it was argued, would act as a buffer against the socialist onslaught since the quality of life would be sufficiently high to forestall any movement towards radical change in the political economy. But once the Soviet Union had disintegrated, and the People's Republic of China, (or for that matter Cuba), alone was no major threat, US interest in propping up these economies waned. Their export was motivated by political considerations by the capitalist West and there was little infrastructural development within these economies to sustain that high a



level of export. In contradistinction thereof, had there been economic growth first and the terms of trade had become favourable due to any other reason, then the export would have had a stable base to stand on. The bubble would not have, perhaps, burst quite so easily.

If one were to take the example of the US economy as well, one would find proof of this idea. The USA engaged itself through isolationist policies to develop its own economy first and then only did it venture into the arena of international trade. It is granted that unless an economy is well endowed in factor resources and has favorable factor prices, autarchy may not be an easy option. In short, unless the economic growth is ensured, one cannot afford to speak of export promotion. The economic history of Japan as well as that of Germany supports this contention. They set their home in order before trading overseas and speaking of exports. This needed that industries must imbibe a culture of consistency, dependability, perfection of quality, a sense of consumer satisfaction and appropriate use of technology.

There is a corollary to this logic. Whenever a globalization program has to be successfully mooted, the planners must ensure that the liberalization process has been adequately if not fully completed. However, the fact that the South East Asian economies went in for globalization when their own liberalization process was incomplete may have contributed to the disequilibrium. And this brings us back to our first premise: that export led growth is a fallacy at best and an economic hazard at worst. And from this springs our second premise: that globalization should not be mooted unless the internal market liberalization process has been completed.

The South East Asian economies violated both the above mentioned premises. One reason that the crisis came as such a surprise in the

conservative camp was South East Asia's long track record of economic success. The Press has eulogized the progress and did not read the small print, which would perhaps have explained why countries like Thailand, South Korea, Malaysia and Singapore really had such a competitive advantage. The broad outlines of that success are only too well-known but need to be repeated. In Malaysia, Indonesia and Thailand, average income more than quadrupled between 1965 and 1995 and in Korea, income rose seven-fold.

Average income in these four countries climbed from 10 per cent of the US average in 1965 to around 27 per cent today. Life expectancy at birth rose from 57 years in 1970 to 68 years in 1995 and the adult literacy rate jumped from 73 per cent to 91 per cent. Notably, the benefits of economic growth were widely shared throughout the population. Income of the poorest of the population grew just as fast as average income and poverty rates fell substantially in each country. In Indonesia, for example, the share of the population living under the poverty line fell from 60 per cent in the 1960s to under 15 per cent in 1996.

The origins of Asia's rapid growth have been hotly debated, and these discussions have taken on new dimension with the onset of the financial crisis. It is also suggested, in the aftermath of the crisis that Asia's rapid development was somehow a mirage that either never really happened or has been completely wiped out by the crisis. This view needs to be tempered with restraint. The enormous gains in income levels, health, education and general welfare in Asia during the last three decades will not be dissipated by even an extended recession. After all, even if the crisis is followed by several years of zero growth, standards of living will still be four times higher than they were a generation ago and 50 per cent higher than they were just a decade ago.



It can be also argued, more reasonably, that there may have been something in Asia's growth strategy that inevitably led to the financial crash. Problems began to emerge in both macroeconomic (capital inflows, real exchange rate appreciation) and microeconomic fundamentals (credit expansion, financial regulation and supervision) in the 1990s that partially contributed to the onset of the crisis. If one were to follow the "Commentary" in Cremer and Zepp (1987), one would find that this was exactly the same position that had occurred on the eve of the Stock Market Crash of 1987.

Looking from a pure Keynesian point of view, we may even be tempted to rush to a conclusion that Asia's development strategy led to a crash. Such a conclusion might be compelling if it were true that the Asian "miracle" in fact was due to strong authoritarian governments, a close-knit relationship between governments and corporate leaders in fostering heavy industry, or large state subsidies to help exporters gain market share. Although the view of the "Asian Model of Development" has gained widespread popularity, it generally fails to hold up under close scrutiny.

The core industrial strategy in South East Asia was the supposed success of globalization. More appropriately, it was claimed, the success lay in integrating national production with international production, not merely through export orientation, but through specific institutions such as technology licensing, original equipment manufacturing and export processing zones, which helped to attract export-oriented foreign investment. This strategy enabled economies to begin with low-technology manufactured export activities (apparel, footwear, and electronics assembly) and gradually to upgrade to high-technology products, such as consumer electronics design and production. Of course, the conservative camp theorized, this outward oriented industrialization strategy also

depended fundamentally on several core macroeconomic policies pursued throughout the region:

- (1) High rates of government and private saving
- (2) Reliance on private ownership in the industrial sector
- (3) Low inflation rates and restrained domestic credit policies
- (4) Convertible currencies, with low or zero black-market premia on foreign exchange
- (5) Political alignment with the United States and its NATO allies.

Any long-term development process involves the strengthening of financial institutions. As production processes become more complex and more deeply integrated with the world economy, a greater range of sophisticated and well-regulated financial services takes on greater importance. Changes in firm ownership structure and financing arrangements require deeper capital markets for equities, bonds, bank loans and other forms of financial intermediation. More capital intensive production processes require low cost long-run financing in order to be competitive, and a range of hedging instruments to protect against a variety of market risks.

At least in part, the Asian financial crisis has its roots in attempts at financial reforms in South East Asia in the early 1990s that were aimed at upgrading financial institutions, but in fact left the economies exposed to the instabilities of the international financial markets. In Indonesia, for example, a series of financial deregulation packages led to a tremendous expansion in the banking sector, with the number of private banks (including foreign and joint venture banks) nearly tripling from 74 in 1988 to 206 six years later. The centerpiece of Thailand's effort to compete with Singapore and Hong Kong as a regional financial center



was the introduction of the now notorious Bangkok International Banking Facility (BIBF) in 1992.

The BIBF allowed for very rapid growth in the number of financial institutions that could borrow and lend in foreign currencies, both on and offshore. In Korea, financial market reforms in the mid-1990s similarly opened the door towards greatly expanded banking activity, and increased access of domestic banks to short-term international loans. As a general matter, careful regulation and supervision did not match the rapid expansion in financial services. Regulatory reforms tended to generally be partial and incomplete. The piecemeal approach led to a situation in which reforms in one area tended to open up loopholes in other areas, which firms were quick to exploit. State-owned banks in Indonesia and Korea were allowed to break many prudential regulations on a regular basis without penalty. As in many countries around the world, many banks were owned by politically well-connected individuals who used the banks to heavily finance the operations of affiliated companies.

In Indonesia, for example, almost all the major corporations also had their own banks, and the division between the two was often blurred. Hobson, Hilferding, Lenin, Baran, Magdoff and Sweezy have demonstrated amply that whenever monopoly capitalism combines with finance capitalism the aggregate level of exploitation increases. And with this increase, trading on the gray market as well as the parallel economy burgeons. The political economy and the market mechanism become disequibrated and fragile, as a result.

To take a more sympathetic view, South East Asia may have become vulnerable to external financial shocks in part because it attempted to reform its financial markets in the 1990s in a market-oriented manner. These reforms led to a dramatic increase in the number of banks and their

linkages to the international economy, which, in turn, increased the exposure of these economies to international financial shocks, mainly through the remarkable buildup of short-term debts. The infrastructure was either absent or too weak to absorb these external shocks and this led to a situation of highly unstable markets which once disequilibrated continued to be so disequilibrated.

Asian countries with stronger financial systems (e.g. Singapore and Hong Kong) had taken steps to redress inadequate regulations and poor supervision, and thus were less prone to a crisis. That the two countries were not democratically governed and that they were virtual city-states may have facilitated the control. However, these two countries too lacked adequate economic infrastructure. Hong Kong has to resign itself to being a conduit for goods produced in Mainland China (PRC) to be exported to the West. Singapore had to resign itself with a satellite state status vis-à-vis the NATO allies. That the US and British naval fleets freely dock in Hong Kong and Singapore harbors indicates that political alignment held the key to smooth exports. This strengthens our third premise: international trade should not be analyzed purely against economic considerations at the cost of overlooking political imperatives. Liberal economic analyses of the crisis fall into the trap of isolating economics from politics.

At the other end of the spectrum, Asian countries that had not undertaken significant financial sector reforms (e.g. China, Vietnam) were shielded from the crisis by two facts. They had seen much less short-term capital inflow in the early 1990s and the ratio of superstructure to infrastructure was fairly well equilibrated. This further strengthens our third premise.

Seen in this light, the liberal economist viewed developments of 1997 not as the inevitable result of an “Asian Capitalist Model,” but rather the



accidents of partial financial reforms that exposed the Asian economies more directly to international financial market instability. Krugman, for instance, takes this view. We now turn to the proximate causes of the crisis and view the dichotomy of budget allocation in a new light.

### **Buildup to the Crisis: 1990-97**

There were indeed growing imbalances and weaknesses in the South East Asian economies both at the microeconomic and at the macroeconomic levels. Most importantly, there was a rapid buildup of short-term external debt into weak financial systems. This was made possible both because of South East Asia's successful track record which attracted foreign credits, and because of partial financial market liberalization in South East Asia, which opened new channels for foreign capital to enter into the Asian economies. The inflows led to appreciating real effective exchange rates, a rapid expansion of bank lending, and especially to increasing vulnerability to a reversal in capital flows.

When capital inflows waned in late 1996 and early 1997, a financial panic erupted following a series of missteps by the Asian governments, market participants, the IMF, and the international community. The result was a much deeper crisis than was either necessary or inevitable. One thing must be understood first of all. The USA and its allies buoyed up the economies artificially (for political reasons). This was to offset the rise of communism. But once the soviet hegemony came to an end, the threat of communist expansion petered away and the bubble burst. Economies could not sustain the growth without the active connivance of USA and its allies. Currencies, which were held high by political expediency, found their low-level equilibrium when economic reality took over. To the analyst, however, several aspects of the buildup to the crisis are worth highlighting:

- Capital inflows into the five Asian countries averaged over 6% of GDP between 1990 and 1996. Capital inflows into Thailand averaged over 10% of GDP during the 1990s, and reached a remarkable 13% of GDP in 1995. Thailand's inflows were predominantly borrowing by banks and financial institutions. In Malaysia, inflows averaged 9% of GDP, and jumped to over 15% of GDP in both 1992 and 1993 before tapering off. However, the bulk of Malaysia's inflows came in as foreign direct investment, which of course is less prone to quick reversals. In Indonesia, inflows averaged a more modest 4% of GDP, mostly in the form of borrowing by private corporations.
- Governments maintained exchange rates either with very little variation (Malaysia, Thailand, the Philippines) or small, predictable changes (Indonesia, Korea). In effect, the central banks absorbed the risks of exchange rate movements on behalf of investors, which helped encourage capital inflows, especially with short maturity structures.
- Exchange rates appreciated in real terms as the capital inflows (brought about at the behest of US) put upward pressure on nontradeables prices prior to the crisis. Real exchange rates appreciated by more than 25% in the four South East Asian countries between 1990 and early 1997. In Korea, the appreciation was about 12%. However, one should not forget that the real appreciations in Asia during the 1990s were relatively modest when compared with other developing countries. Brazil and Argentina, for example, have seen real appreciations of more than 40% since 1990.
- Export growth, measured in current US Dollars, began to slow in the mid-1990s, and then dropped sharply in each country (except the Philippines) in 1996. In Thailand, exports actually fell in nominal



Dollar terms in 1996, while in Korea exports increased just 3.7 per cent. Several factors probably contributed to the crisis.

- Domestic bank lending expanded rapidly throughout the region. In Thailand, Korea, and Malaysia, banking claims on the private sector increased by more than 50 per cent relative to GDP in seven years, reaching 140 per cent of GDP in 1996. The Philippines, starting from a much lower base, recorded private credit growth of over 40 per cent per year between 1993 and 1996. Only in Indonesia did credit growth remain at more modest levels (but here, private corporations were borrowing directly offshore). The banks borrowing offshore financed much of the new lending. In Korea, 15 foreign liabilities of the banking system more than doubled from 4.5 per cent of GDP in 1993 to 9.5 per cent of GDP in mid-1997. In the Philippines, these liabilities soared from 8.8 per cent of GDP at the end of 1995 to an astonishing 21 per cent of GDP in mid-1997, just 18 months later. The most extreme case was Thailand, where, after the introduction of the BIBF, foreign liabilities of banks and financial institutions increased rapidly to over 28 per cent of GDP by 1995.
- Apparently, a modestly increasing share of domestic bank lending was used for real estate, property, and purchases of equity funds.
- A rising share of foreign borrowing was short-term debt, especially in Korea, Thailand, and Indonesia. Short-term debts to offshore banks in these three countries reach \$68 billion, \$46 billion, and \$34 billion, respectively, at the end of 1996. In Thailand, Korea and Indonesia — the three countries hardest hit by the crisis — the ratio of short-term debt to foreign exchange reserves exceeded one after 1994. A ratio greater than 1 is not by itself sufficient to spark a crisis, since it can be sustained as long as foreign creditors are willing

to roll over their loans. A high ratio, however, does indicate vulnerability to a crisis. Once something sparks a withdrawal of foreign capital, each foreign creditor has the incentive to demand repayment quickly, since they each know that there is not enough foreign exchange available to repay everyone.

