Making Sense of the Data Deluge
This plaque, designed and created by Padmashree Nek Chand Saini, was unveiled at the inauguration of the ISB campus at Mohali. The open book in colourful mosaic symbolises “assimilation of knowledge and an open mind.”
Dear Reader,

At the recently-held ISB Digital Media Summit, company chiefs spoke about how almost all available big data has been created in the last two years alone and about the breathtaking pace at which the data is growing each year. However, this is not surprising, considering that in our daily lives we leave a long trail of data in the form of online transactions, email exchanges, audio and video files, and social media interactions. According to International Data Corporation (IDC), in 2012 there was 2.7 zettabytes of digital information stored worldwide, where one zettabyte equals one billion terabytes. This data deluge presents exciting new possibilities for businesses as they seek to find patterns and relationships among different variables by analysing data that was previously unavailable, and to answer questions that were previously assumed to be unanswerable.

However, size, storage and retrieval of data all pose tremendous challenges to organisations. How can businesses sift through data from diverse sources and convert it into meaningful results? In this issue, we present three articles that address such questions and illustrate how insights can be gleaned from analysing data. Professor Galit Shmuéli, Associate Professor of Statistics and SRITNE Chaired Professor of Data Analytics, decodes the bigger picture for businesses seeking to improve their performance by optimally using the wealth of data available. Her article, ably supported by a simple flowchart describing the different steps in the process, answers the basic question of how predictive analytics can help retailers achieve their goals. The other two cover articles target specific concerns that businesses may have regarding business analytics. Professor Ram Gopal addresses the age-old problem of product assortment and writes about how managers can analyse data from sales patterns and identify frequently purchased products. Professor Subodha Kumar describes how his research has helped an Internet advertisement company manage its campaigns profitably. There are many lessons to be learned from our articles in this issue and I hope you find them insightful.

Small bytes of feedback can help us glean some insight into how we can improve our publication. Do write to me at editor_insight@isb.edu.

Sriram Gopalakrishnan
Contents

Cover Story

5 PREDICTIVE ANALYTICS FOR BUSINESS GROWTH
Professor Galit Shmueli describes how predictive analytics can help retailers make insightful decisions.

9 USING BUSINESS ANALYTICS TO IMPROVE PRODUCT ASSORTMENT
Professor Ram Gopal writes about how data analysis can help marketers determine profitable product assortment possibilities.

Features

12 TO SHOW OR NOT TO SHOW: HOW TO MANAGE INTERNET ADVERTISING CAMPAIGNS
Professor Subodha Kumar shares his research on implementing a user profiling model at Chitika, an Internet advertising firm.

19 SOVEREIGN DEBT, GOVERNMENT MYOPIA AND THE FINANCIAL SECTOR
Professor Viral V Acharya explains why governments service their external debt even when it may benefit them to default.

16 KICKING BACK ON KICKBACKS: AN EXPERIMENT IN ASYMMETRIC LIABILITY
Professor Tarun Jain shares his findings from a novel experiment on mitigating corruption.

22 LEAVING A TRAIL OF CARBON FOOTPRINTS
What is the carbon footprint of an Indian Thali dinner? Professor Ram Ganeshan traces the carbon footprints of different entities.

26 NOKIA LIFE TOOLS: TAPPING INTO INDIA’S EMERGING MARKETS
In this case study summary, Nokia India considers whether they can proceed with the national roll-out of a new service based on a successful pilot.
29 COMPETING THROUGH INNOVATION
Professor Amitava Chattopadhyay explores the key components of innovative Indian organisations.

32 THE MYOPIA OF FAR-SIGHTEDNESS
Contrary to popular belief, we can work on increasing our happiness and Professor Rajagopal Raghunathan explains how.

Face to Face

37 ENABLING MOVEMENTS WITH A PURPOSE
Purpose.com co-founder and CEO Jeremy Heimans talks about movement entrepreneurship and technology’s role in social movements.

40 CONTRACTS AND THE FINANCIAL CRISIS
Professor Douglas W Diamond speaks on the weaknesses in the financial system and the need for effective regulation.

Knowledge Sessions

44 SUMMIT ON RISK AND GOVERNANCE SPARKS A CALL FOR CHANGE
Experts discuss ways to strengthen organisations and mitigate risks in the financial system.

46 DISRUPTIVE INNOVATION IN THE DIGITAL AGE
Highlights from the Digital Summit at ISB.

49 THE VICIOUS CYCLE OF CORPORATE FRAUD
The Ethics in Business Forum tackles a pressing issue.

In Brief

50 Insights in brief

Book Review

52 A review of Gurcharan Das’ India Grows at Night: A Liberal Case for a Strong State.
Predictive Analytics for Business Growth

BY GALIT SHMUÉLI

In this article, Professor Galit Shmuéli explores the salient characteristics of predictive analytics in the context of retail, debunks certain myths and suggests untapped regionally-specific new possibilities.