### **Capital Withdrawal and Panic**

There is a crude economic logic, which goes along the following lines. All value is created by labor and capital is man made aid to production. Investment is the process of capital creation and is only viable when the cost of borrowing is less than the rate of return. Hence by logic, direct foreign investment is inherently exploitative in form and content. The recipient economy benefits by default and only if the infrastructure is stable enough to permit the trickle down effect of growth to take place. This is more an exception than the norm. The successful trickle down effect of capitalist development in the South East Asian economies is highly debatable.

Speculative spending is permissible in the short run only. In the long run there must be adequate economic stabilizers to justify the risk taken in speculation. There is ample evidence to indicate that levels of speculative spending in the South East Asian economies was high and economic stabilizers (e.g. infrastructure) were found to be wanting.

Stock Market analysts say that it all began when pressure mounted at nearly the same time in early 1997 in both Korea and Thailand. In Korea, Hanbo Steel declared bankruptcy in January, leaving \$6 billion in debts. In the next few months, both Sammi Steel and Kia Motors faced similar difficulties. These problems put increasing pressures on merchant banks (which had borrowed offshore to lend to these and other chaebol), and



began to raise concerns about the financial strength of other chaebol. In Thailand, property prices started falling in late 1996. It was becoming clear that financing companies, which had exposed themselves to the Bangkok property market, were in trouble. The Baht came under attack in late 1996, and twice more in the early months of 1997. In March, the Thai government promised to buy \$3.9 billion in bad property debt from finance companies, but then quickly reneged on its promise. As evidence grew of the fragile condition of the property sector and the financial institutions, speculation mounted that foreign exchange reserves were dwindling and that the government would have to float the Baht.

The government's protestations that it would not allow Finance One (the largest financial institutions) to go under, and that it would not allow the Baht to float, were to no avail. By late June, Thailand had sharply reduced its liquid foreign exchange reserves, and the Baht was cut loose on July 2<sup>nd</sup> 1998. Foreign creditors reacted by withdrawing capital from around the region, and exchange rates came under intense pressure. By early September, currencies in each of the four South East Asian countries had fallen by 20% or more. As the currencies fell and capital flows reversed, several forces came into play to create a self-reinforcing spiral that quickly evolved into a panic.

- First, in the early stages, creditors made little effort to distinguish amongst the South East Asian countries, and assumed that if Thailand was in trouble, the other countries could not be too far behind.
- Second, as exchange rates depreciated and the domestic currency costs of servicing foreign debts rose, foreign creditors became more reluctant to extend new loans and roll over existing loans. Domestic debtors had to buy foreign exchange to retire these debts, which put

more pressure on exchange rates, which in turn reinforced the tendency for creditors to not roll over loans.

- Third, domestic debtors, many of which had not hedged their foreign exchange exposure, began to purchase foreign exchange to try to close their positions.
- Fourth, the major rating agencies belatedly began to downgrade countries in the region, triggering further creditor withdrawals.
- Fifth, both governments in the region and the international community made several mistakes in handling the crisis that added fuel to the fire.

As international confidence in these strategies waned, and democracy was thrown to the winds, investors panicked. There was just too much politics with the economics and not enough economics with the politics. An anti-communist USA and its Asian epigones soon realized that the economics of bread and butter or the Gospel of Mammon (to use Thomas Carlyle's language), as a motivator was stronger than sentiment, the cookie crumbled. Very soon it became clear that the economic contractions in the region would be much larger than what was originally made out, creditors withdrew even more funds, intensifying the panic.

The implementation of free market economics spelt the inevitable doom. The absence of Keynesian interventionist strategies, the distancing of the state sector from the market place and the high levels of direct private foreign investment (through MNCs) prevented the state from interfering positively and effectively. The exchange rate peg of the Baht to the US Dollar shows the inability or unwillingness of the state to take measures that would upset the direct private foreign investors. Globalization had replaced colonialism as a means of control by the core of the periphery.



## **Initial Responses to the Crisis**

It is very likely that had Thailand reacted differently to the fall in land and stock prices and the growing fragility of the financial institutions in late 1996 and early 1997, it would have escaped a serious crisis. Contagion to the rest of the region would then also have been avoided. Despite the fall in property prices, the warnings of investment analysts, and the large infusions of money to ailing banking institutions, the government staunchly maintained the exchange rate peg of the Baht to the U.S. Dollar, thereby leading to a massive loss of reserves.

By the time the currency was allowed to float in July, the government had spent considerable foreign exchange reserves in defence of the currency, and has committed large amounts of foreign exchange to forward purchases of Baht, as well as billions of Dollars in Baht propping up failed banking institutions without taking fundamental steps towards their closure, merger or rehabilitation. The result was that Thailand became extremely vulnerable to investor panic, since investors recognized that Thailand's available foreign exchange reserves had fallen far below the outstanding short-term debts owed to international banks.

Once the crisis began to spread, other countries also made mistakes that accelerated the capital withdrawals. Malaysian Prime Minister Mahathir's harsh comments about foreign investors and his threats to ban foreign currency trading are prime examples. Thailand and Malaysia imposed mild capital controls. Malaysia announced it would establish a fund to support stock prices, then abandoned the plan a few days later. Korea seemed to be boldly facing some of its problems by allowing some of the chaebol to go bankrupt, but it inexplicably spent down its reserves in a desperate attempt to defend the one in October and November.

Ironically, Indonesia was at first widely praised for its handling of the crisis, as it first widened the trading band on the rupiah, and then floated the currency in August. It resisted the temptation to spend reserves, eased the rules governing foreign ownership of stocks, and announced that it would postpone over 100 investment projects. However, it retracted that decision for several large projects, then later postponed them again. These on-again and off-again pronouncements, and the government's instructions for state enterprises to pull their large deposits out of the banking system (which sharply increased interest rates) frayed nerves and encouraged further withdrawals of foreign funding.

One only has to dig deep into the historical roots of the Bretton Woods Conference that led to the setting up the World Bank and then the International Monetary Fund. The USA and its NATO allies continue to call the shots and it is a well-known fact that IMF conditionalities always favor the donor countries in the long run. Perhaps this will explain why countries that have been financially bailed out by IMF in the past have failed to make the grade in the long run. This is because the terms of trade are skewed unfavorably towards them in the long run. This is exactly what Jagdish Bhagwati bemoaned in his thesis of Immiserizing growth. This is what the ECLA theorists implied in their thesis of unequal exchange or the Marxists when they speak of unequal distribution of wealth and incomes from trade.

The initial IMF programs, rather than inspiring confidence, seem to have accelerated the flight of currency from the region, despite the pledge of more than \$100 billion in emergency funds to Thailand, Indonesia, and Korea. The initial Fund programs focused on fiscal deficits, high interest rates, restrictive money growth, and the immediate closures of insolvent financial institutions. The original Fund programs in Thailand, Indonesia,



and Korea were discarded within months. Korea's first program lasted but three weeks. In each country, the signing of Fund agreements was greeted by brief enthusiasm, followed by continued depreciation of the exchange rate and falls in stock prices.

The first signs of the end of the currency free-falls came only on December 24th, when the international community changed its strategy and initiated a different approach to the problem based on debt restructuring, accelerated disbursements of international funding, and more comprehensive and rational financial sector restructuring.

### **The Liberal View of the Crisis**

In this section we come up with two broad categories of explanations for the South East Asian crisis:

- (1) Shifts in international market conditions
- (2) Growing weaknesses and mismanagement in the Asian economies

All these factors have played their role to the hilt. The shifts in international conditions and mis-management coupled with corruption played a dominant role. It is also clear that intrinsic capital market instability is a key feature of the depth, severity, extent, and simultaneity of the crisis in the region. The intrinsic nature of free market economics ensures that the big fish eat the small fish that capitals are centralized and power is vested in the hands of a powerful few. Whenever the State interfered it was spasmodic, crisis centered and not a product of a sustained long run growth strategy.

The only answer liberal economics has for remedying this malaise in Keynesian Interventionist Macroeconomics, which was absent in the South East Asian Countries.

## Shifts in International Market Conditions

On the most general level, international market conditions were benign or favorable before the onset of the South East Asian crisis. U.S. interest rates remained low. World commodity markets were relatively stable. Risk premia on loans to emerging markets were falling, not rising. The growth in total volume of international trade was strong, if a little bit slower in the aggregate in 1996 and 1997 compared to 1993-95. World export volumes worldwide grew 6% in 1996, down slightly from the 9% recorded in 1994 and 1995 but still above the world average for the early 1990s. The Institutional Investor Credit Rating in March 1998 for these countries was also quite encouraging. [Indonesia 49.9%, Malaysia 64.5%, Singapore 82.9%].

Despite this favorable environment, there are several specific hypotheses that have been advanced about unexpected international shocks to the Asian economy. Upon closer inspection, however, it appears that these shocks were at best a modest contributor to the crisis. The suspicion centers around the collapse of export growth in 1996 in two of the five crisis countries, Thailand and Korea as well as the slowing of export growth in Malaysia and Indonesia. The most extreme case was Thailand, where the Dollar value of exports actually fell 1 per cent in 1996, after two years of growth in excess of 20 percent. Korea's exports grew by just 4 per cent (down from 30 per cent growth in 1995), and Malaysia's by only 6 per cent (down from 26 per cent the previous year).

Indonesia's situation was a bit different, as it registered 10 per cent export growth, about the same as in the previous three years (but well below the 1990-92 average). Only the Philippines registered substantial export growth of 19 per cent in 1996. The division of the fall in Dollar exports earnings between volume and unit value differs widely across countries.



World prices for manufactured exports fell about 2% in 1996 (IMF, 1997). Semiconductors were hit especially hard, with prices estimated to have fallen by as much as 80% in 1996. The rapid growth in electronics production in South East Asia, coupled with the addition of China and Mexico to these markets, probably created excess productive capacity and contributed to these price declines. This provides a plausible explanation for the fall in unit values in Korea and Malaysia, both of which export substantial amounts of electronic products.

A second and closely related hypothesis suggests that the rise of China may have dramatically shifted export-oriented production away from South East Asia. Chinese firms compete directly against other firms in the region in textiles, apparel, and electronics, and in certain products, China was clearly gaining market share. Nevertheless, while China's emergence may have affected certain markets, its overall impact on the South East Asian export slowdown in 1996 was probably modest at best.

A third view is vis-à-vis the U.S. market, which remains the single most important market for the crisis countries of Asia. The passage of NAFTA and the dramatic surge of Mexico's exports (especially in the wake of the 1994 Peso devaluation) may have resulted in intense new competition for South East Asia. Mexico's total exports soared from \$52 billion in 1993 to \$96 billion in 1996, with gains in several areas that directly compete with South East Asia (electronic machinery, apparel, and automotive components). However, as with China, while the effect on certain sectors was probably important, the overall impact of Mexico's surge on Asia's exports was moderate.

Probably each of these factors contributed to the export slowdown in 1996, which, in turn, probably raised concerns among South East Asia's

creditors about the ability of firms in these countries to repay their debts. If one goes deep into the crisis political ramifications will inevitably surface.

An examination of the Composite International Risk Guide (ICRG) shows that the economies of these five countries were anchored around speculative investment spending. The Composite ICRG Risk Rating in March 1998, stood at 78.3% for Hong Kong, 41.5% for Indonesia, 67.8% for Korea, 64.8% for Malaysia and 90% for Singapore. Hence the panic hypothesis can be supported quite ably. But this also brings to the fore a hidden dimension: that investment risk was high because the infrastructural growth was outstripped by superstructural growth. And it is this facet of the macroeconomic dis-equilibrium supports our first premise quite admirably.

### **Economic Management and Asian Capitalism**

The second major liberal hypothesis holds that weaknesses in Asian economic management brought on the crisis. There were clearly growing weaknesses in the Asian economies in the early 1990s that increased their economic vulnerability. Asia's haphazard and partial financial liberalization, coupled with pegged exchange rates, seems to have worsened the allocation of investment funds within the economy. New banks and finance companies were allowed to operate without supervision or adequate capitalization. The issue is the extent to which these problems were responsible for the capital withdrawals, panic, and deep economic contraction, which followed.

If Asian "fundamental weaknesses" are really fully to blame then :

- the apparently unanticipated nature of the crisis, and
- the continued high levels of capital inflow into South East Asia until the very brink of the crisis itself should be accounted for.



One ingenious attempt at reconciling these factors within an overall critique of “Asian capitalism” is the arguments of Krugman (1998) and Dooley (1997) that foreign investors expected to be bailed out from South East Asia’s faulty use of the loans. Assume that foreign creditors lent to Asian banks in the expectation that the Central Banks plus the IMF would provide funds to the Asian banks to prevent their collapse in the event of a funding crisis. In the absence of Keynesian macro-dynamics this was a big task. Also, the fact that speculative investment spending was at high-risk levels, as the Composite ICRG Risk Indices have demonstrated. The risk attached to this speculative investment spending is exacerbated under conditions when the superstructure is stronger than the infrastructure.

In such an event, foreign credits to the banks would be safe upto the amount of the expected bailout, which might (crudely) equal the foreign exchange reserves of the Central Bank plus an anticipated sum from the IMF. If such a bailout were confidently expected, foreign creditors would have little need to do due diligence on the repayment potential of the debtor financial institutions.

One indicator of growing pressures in real estate markets is property prices. If the countries in crisis had indeed been in the midst of a speculative frenzy, we would expect to see real estate prices growing rapidly in the run-up to the crisis, and then crashing. In Thailand, stock prices rose very sharply in the early 1990s, then fell after 1995 and dropped sharply in the second half of 1996. What is interesting is that the property prices were seemingly not rising at all between 1992 and 1996.

In Indonesia, there is even less evidence of a boom-bust pattern. Stock prices rose steadily after 1992, and continued to do so right up until the Baht was floated, without a bust preceding the crisis. Land prices were almost exactly the same in June 1997 as they had been in June 1993,

displaying no evidence of either a sharp rise or fall. The boom-bust cycle probably was a feature in Thailand (and perhaps to a lesser degree in Korea as well), but it was not in Indonesia which ended up being hardest hit by the crisis.

A possible indicator of loan quality is the share of non-performing loans (NPLs) to total loans. In each of the Asian countries, reported NPLs actually fell during the 1990s. In Indonesia, the volume of NPLs peaked in 1993, two years after a dramatic monetary tightening put bank balance sheets under severe pressure. As banks became more profitable starting in 1994, many loans were written off.

The NPL ratio was also helped when a large state-owned bank (Bank Negara Indonesia) cleaned up its balance sheet prior to listing its shares publicly. In Malaysia, the dramatic drop in NPLs is probably a combination of both the rapid increases in bank lending and a concerted effort to clean up balance sheets in the early 1990s. It is probably true that loan quality deteriorated as lending expanded in the 1990s, especially lending in for certain activities, such as real estate. Without question, NPLs rose sharply for Thai financial institutions with heavy exposure to property markets when property prices fell in Bangkok in early 1997, and the costs of those bad debts mounted sharply in early 1997. However, a dramatic deterioration in loan quality throughout the early 1990s, as some have suggested, is not evident.

A crude macroeconomic indicator of the quality of investment is the incremental capital-output ratio (ICOR), which is the ratio of the value of new investment to the change in output in a given year. This measure has to be viewed with some caution, since it does not provide for necessary lags between investment and subsequent changes in output. Generally speaking, when investment quality deteriorates, these ratios increase, as



more investment spending is needed to support a given increase in GDP. Indeed, investment rates rose in the five South East Asian countries in the early 1990s, as the increased capital inflows added to already high savings to create a large pool of investment funds. Economic growth continued to be brisk, but did not rise commensurately with the increase in investment. As a result, ICORs rose in each country in the region except for Philippines.

This raises a very important question: Did foreign lenders believe that Asia's financial situation was unsustainable, but continued to lend with the expectation of an eventual bail out? For example, if lenders perceived a growing risk in Asia, spreads on Asian bonds should have increased in the run up to the crisis. The conclusion is that investors did not foresee the risk just because they believed that the South East Asian Miracle was indeed economic. In other words they began to believe in the fallacy of export led growth. And in their zeal to believe this disingenuous hypothesis, investors missed out on the real reason, the political buffer that had made this growth possible.

Another possible indicator that international markets perceived the risks of a crisis and bailout in Asia were growing are the rating compiled by Moody's, Standard and Poor's, and Euromoney. If creditors believed that the risks of a government-led bailout were increasing, it should have been reflected by a decline in ratings for long-term government bonds. But these ratings were either stable or improving in each of the Asian-5 crisis between 1995 and 1997, and did not fall until after the onset of the crisis.

Even in Thailand, where private investors began to become concerned in late 1996 and early 1997 when property prices fell, sovereign bond ratings remained high right up to the float of the Baht. This leads us to conclude that economic speculation had degenerated into a wanton gambling away

of the political economy. Che' Guevarra seems to have been right when he maintained that capitalism is akin to a race of wolves. He who gets there does so at the expense of others!

If foreign investors believed that a widespread crisis was impending (with only the timing uncertain), it would have shown up in the reports and newsletters of investment banking firms. Instead, these reports gave a more nuanced picture. They often pointed out weaknesses in the Asian economies (slower export growth, rapid loan growth, booming property markets), but they did not give any sense of a bubble waiting to burst. Most investment analysts displayed guarded confidence in South East Asia's prospects, in both the short and the long run. Thus, there is little evidence to support the idea that the majority of investors expected a crisis in Asia any time soon. There is no question that many banks and firms across Asia had close government connections that supported their profitability.

State-owned banks obviously could expect to be bailed out if there were a crisis. Korea's Chaebol had long been given strong support, and none had been allowed to fail for a decade before Hanbo steel collapsed in early 1997. In Indonesia, firms closely connected with the first family or the army have long been given special privileges. It is hard to make the case, however, that foreign investors felt themselves in a general way to be indemnified against risk through the prospects of generous bailouts. Thus, it is probably fairer to say that foreign investors thought too little about risk because they expected rapid growth and high profitability to continue, not because they expected a bailout.

Thus we can say, the combination of the rapid inflows of foreign capital, the appreciating real exchange rate, and rapid growth in bank lending undoubtedly led to some deterioration of the quality of



investments in Asia. Lenders to some well-connected firms, or to major commercial banks, no doubt felt secure in their positions, confident that they would make a nice profit and that the odds of default on a protected project were slim. Some observers, but relatively few, foresaw a major financial crisis on the horizon. Speculators certainly did not smell a kill in Asia on the heels of the Mexican peso crisis. There was almost no expectation of a widespread financial crash and the probability of a subsequent bailout was misplaced.

### **IMF response to the crisis**

The official international response to the Asian crisis, led mainly by the International Monetary Fund (IMF) has evolved over time. During August - December 1997, the Fund signed three emergency lending agreements with Thailand (August), Indonesia (November), and Korea (December). These programs established packages of international financial support at an unprecedented cumulative sum of approximately \$110 billion. This represents the sum of commitments of \$18 billion for Thailand, \$35 billion for Indonesia, and \$57 billion for Korea. However, these figures overstate the actual amount of funding made available. \$22 billion of the funds for Indonesia and \$22 billion for Korea were “second line of defense” funds from individual donor governments (mainly the U.S., Japan, Singapore, and Europe), with relatively little likelihood of being available early in the program. Of the remaining money, only a part could be disbursed early in the adjustment program.

The basic character of the three loan agreements was similar. All of the IMF programs were predicated on the following design:

1. A package of loans to the respective central bank and governments, that could be drawn upon directly or indirectly to help support the

repayment of debts falling due to international creditors, and directly or indirectly to help stabilize exchange rates

2. A macroeconomic framework based on budget balance or surplus, and high nominal interest rates and restrictive domestic credit targeted at exchange rate stability
3. A program of drastic financial sector restructuring, built upon the immediate closures or suspensions of several financial institutions, and a significant intensification of financial sector supervision in various forms
4. Other “good governance” and “structural” measures, aimed at increased transparency and competitiveness of the economic system, including accelerated trade reform, demonopolization, and privatization.

The concepts underlying these programs may be summarized as follows. First, the IMF envisioned that the immediate objective was to re-establish financial market confidence, most importantly by stabilizing the exchange rate. Exchange rate stabilization was to be based on a combination of macroeconomic discipline (fiscal balance, high interest rates, and tight credit), the increased availability of foreign exchange reserves, and confidence that fundamental reforms of the economic system were moving forward.

These reforms, in turn, would be signaled by decisive actions at the start of the program to close or suspend loss-making financial institutions, as well as the announcements of a strict timetable of longer-term reforms regarding financial markets, corporate governance, and increased market competition in various areas.



The foreign creditors were allowed to escape losses, Government took over the burden of repaying the foreign debts (which were now owed to the IMF, rather than to the international private creditors). The IMF has stressed that the goal of the lending packages was to support stabilization, not merely to bail out foreign financial institutions. The IMF had hoped that its role as a quasi lender of last resort would restore enough market confidence to obviate the need for the Asian Governments to actually draw down the full package of loans. The thinking presumably ran that if the exchange rate could be stabilized and default avoided, then private lending would be restored. The IMF feared that an outright default in Asia would trigger a massive upheaval in other emerging markets. Therefore, even if the loan packages did little more than to repay creditors and forestall default in Asia, it might have important salutary effects in the rest of the emerging markets. The country-wise statistics given on Composite ICRG and Institutional Credit Rating, in the World Development Report 1998/99, and quoted earlier, need therefore to be viewed with circumspection.

During the period August to December 1997, the IMF programs failed dramatically to meet the objective of restoring market confidence. In all three countries, the exchange rate was expected to stabilize, but in fact quickly depreciated far below the targets set in the program and this despite a very sharp increase in interest rates. Foreign investors remained unconvinced about the debt servicing capacity of the private debtors despite the announced availability of IMF loans, and continued to demand the repayment of short-term loans as they fell due. Official reserves fell more rapidly than the IMF had predicted. In the case of Korea, the withdrawal of short-term debts was so much more intense than predicted in the December 3 program that Korea faced imminent default by

December 24. Indeed, on December 22, Moody's downgraded the sovereign debts of all three bailout countries, Indonesia, Korea, and Thailand, to "junk-bond" status.

The most important measure of failure of the IMF programs lies in the outcomes on economic growth. The basic goals of IMF programs were to give confidence to members by making the general resources of the Fund temporarily available to them under adequate safeguards, thus providing them with opportunity to correct maladjustments in their balance of payments without resorting to measures destructive of national or international prosperity. This purpose has not been well served. Since the launch of the IMF programs in each country, actual outcomes have turned out to be far worse than projected.

With Korea on the brink of default, the U.S. Government decided to press the foreign commercial banks to roll over their short-term credits on an enforced basis, rather than waiting for market confidence to be restored. Initially, the banks and the Korean Government announced a standstill on debt servicing, pending a formal agreement. The Korean Government and the banks agreed to a complete rollover of all short-term debts falling due in the first quarter of 1998. On January 28th, an agreement was reached to convert \$24 billion in short-term debt into claims of maturities between 1 and 3 years. Notably, the IMF, with U.S. Government backing, insisted on the comprehensive debt rollover as a condition for further disbursements of the IMF lending package. Those disbursements were in fact accelerated as part of the new arrangement. The new Korean arrangements put a brake on the fall of the Won. However the currencies in Thailand and Indonesia continued to depreciate, however, for several more weeks. In Thailand, the end of currency depreciation seems to have occurred when the Thai Government formalized its guarantees of all



liabilities owed by Thai commercial banks, including those liabilities owed to foreign creditors.

The clarification of such state guarantees on what had been private sector debts, in combination with other policy actions and the improvements in Korea, stemmed the collapse of the Baht, and initiated a period of currency appreciation. Thai corporate debts owed to foreign creditors, in the mean time, fell into partial suspension, though systematic data on the extent of debt servicing by non-financial corporate borrowers is not available, (Not even on the Internet).

In Indonesia, the situation became more chaotic when the government announced January 6th announcement of its proposed budget for the new fiscal year (starting April 1, 1998). The budget called for a 32% increase in spending in nominal rupiah terms. The proposed budget was immediately strongly denounced by the US Treasury and the IMF as being inconsistent with the IMF program and signaling that Indonesia was not seriously implementing the program. Since few outsiders actually had seen the confidential IMF documents, these claims could not be independently verified, and the markets plummeted. Unfortunately for Indonesia, the statements from Washington turned out to be too hasty. The increased spending was entirely due to pass through effects of the depreciation, and in real terms, the budget represented a reduction in spending. The Indonesian government and the IMF signed a new agreement, revising the agreement. Surprisingly this new agreement simply intensified the previously agreed strategy, based on the IMF loan package and accelerated structural reforms.

The above strategy failed once again to spur a revival of market confidence. The markets reacted negatively to this new package, resulting in further declines in the exchange rate. The turn in Indonesia towards a modicum

of financial market stabilization came two weeks later, when the government of Indonesia made two policy announcements. First, a de facto suspension of payments on short-term debt. And second a government guarantee of all commercial bank liabilities, both to foreign and domestic depositors and other creditors. Despite considerable other turmoil the following weeks (including the government's flirtation with a currency board, the re-election of the President, and the replacement of the Cabinet), the steep decline of the rupiah halted. The voluntary suspension of debt payments was in one sense merely reporting the actual state of affairs, since most corporate debts were not being paid.

Indonesia signed another agreement with IMF, which finally included provisions on restructuring private sector foreign debt and a more comprehensive strategy for reorganizing the commercial banks. It also eased requirements on fiscal stringency and the timetable for removing subsidies. The achievement of currency market stability across the region during the first quarter of 1998 (and even nominal appreciation in the cases of Korea and Thailand) came in conjunction with a relaxation of the IMF's fiscal targets.

In all the three countries, the IMF relented on its goal of a fiscal surplus in 1998. In the revised programs, Indonesia, Korea, and Thailand will aim for modest fiscal deficits. The currency markets demonstrated that exchange rate movements were not closely linked to the realization of budget surpluses.

The management of crisis clearly entered a distinctive phase with a new set of principles guiding IMF strategy given as:

- (1) Partial suspensions of foreign debt payments, based on collective agreements between creditors and debtors (Korea) or unilateral actions to be followed by creditor-debtor negotiations (Indonesia);



- (2) Government guarantees of all bank liabilities (in contrast, for example, to the policy in the November program of Indonesia, in which only small depositors in the closed banks were protected);
- (3) Reduced focus on bank closures in the short term, and more focus on longer-run restructuring and bank recapitalization (the IMF dropped, for example, a demand for further Indonesian bank closures that it had tabled in discussions in early January);
- (4) An abandonment of fiscal surplus targets.

However certain principles remained unchanged, especially:

- (1) The targeting of exchange rate stability through high interest rates and restrictive domestic credit policies;
- (2) The implementation of a wide range of structural measures, in finance, trade, and corporate governance.

### **Why did the original IMF programs fail?**

Although it is a bit early to comment on the success of the IMF program, the Asian countries are currently suffering an extreme contraction of economic activity in 1998, despite the commitment of \$110 billion in emergency international support. The IMF programs failed to achieve their goal of maintaining moderate economic growth in the Asian countries. The programs also failed on several intermediate goals, including the preservation of creditworthiness, the continuation of debt payments, and the stabilization of the exchange rate at levels that prevailed upon the signing of the original lending agreements. According to the conservative view, there are reasons for that failure. First, the IMF is rather poorly placed in any circumstance to rally market confidence in the short term. Second, the IMF greatly amplified the jitters that it naturally creates by declaring both for negotiating purposes and as a result of substantive

institutional views that the financial crisis engulfing Asia was mostly the result of deep fundamental weaknesses, not a self-fulfilling panic among creditors. Third, the basic IMF approach to restoring market confidence was based on a very peculiar hypothesis. That tough actions of financial market restructuring including closures of financial institutions, tightened regulatory standards, and the like would reassure creditors so much that they would roll over their short-term claims as they fell due is questionable. There is simply no reason to believe that strong regulatory actions to close down banks and finance companies in the middle of a panic, and to tighten supervisory standards, would in fact restore market confidence, in the sense of halting the demand for repayments of short-term debts. Indeed, the logic of creditor panics is the opposite: the sudden realization that a bank will not be bailed out by a lender of last resort can easily incite a panic that would not have arisen. The IMF's actions in Indonesia were particularly egregious. Sixteen commercial banks were suddenly closed with the explicit proviso that deposits over 20 million Rupiah (approximately \$5,000 at the time) would be unprotected. This was a sure-shot recipe for panic.

Even relatively strong banks came under intense pressure as foreign creditors refused to roll over loans and depositors fled to state and foreign owned banks. By January, the banking systems in Indonesia, Korea, and Thailand had nearly ground to a halt. Foreign banks stopped accepting letters of credit written by banks in these countries, and firms whose banks had been closed had difficulty finding new banks to service their needs. Ironically, even exporters were badly affected, despite the potential for increased profitability from the exchange rate depreciation. There were widespread reports of exporters with confirmed orders unable to obtain needed trade credits because banks were simply not making new loans. Thai exports in January 1998 were actually 8 per cent below the level of



January 1997, despite the massive depreciation. Despite having an estimated \$1 billion in confirmed export orders for the first six months of 1998, these firms were unable to arrange for the working capital credits that they needed to import the inputs.

Fourth, the IMF's fiscal and monetary policy approach was also problematic. The IMF put great stress on the need for strong fiscal contraction in order to ensure a fiscal surplus in 1998, even though the countries were already being hard hit by the contractionary force of the withdrawal of foreign credits. The IMF asserted that fiscal adjustments were core components of confidence building measures needed for currency stabilization. There is no evidence that the currency markets reacted at all favorably to the fiscal surplus targets.

The monetary targets are more conventional, but also problematic. The IMF used interest rates as both instruments and intermediate targets to achieve financial stabilization. Most macroeconomists share the view that interest rate increases would help to support currency stabilization, and yet this basic proposition becomes problematical — even doubtful — in the context of an extreme creditor panic. Tight money in a given financial center can serve either to attract funds or to repel them, depending on the expectations that a rise in interest rates generates. With inelastic expectations — no fear of crisis or of currency depreciation — an increase in the discount rate attracts funds from abroad, and helps to provide the cash needed to ensure liquidity; with elastic expectations of change — of falling prices, bankruptcies, or exchange depreciation — raising the discount rate may suggest to foreigners the need to take more funds out rather than bring new funds in. This point is not just a theoretical curiosity. The experience of the Asian currencies in the second half of 1997 gives some direct support for the above contention.

# Discriminants of investors from non investors on public issues

Dr.T. Vanniarajan

## Abstract

*Indian finance market consists of both new issue market and secondary market. Fresh public issues of shares, debentures and bonds of public and private companies are dealt in new issue market and subsequently, these securities are listed and traded in the secondary market. The investors' profile, knowledge on capital market, risk taking ability and the attractive features of the financial instruments are playing an important role on the investors' perception towards public issues. The study focuses on investors' preferences in public issues.*

## **Introduction**

Real developments and financial developments are interrelated. A developed economy cannot afford to have an underdeveloped financial system. As a sign of dynamic financial system, innovations in financial technology is taking place. Use of financial instruments are reliance on financial institutions by different economic units is rapidly increasing. Financial institutions compete with each other to get surplus funds for their requirements through a wide range of investment opportunities. The Indian finance market consists of both new issue market and secondary market. Fresh public issues of shares, debentures and bonds of public

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*Dr.T. Vanniarajan is Reader in Business Administration, N.M.S.S.V.N. College, Nagamalai, Madurai.*



and private companies are dealt in new issue market and subsequently, these securities are listed and traded in the secondary market. The investor's profile, knowledge on capital market, risk taking ability and attractive features of the financial instruments are playing an important role on the investors' perception towards public issues. The present study focuses on investors' preferences in public issues with certain objectives:

- i. To reveal the profile of the investors and the association between the profile and investment preference.
- ii. To analyse the discriminatory variables of investors and non investors on public issues and
- iii. To identify the source of awareness towards public issues and the investors' attitude towards various public issues.

## **Methodology**

The main objective of the study is to analyse the investors' profile, awareness and attitude towards public issues with an additional attempt to identify the discriminators of investors and non-investors in public issues. Some enhancing and inhibiting factors in marketing of public issues are also identified. A questionnaire survey on 150 respondents was done covering the salaried and self-employed class people belonging to middle income class in the city of Madurai. Being exploratory in nature a convenience sampling method was adopted in selecting the sample respondents.

## **Technology for analysis**

Chi-square test was used to find the association between the profile of the respondents and their nature of investment in public issues. The two group discriminant analysis was applied to identify the discriminatory variables of investors and non-investors in public issues.

The simple percentage and weighted average methods was used for inference building regarding the other aspects.

## **Analysis**

The profile of the respondents indicate the demographic characteristics of the individual investors.

The study confined to the profile variables that included the life cycle of investors, level of education, monthly income and the nature of occupation. The life cycle of the investors is classified into (i) The first stage which represents the school / college leaving stage or beginning of career. The study included respondents who were unmarried, newly married and who had family with one child. The second stage covered the period 35 to 55 years of age. The third stage shows the retirement or nearing superannuation (above 55 years). As the life cycle of the investors influence more on the selection of portfolio, it is also included in the present study. As education leads to investors' awareness and perception towards the various portfolio, in the present study, it is classified into less than higher secondary level, higher secondary level, under graduation level and post graduation level.

The study focuses on the respondents who are at least in the middle income level. The monthly income of the respondent is grouped into less than Rs. 5000, 5000 to 10,000; 10001 to 20,000 and above Rs.20,000. The occupational structure of the respondents is confined to only salaried class and self-employed class. The respondents were asked whether they invested in public issues or not and on the basis of the result, they were grouped into investors and non-investors. The distribution of two classes on the basis of their profile is shown in Table-1.



**Table – 1**

	Profile	Investment in public issues			Chi-square value
		Yes	No	Total	
1	Life cycle stage :				
	a. First Stage	4	10	14	
	b. Second Stage	63	22	85	
	c. Third Stage	28	23	51	
	Total	95	55	150	13.2327*
2	Level of education:				
	a) Less than higher secondary	–	8	8	
	b) Higher Secondary	8	13	21	
	c) Under graduation	43	26	69	
	d) Post graduation	44	8	52	
	Total	95	55	150	24.4794*
3	Monthly income:				
	a) Less than Rs.5000	13	18	31	
	b) Rs.5000-10,000	31	22	53	
	c) Rs.10,0001-20,000	28	8	36	
	d) Above Rs.20,000	23	7	30	
	Total	95	55	150	12.5323*
4	Occupation				
	a) Salaried				
	b) Self employed	2966	2728	5694	
	Total	95	55	150	4.4016*

\*Significant at 5 percent level.

It is observed that 56.67 per cent of the total respondents are in the second stage in their life cycle whereas only 9.33 per cent are in the first stage. The percentage of investors are noticed as higher in the second stage of life cycle as 74.12 per cent that in the third stage as 54.9 percent to its respective total of 85 and 51. The chi-square test reveals that there is a significant difference regarding the investment in public issues among the respondents under different life cycle stages. The level of education is

also a criterion on the investment in public issues among the respondents since its chi-square value is significant at 5 per cent. The higher income respondents are investing more in public issues than the lower income groups. The self-employed are highly interested to invest in public issues than the salaried. The monthly income and occupation of the respondents are also the criteria for investment in public issues.

### **Form of investment**

The public issues in the present study are classified into shares, debentures, mutual funds and bonds.

**Table-2**  
**Form of Investment in Public Issues**

S.No.	Form of Investment	Number of respondents	Percentage to the total investors	Rank
1	Shares	53	55.79	I
2	Debentures	29	30.53	III
3	Mutual Funds	46	48.42	II
4	Bonds	18	18.95	IV

Table-2 depicts that the maximum of respondents who invested in public issues (55.79 per cent) invested in shares, followed by 48.42 per cent in mutual funds and 30.53 per cent in debentures. Bonds were the least preferred by the respondents in the study area.

### **Investors and non investors in public issues : Discriminant analysis**

An analysis was carried out to find out whether the selected respondents could be discriminated into two groups based on their nature of investment in public issues. They were classified into investors and non-investors. To find out whether this discrimination was due to some factors related to the portfolio choice and if so, to find out the relative contribution of the



selected factors in discriminating between the two groups, discriminant analysis was applied. Ten important factors affecting investment in public issues were identified-viz., 1. Safety ( $x_1$ ), Regular income ( $x_2$ ), Capital appreciation ( $x_3$ ), Price ( $x_4$ ), Liquidity ( $x_5$ ), Conditions in market ( $x_6$ ), Company image ( $x_7$ ), Tax benefit ( $x_8$ ), Procedure ( $x_9$ ) and Windfall gain ( $x_{10}$ ). The respondents were asked to rate the above said 10 factors at 5 point scale namely mostly important, important, moderate, not important and not at all important. The score value varied from 5 marks to 1 mark on each factor. The score of the above said ten factors obtained from all respondents are analysed with the help of discriminant analysis. The resultant means and standard deviation of each factor and its Lambda are presented in Table.3.

**Table-3**

**Means and Standard Deviation of the Discriminant Variables**

Sl. No.	Variables	Investors		Non-Investors		Wilk's lambda
		Mean	Standard deviation	Mean	Standard deviation	
1	Safety	2.34	1.96	3.98	0.67	0.4271
2	Regular income	2.06	1.21	3.44	1.09	0.4717
3	Liquidity	2.87	1.72	3.22	0.92	0.5898
4	Price	2.11	1.08	1.86	1.12	0.6899
5	Market conditions	3.72	0.91	1.04	0.86	0.3917
6	Company image	2.24	0.82	3.06	1.26	0.6828
7	Procedure	0.81	0.48	2.97	1.17	0.5223
8	Capital appreciation	3.27	0.79	0.91	0.34	0.4223
9	Tax benefit	2.31	1.24	3.17	0.43	0.7204
10	Windfall gain	3.86	1.33	1.32	0.79	0.4172

As can be seen from the table, the respondents who considered more windfall gain, conditions in market and capital appreciation were in the investors group. The respondents who seek safety, regular income and liquidity, are in non-investors group. This leads to the logical conclusion that with the risk bearing capacity, the respondents invested in public issues. The risk takers gave only lesser importance to procedure, price (par value), regular income and safety which were identified as the important factors among the non-investors.

To test the statistical significance of the discriminant variables in discriminating between the two groups, Wilk's lambda was used. Wilk's lambda is a multi-variant measure of group differences over discriminating variables. Values of lambda near zero indicate high discrimination and when it equals its maximum value of one, the group centroids are equal and there is no discrimination. From Table-3, it can be inferred that in the case of tax benefit, price and company image, there was no discrimination, the significance level being 0.05 per cent. The other variables were statistically significant in classifying the two groups as investors and non investors.

The relative discriminating power of the variables was calculated as,

$$I_j = K_j (\bar{X}_{j1} - \bar{X}_{j2})$$

Where,

- $I_j$  - the important value of the jth variable.
- $K_j$  - unstandardised discriminant co-efficient for the jth variable.
- $X_{jk}$  - mean of the jth variable for the Kth group.

The relative importance weights may be interpreted as the portion of the discriminant scope separation between the groups that is attributable to



the  $j$ th variable. Since a relative important value shows the value of a particular variable in relation to the sum of the important values of all variables, the relative importance of a variable ( $R_j$ ) is given by

$$R_j = \frac{I_j}{\sum_{j=1}^n I_j}$$

The resulted relative discriminating power are presented in Table-4.

**Table-4**  
**Relative Discriminating Power**

Sl.No.	Variables	Unstandardized discriminant co-efficient	$I_j$	$R_j$
1.	Safety	.0482	.0791	19.53
2.	Regular income	.0139	.0192	4.79
3.	Capital appreciation	.0426	.1005	24.81
4.	Price	.0031	.0008	0.19
5.	Liquidity	.0337	.0117	2.89
6.	Conditions in market	.0297	.0796	19.65
7.	Company image	.0008	.0007	0.17
8.	Tax benefit	.0124	.0107	2.64
9.	Procedure	.0091	.0197	4.86
10.	Windfall gains	.0327	.0831	20.52
	Total		.4051	100.00

It was capital appreciation, windfall gains and conditions in market which discriminated the two groups namely investors and non investors with the highest discriminating power of 24.81, 20.52 and 19.65 percent respectively. With the increased capital appreciation, windfall gains and conditions in market, the respondents were able to be in the investors group. Although ten factors were included in the discriminant function,

only the above three factors together contributed about 64.98 percent of the total discrimination.

To find out whether the classifications of the groups were correct or not, canonical proportion criteria was used. The classification results are given in Table-5.

**Table –5**  
**Confusion Matrix**

Actual group	Number of cases	Predicted as	
		Investors	Non-Investors
Investors	95	88	7
Non-investors	55	6	49
Percentage of correct classification 91.33			

The discriminant function correctly classified the investors and non investors to the extent of 91.3 per cent.

### **Source of awareness**

The investors may use some sources to gain awareness regarding investing in public issues. The sources in the present study are confined to financial journals, business journals, reference groups, television, newspaper (general), newspaper (business) and brokers and professional consultants. Since an investor may use more than one source of awareness about the investment, they are allowed to exhibit multiple responses. The percentage of respondents who used different sources of awareness were computed and is shown in Table.6.



**Table-6****Source of Awareness among Investors Regarding Public Issues**

Sl.No.	Source	Number of respondents	Percentage to the total of 95	Rank
1	Financial journals	72	75.79	III
2	Business magazines	58	61.05	V
3	Reference groups	64	67.37	IV
4	Television	11	11.57	VII
5	Newspapers (General)	86	90.53	I
6	Newspapers (Business)	73	76.84	II
7	Brochures and professional consultants	32	33.68	VI

It shows that 90.53 per cent of the investors use newspapers (general) as a main source of awareness about the investment, followed by the newspaper (business) which constitute 76.84 per cent to the total. The first three sources of information about the investments are newspaper (general), newspaper (business) and financial journals. It is also evident that reference groups (67.37 per cent) do play a vital role in influencing the decision on investment.

**Attitude towards various public issues**

The attitude towards public issues are measured at five point scale namely, very favourable, somewhat favourable, indifferent, unfavourable and very unfavourable. The respondents were asked to rate their mode of investment or investments at five-point scale one by one. The attitude of the respondents regarding the various instruments are analysed and depicted in Table-7.

**Table-7****Attitude Towards Various Public Issues**

Sl.No.	Attitude	Instruments			
		Shares	Debentures	Mutual Funds	Bonds
1.	Very unfavourable	9	3	8	5
2.	Unfavourable	18	4	6	6
3.	Indifferent	14	7	9	3
4.	Favourable	7	12	17	2
5.	Very favourable	5	3	6	2
	Total	55	29	46	18

Only 22.64 per cent of the total respondents who invested in shares are either favourable or very favourable whereas this percentage in the case of debentures, it is 51.72 per cent. Regarding the investment made on mutual funds and bonds, the percentage of satisfied are 50.00 and 22.2 per cent respectively. It reveals the favourable attitude towards the debentures and mutual funds among the investors than in bonds or shares.

**Concluding observations**

The findings bring out that the profile variables of the investors are associating with their investment pattern. The important discriminatory factors of investors and non-investors in public issues are capital appreciation, windfall gains and conditions in the market. It was found that the important source of awareness about the instruments among the investors are newspapers, journals and magazines. The investors are not having a favourable attitude towards shares because of the uncertainty in the price of shares. The investors lack knowledge about equity investment.



A simple mechanism is necessary to create awareness about the trade-off between risk and return among investors.

Investors with better educational qualification are more inclined towards investing in public issues. Those respondents who are interested to invest in equity finance, don't invest in public issues because of lack of knowledge. So, a planned marketing approach, which creates an awareness and inculcates confidence in equity finance is essential to convert non-investors into investors and investors into confident investors.

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# Web Based Market Research Survey – An Illustrative Study

Prof.U.S. Rao & Mr.Abhishek Sharma

## Abstract

*Marketing Research is a mode through which an organisation tries to reach out to its customers, tries to know more about them and give them the products or services that they desire. Choosing the right type of marketing research strategy is very important for the marketers. In recent years, marketing research techniques have undergone a sea change due to the advent of new technologies, and the internet. Hence, there is a need to study these techniques so as to find out the opportunities available for the marketers.*

*The aim of the study was to try and compile the various techniques and their applications, which the internet has enabled and their implications in the field of marketing research. The study also endeavoured to demonstrate one of the web enabled market research methods, namely Web Survey. One of the key tools for conducting any kind of market research is questionnaire survey. The web survey seems to be a very good upgradation in the usage of the internet for market research. To demonstrate the effectiveness and the feasibility of web-based survey, a web survey was run live during the study. By conducting the web survey it was established that the internet has*

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*Prof.U.S.Rao is the Dean of School of Business Management, Accounting and Finance and Principal at Sri Sathya Sai Institute of Higher learning, Prasanthinilayam, Andhra Pradesh and Mr. Abishek Sharma was a student of Sri Sathya Sai Institute of Higher Learning and is working in HDFC Bank.*



*made marketing research, from being a slow, time consuming, and an expensive exercise to a fast, easy, and cost effective task.*

## **Introduction**

In the era of the convergence of internet technology with the communication technologies, the proliferation of applications of these dynamic technologies has affected every field. This convergence has made information available at fingertips and often this is good quality information. With this development, the marketing research activity has now evolved from a backroom activity to an activity which is at the centre stage. With unprecedented change around us, consumers are getting more educated and demanding. They are flooded with choices. Coping with these, results in increasing stress and anxiety. All this plenty creates enormous competition for the consumer's share of mind and wallet.

Research merely provides support to businesses and marketing in taking decisions. There is greater need for innovation, ways of engaging the consumer. Merely asking the consumer about his interaction with a product or indeed his/her unmet needs will never reveal this. Research must help companies identify needs and ideas that even consumers are unaware of or cannot articulate. Marketeers expect research to look at not only specific brand issues. But research must capture a holistic picture of the consumer and place the brand or product in the broader context of their lives. The role of research is in identifying big trends impacting consumers.

A couple of trends illustrate the impact on business; consumers and the role research can play. According to management guru and University of Michigan professor, CK Prahalad, connectivity and speed have the biggest impact on our lives. The internet and telecom have changed our concept of space and time. Information is available at the touch of a button and decision-making is becoming simpler and quicker.

Technology has provided a new playing field, and data that could never have been accurately tracked previously is now available on a constantly updated basis. It is imperative for the researchers to appreciate and use these technologies in an optimum manner.

## Literature Review

“Market Research is the function which links the consumer, customer and public to the marketer through information – information used to identify and define marketing opportunities and problems; generate, refine and evaluate marketing actions; monitor marketing performance; and improve understanding of marketing as a process. Marketing Research specifies the information required to address the issues; designs the methods for collecting information; manages and implements the data collection process; analyses the results; and communicates the findings and their implications”  
*(P.M. Chrisnall 1997)*

“Technological breakthrough in computers and communications equipment will no doubt have a profound impact on marketing research procedures. Systems such as Information Resources Inc’s Behaviour Scan (B P Shapiro 1983) with electronic panel data (through supermarket scanning equipment to record purchase) means more accurate and prompt availability of data down to the household level. These systems offer many new opportunities for the firms”*(R J Dolan 1984)*

As per marketing tools/lexis-nexis survey in 1996 (American demographics 1996) it was found that market researchers use the internet for the following purposes:

- Competitive Intelligence
- Conducting Research



- Broad Overall Market Trends
- Production And Technology Data
- Information About International Market

As information is crucial to consumer and investor in their purchase decisions, companies are supplying all the information that they possibly can on websites. Accordingly, more and more researchers are using the internet for competitive intelligence.

“Companies that can establish direct links to their industry’s value chain, and take away bits of value digitally from other companies may put themselves in a position to become powerful new forces in electronic commerce.”(*Shikhar Ghosh 1998*)

“It’s a marketer’s dream: do your research on the web and get instant information. But it doesn’t work in every situation. While using the web for general surveys may be problematic; it’s a great tool for gathering information about specific groups.”(*Harvard Management Update, 2000*)

“For market research to work it has to be tailored and accurate and, hopefully, not cost too much or take too long. That is why executives pushing for more world wide business must make sure that corporate market researchers are taking full advantage of the internet.

The web is very very useful in two ways to conduct fast, effective surveys of customers and potential customers, and to gather useful information, most of which is gratis and the information that requires payment is often a bargain. For large corporations that spend millions of dollars on surveying customers and potential customers the web is Godsend”(*Mel Mandell 2001*)

“Market researchers have at their disposal an increasing array of high tech tools for researching consumers. With new, largely internet based options, marketers are assembling far flung focus groups and surveying hard to reach potential customers without having to invest in dozens of computer workstations, or wait months to find the right people. After several years of working with online focus groups and surveys, market researchers say that internet-oriented techniques are ready for prime time”. (*Noah Shactman 2001*)

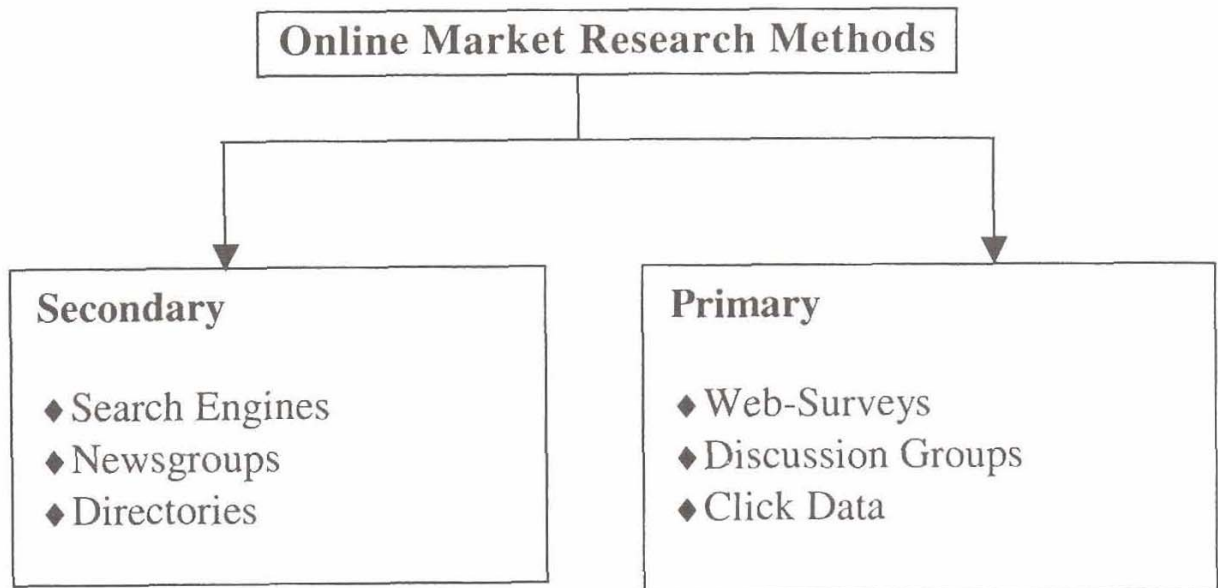
“Businesses are bringing market research to the internet to improve customer satisfaction, reduce cycle time for products and services, enhance marketing effectiveness, and build competitive advantage. Market tool uses the term e-research in this context. Market tools software helps measure and capture market preferences, attitudes, and opinions through the internet. Market tools seek to join web technology with brick and mortar retail stores such as Filenes’s basement, the ability to conduct consumer research about opinions and shopping satisfaction at point of sale.”(*Scott Shrake 1999*)

The market research activity basically endeavours to satisfy the organisation’s hunger for information – the information about the industry, about competition, about its customers. They believe the more they know about the environment better equipped they would be to outdo others. In search of this information the market research techniques have been developed. With the invasion of the Internet the researchers have a new storehouse of data at their disposal. This particular study tries to take a peek into the impact of technology on the methods of market research.



## Market Research On The Internet

There are two broad categories of market research methods. In the context of internet-based market research these can be classified as shown in the figure.



### Primary Research On The Internet

The various online market research methods for primary search that have been identified are as follows.

- Online Focus Groups
- Web Surveys
- E-mail and databases
- Discussion Groups
- Cookies and Data profiling
- Individual Website

All these methods that are available for the researcher, provide very good quality data, at an astonishing speed and the costs associated with such researches is almost negligible.

### **Online Focus Groups**

A focus group is an interview conducted in an *unstructured* manner by a trained moderator among a small group of respondents (N.K. Malhotra 1999). This is the most important *qualitative research* procedure. Many of the features of focus groups can, in fact, be replicated in an online environment. Through the use of real-time chat rooms, participants can interact with each another, although the dialogue is text-based rather than verbal.

Online Focus Group participation is by invitation only. The respondents are preselected generally from an online list of people who have expressed an interest in participating. The groups may also include a moderator who manipulates the discussion, and participants can be screened prior to participation through the use of e-mail questionnaires or web-based forms. The primary advantages are financial advantages, diversity of group participants and efficiency advantages in terms of speed.

### **Web Survey**

The time and costs involved in traditional surveys have been very high. In many researches it was found that by the time results were ready, the results had become redundant. Companies in the past shied away from conducting researches because the costs were prohibitive. Running a survey on the web is a blessing for every company wanting to conduct a market study. It is said that no boon comes without its downsides 'web surveys are no different. They do the job fast, they



do it without much or at less expense, they do it without geographical constraints, but they do it with a lower response rate – the data collected needs to be checked for consistency to make such studies more effective.

### **E-mail Surveys**

In an e-mail survey, a list of e-mail addresses is obtained. The survey is written within the body of the e-mail message and sent to respondents. E-mail surveys use pure text (ASCII) to represent questionnaires and can be received and responded to by anyone with an e-mail address, whether or not they have access to the web. Respondents type the answers to either closed-ended or open-ended questions at designated places and click on “reply.” Responses are data entered and tabulated. Data entry is typically required before any statistical analysis can be conducted. E-mail surveys have several limitations. Given the technical limitations of most e-mail systems, questionnaires cannot utilize programmed skip patterns, logic checks, or randomisation.

The limited intelligence of ASCII text cannot keep a respondent from, say, choosing both “yes” and “no” to a question where only one response is meaningful. Skipping instructions (e.g., “If the answer to question 5 is yes, go to question 9”) must appear explicitly, just as on paper. These factors can reduce the quality of data from an e-mail survey and can require post survey data cleaning. Another limitation is that some e-mail software products limit the length of the body of an e-mail message.

### **Click Stream Analysis**

Along with cookies click stream analysis is one of the most powerful tools available with the Market Researcher. With the help of software that have a capability of conducting such tracking, and creating

databases, for the same. The quantity and quality of data available for the researcher is very high. The 'client history report' identifies the frequency of access by each client over the period of the report. These reports are useful in identifying the consistency of each client. This report not only tells about the frequency of access but also tells the researcher the path the client took to reach their website, time he spent there, what he did all the time he was there on the website, how much data was transmitted to the user. The quality of data is so good that with the help of data profiling techniques the researcher is able to pin point the user as to his likes and dislikes, his buying patterns on the net and also his surfing habits.

## **Cookies**

Cookies were designed to allow web servers to operate more efficiently, provide a better response time to repeat visitors to their sites, and more accurately track how many different users (as opposed to repeat visitors) visit a site. The use of cookies, however, has become a very controversial topic by privacy groups preferring to have no information about web browsing activities to be kept by the web sites visited. The cookie file is a text file (.txt) that is easily read. Although rare, if an unencrypted password is placed in this file, the danger of the file being read by some other malicious mechanism is a potential exposure.

## **Discussion Groups**

Discussion groups come in many variations. They range from a more open forum, such as chat rooms, to closely monitored sessions, such as focus groups. Discussion groups can serve as a secondary research tool if an observing party monitors the discussion, or as a primary research tool if a number of questions are posed and participants' responses elicited.



Online chat groups or rooms allow individuals to interact using typed messages. This may or may not include a session moderator. Although chat rooms create interactivity among participants, they are of only marginal use. Chat rooms are not sufficiently formal and cannot provide high-quality research data. Unless researchers are simply interested in getting an idea of what the market might think about a topic, they should avoid chat rooms.

### **Individual Websites**

A lot of people unwittingly put a lot of information about themselves by putting up individual web sites. The information that people post about themselves, can be a useful source of data for the market researchers. Although there are ethical concerns about use of information gathered using this source, generally the user is unaware of the possibility of unsolicited use of information being put online. There is a rampant use of such information as it is high quality data for the researchers and that too, free of cost.

### **Secondary Research On The Internet**

Although there are various market research techniques but the ones using the internet are fast gaining more importance as against the traditional ones. The secondary research online is carried out mostly using search engines like *AltaVista, Go, Northern Light, Ask Jeeves, Lycos, Search, Excite and LinkMonster*. If the data exist, a search engine is likely to find the same. The basic function of search engines is essentially to carry out any type of research, as they provide fast and thorough worldwide searches on a multitude of topics.

Newsgroups form another popular category for secondary marketing research on the internet. Also known as internet discussion groups, a newsgroup is a message board. Discussions start when someone posts a question or comment on a site and other members reply. Still others reply to the replies, and so the discussion forms a chain of related postings called a 'thread'.

Newsgroups are not a recent phenomenon and were around long before the internet became popular. There are thousands of newsgroups on a broad range of topics. The primary advantage a newsgroup has over a search engine is that search engines provide links to web pages owned by companies or individuals. These web pages might present a biased viewpoint based on the objective of the web page designers. Newsgroups, on the other hand, usually represent a free, non-filtered discussion about a particular topic and can serve as both a secondary and a primary research tool.

The internet is also host to a large number of directories. The topics covered are diverse. Access to most of these directories is free. These are also excellent for carrying out secondary searches. Popular in this category are the online equivalents of yellow and white pages. Directories are becoming increasingly accurate and can provide an excellent starting point for a researcher examining a directory-related issue.

### **Methodology Adopted**

The present study has been undertaken based on the primary and secondary data. Another guiding factor for the study to be undertaken was the internet and the opportunities it proffered to the market research industry. The objective of the survey was to demonstrate the feasibility of conducting such surveys. The other objectives of the study were to



ascertain the response pattern and the profile of the respondents who can be accessed through web-based market research, the effect of the size of the questionnaire, and the form of questions, on the response and completion of the questionnaire.

The study endeavours to compile various techniques being available for the market researches to go online. It also brings to fore the various legal and ethical concerns of such techniques. The web survey conducted was just for pure academic purposes. The area of the survey was selected to ensure that it is universal in nature and did not require experts to respond. Hence, television advertising for motorbikes was selected. The questionnaire was hosted on a free web server. There were two methods used for publicising the questionnaire on the World Wide Web. An article containing the link to the questionnaire was published on a popular website and the article was online for a period of seven days (the questionnaire was open for response for a period of 19 days). An e-mail with link to the questionnaire was sent to 175 e-mail addresses with a request to fill the questionnaire. There was also a request to the recipient to forward the mail to all his/her friends and relatives.

The survey questionnaire was designed using VBScript on ASP (Application Server Pages). It was spread over 6 pages. The questionnaire quizzed the respondent in four broad areas. First, was the demographic details of the respondent. Second, it tried to make the respondent answer the same questions for 3 different product advertisements. Thirdly, the respondent was tested on the propensity to answer the open-ended questions. Lastly, the respondent was made to decide on giving a contact e-mail id.

## **The Profile Building Exercise**

The questionnaire for the web survey was kept open for responses for a period of little under three weeks. There was low-key advertising for soliciting responses, which included an article on a national web portal and e-mails being sent out to 175 people with a request to fill the questionnaire. There was also a request to the recipient to forward the mail to all his/her friends and relatives. This shows that if an article is put up on a popular website with similar interests, larger response can be obtained in a short period of even one week, at a very low cost. As time is the most important factor for the organisations in observing the customers' response to their promotion schemes to make necessary changes and improvement, web based market research will be ideal. The questionnaire that was posted was on motorbike advertising. It quizzed the respondents on the various aspects of three advertisements.

Despite being an area, which will seemingly interest men more than women, the male-female ratio of the response was surprisingly close. 56 per cent male and 44 per cent female. An interesting feature is that in the above 30 years age group, there were more female respondents than male. Despite such trend, the response has hardly any male-female bias, the general age group of the respondents is below 30. This category constituted 78 per cent of the respondents. 61 per cent of the respondents were between the age group of 18-30. A very surprising fact is the abysmally low number of respondents from 30-45 years category (only 8 per cent). Today's highflying young and powerful executives are largely from this age group but seemingly they are not much inclined to respond to general web surveys. This low response in this age group could also be due to the subject being two-wheelers, which is more appealing to



Education	Age Group				Grand Total
	Under 18	18-30	30-45	45-60	
Class 12 or below	13	3	-	-	16
Management professional	-	1	-	-	1
Post Graduate – General	-	4	3	5	12
Post Graduate - Professional	-	19	3	1	23
Prof. Degree (MBBS, BE, etc)	-	13	-	3	16
Under Graduate	2	13	1	3	19
Grand Total	15	53	7	12	87

*Age group distribution education level wise*

**Table 1**

the younger generation. Another unexpected result was the number of respondents from 45-60 years age group category being more than 30-45 years age group category (being almost double). On the whole, this survey puts the age of an average respondent between 18-30 years.

All the respondents were well educated. The study showed that almost 60 per cent of the respondents have either a postgraduate degree or a professional degree (MBA, CA, CS, MBBS, BE or equivalent). The respondents are mostly either working (a person with a professional degree) or students. It is also observed that in the 18-30 age group categories, about 51 per cent are students and 30 per cent are professionals.

During the study it was seen that seven respondents below 18 years age group category declared themselves to be working professionals which is inconsistent with table 1 which says that 13 people out of the 15 under the age of 18 are with educational qualifications of below class 12 and other 2 are undergraduates. This raises a serious question on the reliability of the data collected by the method of web survey, unless questions that check consistency of the data are incorporated, to weed out unreliable respondents in the survey results. Apart from the above area of concern, the study reaffirms that respondents on the whole are highly educated individuals.

Among the respondents, the only category where there was a marked variation in profession on the basis of gender was working professionals. Men

outnumbered women. Amongst the government employees there were five women respondents and a lone male respondent. As the total number of government employee respondents are a small fraction of the total respondents, it is considered as not having any major impact on the profile. A very interesting fact thrown up from the study was the equal number of male and female student respondents.

The family income level of the respondents showed a very interesting feature. Where as in all the other categories one of the fields showed a clear trend but here 34 per cent of the respondents were in the income category of Rs. 2.5 lakhs – 5 lakhs per annum, 33 per cent in Rs. 1 – 2.5 lakhs category and 30 per cent were in a category of family income below Rs. 1 lakh per annum. The income trends indicate that majority of respondents belong to the middle class.

The study showed that the people with professional degrees tend to belong to the Rs. 2.5 to Rs. 5 lakhs category. On the whole, the study showed that there was a general increasing trend in income level with higher educational level.

It was noted that progressively lower number of people responded to the subsequent pages as the questionnaire extended to many pages. The total hits for the web page were 93. It was noted that six respondents didn't respond to the demographic details page but went to answer the remaining pages.

<b>Respondents to:</b>	<b>Number of Respondents</b>
Page 1	87
Page 2	79
Page 3	71
Page 4	63
Page 5	58

*Details of Response Patterns*

*Table 2*



The table indicates the restlessness of the respondent online. It shows that the respondents' patience levels are considerably low while on the internet as compared to administered or wanted questionnaire.

It was observed from the study that the respondents were more content in answering multiple-choice questions. It was observed that all the people who had seen the advertisement have responded to the multiple-choice questions. The response to the open ended questions was abysmally low. Another fact noticed was that the response to the open ended questions became progressively lower as the questionnaire went on. The response pattern indicates that most of the respondents had seen the advertisement (to which they responded to) in the preceding one day. The lower response to the open ended questions is also an indicator that the questions with lower effort requirements are answered mostly.

There were four general observations from the survey:

- Structured portion of the questionnaire generated more response.
- Respondents tend to answer only the questions that are easy to answer.
- Response of 93 in a period of 19 days was reasonable. (Keeping in mind the low-key advertising for the questionnaire).
- Web survey generates quick response, and this can be of immense benefit, if the company wants feedback on an on-going promotion and wants to modify or continue the scheme based on the feedback.

In this survey only six respondents preferred not to answer the personal details. During the design of the questionnaire it was kept in mind not to solicit any information from the respondent, which can lead to his/her identity disclosure. In spite of this precaution, there were six people who did not respond to the personal detail questions. At the end, there was a

request for e-mail address for contacting again. Only 24 respondents gave their e-mail id. This shows the general distrust of respondents in giving personal identity in web surveys.

The questions on television viewing habits of the respondents were necessary to seek their response on two-wheeler advertisements on television. However the same responses can also be used to analyse their personality and television viewing habits of web survey respondents.

It was observed that almost all of them watched television an overwhelming 85 per cent of the respondents watched television for less than three hours a day. It was a common trend across all age groups. Average television time of age groups is given in the following table.

<b>Age Group</b>	<b>Average TV Viewing Time</b>
Under 18 years	2.13
18-30 years	1.85
30-45 years	2.00
45-60 years	2.25

*Average TV Viewing Time*

*Table 3*

When the TV viewing habits are seen against the profession it was observed that there is hardly any category, which watches TV more than others.

The study made it abundantly clear that there is hardly any bias in TV viewing habits based on profession. The average TV viewing times of the two key categories of respondents is given in Table 4.

<b>Age Group</b>	<b>Average TV Viewing Time</b>
Professionals	1.66
Students	2.22

*Average TV Viewing Hours*

*Table 4*

The above two categories of respondents constitute 78 per cent of the respondents. Most of the respondents (52 per cent) watch TV during



prime time (i.e. 8 PM to 11 PM). An overwhelming number (83 per cent) watch after 6 PM. Very few of the respondents (18 per cent) see TV late night (i.e. after 11 PM).

The study demonstrated that there is hardly any disparity of TV viewing timings based on the gender except that mostly ladies watch the afternoon programs. Again there is no peculiarity in TV viewing timings as observed from amongst the respondents based on their profession.

## **The Profile**

Based on the above discussion it is observed that the typical respondent to the survey is below 30 years of age, is well qualified, belonging to the middle income level and is either a working professional or a student. Also he/she does watch television for approximately two hours per day mostly in prime time.

The web survey done was just an illustration of a low cost, quick survey, which can be conducted by using the internet, and the market research intelligence, which can be obtained at a low cost by analysing the responses received.

## **Conclusions**

The study reaffirms the fact that the use of internet for market research is a boon. The internet has changed the way businesses used to look at market research. From being a slow, time-consuming and an expensive exercise it is now becoming a fast, easy and inexpensive task.

One of the key tools for conducting any kind of market research is questionnaire survey; the web-based survey seems to be a very good upgradation for usage of the internet. To demonstrate the effectiveness

and the feasibility of web based survey, during the study a live web survey was run. The following are the observations arising from it.

- Essentially it reiterated the viability of doing market research by means of a survey on the web, at a low cost and gaining fast feedback. The benefit is that the on-going promotion programs can be modified based on feedback.
- The response generation can be really promoted by the use of articles published on popular websites.
- Sending e-mails to solicit response is also an effective way of getting responses.
- The response rate (invitations sent to actual response) was perceived to be very low. But the speed of response is fast.
- The design and the length of the questionnaire have a major bearing on the respondents filling the questionnaire completely.

On the whole the study finds the concept of *Online Market Research* as very promising for the market research industry. The technology is providing the researchers new opportunities. It is now upto the researchers to make use of it in the best possible manner.

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# Direct Attack!

**Ms.Ritu Gupta**

You open the newspaper, out fly the *flyers*, announcing the grand opening of the state-of-the-art slimming-cum-beauty centre in the neighborhood, then there is an offer on page three for a free test drive of the new luxury car that has just entered the Indian market (call the nearest showroom to book for a test drive), you switch on the TV while drying your hair vigorously with that towel, and a foreign model is extolling the virtues of a very professional-looking exercise machine and the results bamboozle you! Then you think – oh! these ads...they show anything and think you will believe. Nevertheless, you are still thinking! There is a number that if you call in the next few minutes, will qualify you to extra discounts...

As you are leaving home for office and step out on the front porch, a very popular international pizza chain had dropped full colour glossy leaflets showing irresistible pizzas and matching offers of this and that. As you are driving and the radio bleats out “...dial a can ( Engine Oils), ...dial a windshield from the windshield experts” a song, sponsored by “..tyres, home delivered, just call.”

You step out in the parking lot, and the hoarding (in your face) tells you that you can *sms* free, talk to your favourite person free (with an astreix), and all you have to do is to dial the mentioned toll free number.

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*Ms.Ritu Gupta is Faculty of Marketing and Incharge-Admission, Undergraduate Business School, affiliated with University of Bradford, UK, in Institute for Integrated Learning in Management (IILM), Lodhi Road, New Delhi.*



You reach inside your office and after pleasantries, start checking your e-mails. Even on your intranet mail id, there is an offer from a New Retail Store in the city for redeeming the electronic discount vouchers by quoting the numbers mentioned therein. Your free internet e-mail account, despite the high security filter has enough mails in store for you to keep you busy for a couple of minutes sifting and deleting.

Your credit card statement has come from the bank and they are reminding you of the points you have accumulated by being a wonderful customer and when you have so many more points, you can enter a sweepstakes to go to a trip to US of A! You call up the customer care centre of the credit card company and clarify if there is possibility of redemption at a lower level. You are told the point-wise redemption details will be e-mailed to you by the end of the working day!

Whew! It's just been two hours since you have been up from slumber and the world of Direct Marketing seems to have been working its wheels even as you slept.

Welcome to the wonderous world of Direct Marketing. To the uninitiated, the above are some of the examples of our lives with more and more of DM having infiltrated it – why infiltrated – because, it was done very quietly, without you having noticed it, right under your nose!

From being thought of as something small operators did, who did not have the dough for a full-scale mass media blitzkrieg, the nemesis has hit almost everyone on the tarmac. The days of plenty are long over.

Now every penny needs to be saved, reach and exposure of every communication medium assessed under microscope, sales per channel, per week (not even month) tracked per product per variant per... Even the MD does not wince to travel on Superapex fares on travel itinerary finalised 30 days in advance!

Tough conditions, tougher competition, vagaries of consumer choice and whims and fancies, have forced the ad-happy corporates to look for alternatives that would not burn holes on balance sheets and still keep the sales ticking. In comes the country cousin in the glamorous world of high end communication and glitzy multi millions expense campaigns, the personal media and response devices. The name: *Direct Marketing*.

The single most outstanding benefit to its user being: measurability of the results (mostly response and sales) to the spend in getting it. Something advertising could only help hazarding a guess, which could of course be nowhere close to the real.

The linchpin of Direct Marketing is capturing of customer's personal and purchase information on a database at the first instance of contact, informed analysis and then using this knowledge to make such offers to them that it is too good to resist! Not to forget at this point the other thing on which this marketing process scores over others is the ability and ease of consumer response. The media used for direct communications has almost always, inbuilt response devices such as self addressed, addressee paid envelopes in mail, toll free numbers in newspapers, on Television and hoardings, cutout coupons in magazines, pamphlets, flyers and even on-product, telecalling is in itself a two-way communication process and so on. So when customer has interest or may be wants additional information and responds through the response devices, the data is captured to be used to communicate with him further.



To explain by the use of an example: you visit a fair and drop your visiting card in the drop box, the company official contacts you, say by phone, if you are interested in further information on any offer of the company. Whatever you respond to, gets recorded. If positive, you enter 'hot list' and they send you a brochure, call you back after a few days, send across an executive to close the deal and so on.

Why is the sudden surge in interest in such a long drawn process to sell? Well, there are a number of reasons. The markets of yore used to be pretty much alike (homogenous) or at least so was the marketer's belief. But the realization has set in that this is not to be. The consumers differ widely today. Even when they don't, even minor differences in their purchase preference and patterns can build or destroy marketing fortunes. To capitalize on these differences, you need to understand them. It may sound clichéd, but for the appropriateness of the statement, I cannot resist making it here:

*"We all know there is a gap in the market, but what we actually need to know is if there is a market in the gap!"*

For that either you need market research to study buyer behavior nuances, and that is not just very very expensive, it is even sporadic. Or use the database captured, maintained and analysed over a period of time to provide food for market understanding.

More than that, with the markets fragmented, consumers are no longer taking the bait of the mass advertising. What used to constitute the proverbial niche has become the *whole* you can ever hope to serve, that is, someone else smarter than you, does not make your life tough in the niche too!

Niches have become profitable. The consumer has a very specific, sometimes unusual set of requirements that he is willing to pay a little extra to satisfy. Such consumers are there, interspersed in the entire market but may be form a small fraction of that entire mass.

To talk to the full 100 per cent then, does not make sense, in fact works out wasteful. Know your 1.25 per cent, and know them well! Contact them directly, even personally if possible, pass on at least part of the benefits of having saved money on mass communication to them, and make a sale. Most of all, try to *keep* them. 'Nichers' have been using these techniques for a long time and have been making merry.

Pareto gave the famous 80/20 rule that a Direct Marketer swears by. Simply put, 80 per cent of your sales and profit comes from 20 per cent of your customers. Well more or less, that is, the figure could be 75-25, or 90-10 but the rule holds in most real life situations. For example, we spend 80 per cent of the time with about 20 per cent of the people we know, 80 per cent of the time we get our petrol filled from about 20 percent of the possible filling stations. 80 per cent of the time we spend in the 20 per cent of the possible leisure activities we like! And so on and on and on.

Service industries like the hospitality and banking have to use direct methods almost traditionally to make customer feel special and pass on customer specific information to them. Of late they are much more organized and sophisticated and using, even creating, these moments of contact to make offers. With very little tangibility to show as proofs of their word, they rely more on virtue of making the customer feel good about everything about them.



These are not the only takers of Direct Marketing, or it would not have assumed the proportion it has today. Multinationals of the biggest and the richest kind have a share in the Direct pie. From pharma giants, instant noodles, condensed milk, pizza and burger heavyweights, cell phone operators, airlines, banks, hotels, hospitals, educational institutes both national and international, gas and petrol majors, cosmetics, consumer electronics, home products, apparel, you name it and they are in the game.

The extent of use may differ from absolute to fractional. Some, like a well known tea marketer may be using it to keep a tab on the profile of its customers, others like hotels and airlines are trying to increase repetitions of use by incentivising it. Still others are trying to give customers added value and a sense of pride and belonging by initiating club memberships (like luxury car companies, airlines, credit cards and even magazines which are offered to more valuable, select customers).

The mail order shopping (catalogue) companies (like Otto Burlington's), television shopping and home shopping (like Asian Sky Shop, Telebrands, The Home Shopping Network), the e-commerce (B to C type) like the Amazon, *ebay* and *Bazee* are more pure Direct Marketers. They communicate the offers directly and in almost all the above mentioned examples, distribute direct too.

Many others like hotels and airlines use it to instill loyalty and make the customer feel valuable. Banks and credit cards use Direct Marketing to communicate customer specific information as well as cross sell (selling other even unrelated products) to the customers. Some may use Direct Marketing only marginally to support the mainstream general marketing.

There are the proverbial chinks in the armour and Direct Marketing is not without its pitfalls. Buying behavior modification has taken place. The consumers on their part are turning more savvy and want 'extra' or have been *trained* to look out for something 'extra' to be a happy consumer! Now this extra could be in terms of discounts, augmentations, home delivery, special offers, reservations or as simple as points collected with acts of related or unrelated purchase. Consumers, it has been noticed across the countries and product categories, are increasingly learning to defer their purchases and wait for the 'offer' or 'schemes' to be there to dig into pockets and give the marketer that awaited sale.

On the other hand, the ones who have just bought the item, feel cheated at the knowledge of an extra incentive. When the offer which is made to get non-consumers to try out (sample) the product in the hope that even if a small percentage of trial lists convert to usage, the show is on. In such a case, it has been found that more than genuine trials, it is the loyalists who snap up the deal, purchase multiple units and stock up the product which they would have anyway bought later at full price. Thus a lot of the sale of the next couple of months gets advanced to the scheme period. It looks gorgeous on the sales graph at the time but is bound to dip from the regular, later.

The situation is Hobson's choice for the marketer. No incentive – low sale, more incentive – less profitability and definitely more sale but also a lurking danger of a dent in the market image of becoming notorious as a sale-when-scheme product.

Now either you are really lucky to work out the complexity of the situation or if you can, use Direct Marketing to administer incentives selectively, using personal media, to those consumers whom you want to incentivise.



We have so far seen how Direct Marketing uses personal media to elicit a response. At the same time, newspapers and magazines, even television, have been used. The use in the case of these media is what in Direct Marketing is called 'handsraising'. With an audience yet to be identified, distributed among all market, the tools of mass media are used for them to self select, identify themselves by responding (as in raising a hand) and with the capturing of their information on a database, personal media is resorted to communicate further.

Internet has emerged as a very powerful, inexpensive and worthy medium for Direct Marketing. Of course many would squirm at the thought of it, with all the nuisance generated by spams and unsolicited mails. Notwithstanding, the medium has changed the way markets and marketing was to be. Things can be bought off the net. If you are not so sure as to how to transact, you can at least surf the net, check out offers and bargains, correspond with the net-operators and then buy from a brick-and-mortar place (as opposed to a click-and-mortar). For the seller, the world is a market now. Logistics no longer means the same to all businesses.

In conclusion, it's safe to say that ways of doing businesses are changing with the changed requirements of both the sellers and the buyers. Marketers have already responded positively to it, consumers are more innovating and less reluctant. Though it will be too far fetched to conclude by saying that one-day, there shall be only one way to market, which is Direct Marketing, but truly, it is a force we all reckon with.

# Data warehousing and Data mining techniques in enhancing business opportunities and values

Prof.N.Venkataraman

## Abstract

*Last few years have seen that information is the key to survival. This fact is magnified many-fold by the emergence and wide spread adoption of the web and its revolutionary effect on all aspects of our existence, including the way we live, learn, interact with each other and conduct the business. In this complex environment, finding solutions to problems, new method of attracting and retaining customers, developing new products at shorter intervals etc., are a continuous process. Conventional methods like analyzing data, conducting market survey and adapting the market leaders practice would not be sufficient. There are better and faster methods. One of the important techniques followed increasingly in developed countries is (also in developing countries like India) data warehousing and data mining process. This article discusses the various techniques adapted in data warehousing and data mining, its application, future development and its value to business.*

## **Introduction**

When a premium quality product does not take off in the market, how does a company single out the cause for failure within the marketing mix? How does the company then take corrective steps to salvage costs and demonstrate ROI (Return on Investment)?

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*Prof.N.Venkataraman is with SDM-Institute for Management Development, Mysore*

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A market leader in industrial paints in terms of volume and market share launched a new product first of its kind in the country with a lot of hopes to increase the market share. But that product did not take off. “Thriving in the fast-paced and ever-changing Indian telecom market is next to impossible,” says a CEO of a leading mobile phone company. The industry is in a constant state of churn thanks to regulatory uncertainties, frequent tariff changes, growing competition and demanding customers. A departmental store was trying to launch a new scheme for a segment of customers based on the observation of the business transactions, which was proved wrong finally. The list goes on. “Business is not only about solving problems but exploiting opportunities”. All business is highly competitive today. Traditional methods of thinking and acting will no longer help to grow and sustain in the business. Businesses have to continuously think differently and act or do the same thing differently. The organization referred to above solved their problems by adopting the techniques of data warehousing and data mining, which is discussed in this article.

### **What is data warehousing?**

Information is the strength of business. In today’s complex environment, correct information is required at the tip of your ‘*nail*’. Action and reaction have to be spontaneous so that your brand image and reputation are maintained. This is not very difficult today. With the advancement of technologies and in the internet era the word ‘boundary’ may not be required for various businesses. For example, organizations like Amazon.com sell books and other articles throughout the world without any geographic limitation. There are many other such businesses today that are open to the entire world. Data (information), which is a primary component of business, is available in abundance today. Availability of data alone may not solve the problem completely. Collecting data is also

not seen as a problem. Organizations like Wall mart, for example, collect huge amount of data everyday, something of the order in terra bytes. What is the use of such huge amount of data for the business? is the question. This is where the concept of data warehousing is used to handle the data effectively. Data warehouse is defined as a kind of database storing data with respect to time and application specific. It is different from transactional database where it is not concerned about the day-to-day functional requirement. Normally, data warehouse stores past data for nearly six to ten years. The data stored in the data warehouse is time and context specific. It is not volatile. Data can be added but will not be allowed to delete or update the data.

Therefore data warehousing is a blend of technologies aimed at the effective integration of operational databases into an environment that enables the strategic use of data. These technologies include relational and multidimensional database management systems, client/server architecture, graphical user interface, and much more.

### **Need for data warehousing**

Managing data effectively and using it for an appropriate purpose is the primary concern of today's business. The basic reasons for organizations to implement data warehouses are:

1. To relieve the transaction processing system from querying to prepare various reports and analysis so that it would be effectively used for day-to-day business activities. Most firms want to set up transaction processing systems so that there is a high probability that transactions will be completed in what is judged to be an acceptable amount of time. Reports and queries, which may require more server resources than transaction processing, lower the probability that transactions



complete in an acceptable amount of time. Firms therefore may find that the least expensive and/or most organizationally expeditious way to obtain high probability of acceptable transaction processing response time is to implement a data warehousing architecture that uses separate servers for some querying and reporting.

2. To use different data models and/or server technologies that speed up querying and reporting and that are not appropriate for transaction processing. There are models like star schema, which could be used to speed up the querying and reporting process and normally not used for transaction processing. Also there are server technologies that may speed up query and reporting processing but may slow down transaction processing (e.g. bit mapped indexing) and server technologies that may speed up transaction processing but slow down query and reporting.

Loading more and more data in transaction processing system will slow down the performance. At the same time to make in depth analysis and provide a detailed report we may require data for a long period of time. To meet the above criteria data warehousing could be used to effectively hold the data and also to lessen the load on TPS.

### **Preparation of data warehouse**

Data for data warehouse is supplied from various sources like transaction processing system, spread sheets, text files etc. Preparing proper data for data warehouse is highly important and is the most difficult task of data warehousing. Various kinds of errors could be present in the old data which has to be resolved at the time of setting up the data warehousing. Some of the types of error normally present in the old data are:

- Incomplete
- Incorrect
- Incomprehensible, and
- Inconsistent data.

Since data comes from different sources, it has to be cleaned properly before put into use. The preparation phase consists of levels such as:

**Extraction:** Identify required data (fields) from various sources and pull out the information.

**Transform:** Since the data is supplied from different sources it may not be uniform. For instance the quantity of oil may be represented in different units like litre, kg, pound, gallon, a gender might have been represented as (M / F) in some cases and in other case as 1 or 2 (1 - for male, 2 - for female). At the time of preparing the data warehouse these differences have to be sorted out so that uniformity can be maintained.

**Load:** After cleaning the data finally it is loaded into the data warehouse for further use.

### **What is data mining?**

The ultimate goal of new techniques and technology is to effectively use the vast repository of data so as to reap business benefits from these data. When the database size grow further and further it would not be effective to use the conventional method of searching the data using SQL. The issue that must be addressed is that the results of data mining are different from other data-driven business process. For instance, in most of the standard interactions with customer data, nearly all of the results presented to the user are things that they knew existed in the database already. A report showing the split-up of sales by product line



and region is straightforward for the user to understand because they intuitively know that this kind of information already exists in the database. If the company sells different products in different regions of the country, there is no problem of translating a display of this information into a relevant understanding of the business process.

SQL or other querying methods may bring the already available information in the database, in a form of report, but it cannot bring out any new information. Data mining is defined as “**A process of discovering meaningful new correlations, patterns and trends by mining mountains of data stored in warehouses**”. The major advantage of data mining is its capability to build predictive rather than retrospective models.

### **The data mining process**

The process of analyzing data is done using one or more combination of the following techniques. These are various statistical techniques used in the process. Though these statistical techniques have been in vogue for quite a long time, usage of these processes have greatly increased due to, new software technology, which is quite handy to analyze huge amount of data. Some of the mostly used techniques are explained below.

#### **Technique 1. Classification**

This technique is used to classify the data into number of predefined classes based on certain criteria. For example, a bank may classify the customers into good, medium and poor risk categories. A classification system may then generate a rule stating “If a customer earns more than Rs.2 lakhs, is between 40 and 50 years of age and owns a house or a flat, he or she is a good credit risk”.

## Technique2. **Clustering**

This technique is used to segment a database into subsets or clusters based on a set of attributes. For example, a credit card company may form a cluster on their database based on spending pattern, age and educational background. Clusters can be created either statistically or by using artificial intelligence.

## Technique3. **Association**

This technique is used to identify the relation among a group of items. For example, a departmental store may find a relation in the buying behaviour of customers - customer who buys bathing soaps and detergents also buys liquid blue. A customer, who buys tea, sugar may also buy milk powder. Association technique is often applied to market basket analysis, where it uses point-of-sales transaction data to identify product affinities.

## Technique4. **Sequencing**

This technique helps to identify patterns over time. Tracing the sequence of transactions occurred with respect to a customer and identifying the pattern is known as sequencing. For instance, if a customer who buys a PC and a printer during one visit may buy a UPS during the next visit. This type of analysis is particularly important for catalog companies. It is also applicable in financial applications to analyze sequences of events that affect the prices of financial instruments.

Now the advancement of technology in terms of software and hardware have made it possible to apply these techniques for data mining process. Moreover when the volume of data is large, manual process of analyzing would be difficult, time consuming and is not a feasible option today.



## **Software tools for data mining**

Various data mining tools are available in the market. Some of the leading vendors who are providing data mining solutions are listed below.

1. SAS
2. IBM
3. Oracle
4. SPSS
5. Cognos
6. Megaputer

The cost of data mining tools would be in lakhs. Over a period of time it may come down and may be affordable to individuals.

## **Application of data mining techniques**

The application areas of data mining keeps on increasing day by day. Predominantly on business front, it is used to find out information relating to customers and applying the new findings to improve the business. Some of the applications where organizations using data mining process are given below.

### **Credit card**

Credit card issuing companies monitor the usage of credit cards of customers and customize services according to the findings. For instance, if a customer regularly uses the card for hotel payments, then they could provide some additional facilities like discounts on hotel usage and holiday trips to motivate the customer and also to increase the usage of card.

Secondly, if a customer regularly clears the dues within a stipulated time period then they may provide additional incentives like increasing the credit limit and provide additional loans.

### **Fraud detection**

Monitoring the buying behavior of a customer will also help to detect the fraud on credit card transactions and alert both the company and card holders to limit the damage in case the card goes into the hands of third party.

### **Products grouping**

“Those who bought nappies also purchased more beer” was the finding on monitoring the transaction data of a departmental store in the U.S. Subsequently on the basis of these findings the departmental stores grouped various products together to increase the sales. The buying behaviour of customers is noticed through various transactions and is used to group different types of products together in order to increase the sales.

### **Insurance**

Life Insurance Corporation of India (LIC) plans to use data mining to improve the customer service and to keep pace with widespread competition. Through the proposed service LIC hopes to be totally reform customer services. The data-mining project will enable LIC to cross-sell products and strengthen its existing product portfolio. The project in addition, would also help LIC to offer cheaper and better services to its customers.



## **Application on bioinformatics**

Strand Genomics, a bioinformatics company in Bangalore, plans to display its data-mining product Sookhika at various bioinformatics meets. The Sookhika is a knowledge management tool, which activates the productivity of the drug discovery process.

## **Future developments in data mining**

So far, data mining is largely used on numerical data to find new patterns. Recently, text mining is also gaining momentum since huge amount of textual information is available. Already various leading vendors in the field have developed tools for text mining. Hence, apart from numerical data, efforts are made to find interesting information from non-numerical types of data. Now that data is also captured in various other formats like picture, image, voice etc., there is a necessity to mine those information also to bring out the hidden values. Lots of research is going on in this field and we could expect a solution to mine a variety of data very soon.

## **Conclusion**

In the information intensive age of today, proper understanding of data has become imperative to all organisations. One of the studies conducted by IDC reveals that ROI on IT projects is low because computer technology is used to automate the existing process and to capture data. But the value of data was not understood properly. By applying data mining techniques it is proved that the ROI had rapidly increased.

Bringing out new information that are hidden inside the data is going to be the top priority of the future. There is no doubt that data warehousing and data mining techniques going to dominate the business world in the future and will immensely help the customers, organizations and vendors.

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