Where Business Meets Statistics
Technological advancements and the availability and accessibility of data within companies are facilitating fact-based and insightful decision-making. With closer connections among business experts, statisticians and data engineers, advanced analytics can be implemented effectively in the business context. A major business analytics technology is predictive analysis.

Predictive Analytics
What exactly is predictive analytics and what distinguishes and underscores its recent prominence and usage in driving business success? We have business intelligence, which includes reporting tools and dashboards that leverage data by making it more visible to decision makers. Yet, business intelligence is about looking at the past or the present. The key distinguishing factor of predictive analytics is its forward-looking approach. In predictive analytics, we use past data for the purpose of predicting future events.

A second distinguishing feature of predictive analytics is the focus on micro-level decisions. Unlike the focus of statistical models on “average behaviour” or a high-level estimation of aggregate patterns, predictive analytics are designed to work on the granular level of individual customers, individual transactions, individual suppliers, individual employees, etc. Will a particular employee churn? Will a particular customer redeem an offer? Will a particular supplier fail to ship in time? Predictive analytics applied to large pools of customer data holds the promise of personalisation. We can predict future behaviour, and based on such predictions, customise the best offers, timing and other parameters of customer interaction and care. In a diverse country such as India, where variability is at its core, such personalisation to customer preferences carries especially great weightage as compared to some of its western counterparts.

Granularity of data in performing predictive analytics is not just restricted to understanding diverse customer needs, but also transcends to the market side into store-level data, SKU level in retail and individual transaction level in services in retail operations. Mobile, e-commerce and even modern brick and mortar retailing are data intensive already, and that makes it easier to work on predictive analytics, as data generation and collection are now more feasible.

The Process
To gain useful results, it is critical to have a close connection among predictive analytic techniques, data, and business needs and requirements. The process of predictive analytics implementation, therefore, begins with the most difficult step of translating a business problem or challenge into a predictive
analytics problem. Let us look at a schematic of the entire process that a company would go through in implementing a predictive analytics project. To make the process more concrete, consider the case of an online retailer such as Flipkart.com who offers cash on delivery (COD).

**Problem Identification:** Once a business challenge or opportunity is identified, it must be translated into a precise predictive analytics formulation. This means defining specific desired measurable outcomes. Recall the online retailer offering COD. Needless to say, the risk of COD to the retailer is higher than other payment options. Business goals might include reducing the number of COD transactions (by converting to another mode of payment), reducing failed cash collections, reducing turnaround time or even reducing defective or wrong deliveries. Each of these objectives would require formulating a different predictive analytics goal. In the case of reducing failed cash collections, we could formulate the predictive analytics task of predicting the chance of payment for each new transaction.

**Measurement and Data:** The selection of outcome and predictor measurements depends on the formulated predictive analytics problem. We must determine which measurements are of interest and are available not only now, but also at the time of deployment, when predictions will be generated. The outcome measurement is the one that we are trying to predict. In the COD example of predicting the probability of payment, the outcome measurement is whether a customer paid or did not pay (a “pay/no-pay” measurement). The predictor variables are measurements that we suspect are correlated with the outcome, but in a predictive fashion. This means measurements that give an indication of the outcome before it occurs. In the COD examples, perhaps age, gender and prior purchase history can be indicative of the chance of payment in a future transaction.

Concerns about data have evolved from “Do we have sufficient data?” to “How do we get access to these data in a timely manner?” and “How do we integrate data from multiple sources?” Once a dataset is assembled, we randomly partition it into two subsets: a training set and a holdout set. The training data are used for building a predictive model; the model “learns” from the training data. The holdout data is then used to test the performance of the model on data that it “did not see.” The idea of deploying the model on the holdout data is to mimic reality, in which we deploy the model on completely new data.

One should also not get obsessed or disappointed by too much or too few data. The focus always is on the end goal of the analysis, and when it is unavoidable, one may still get good insights from a moderate set.

**Model:** The model-building stage comprises trying different algorithms and models and selecting one or more that meet the required performance goals. The variety among models and algorithms is due to the different ways in which they search for patterns and correlations in the data. Some methods are more data driven, in the sense that they make no assumptions about possible patterns, while others assume some underlying structure. All these methods fall under the term “data mining,” a field that combines methods from artificial intelligence, statistics and other disciplines. It is impossible to know in advance...
which predictive method will be best, and in fact, we often combine multiple models to obtain better predictions. It is therefore important that analysts are knowledgeable about various methods, from classification and regression trees, to nearest-neighbour algorithms, Naïve Bayes, regression models and more.

Deployment: Once the model is validated on the holdout dataset, it is ideally tested on some live data. It is possible that data patterns have undergone a change since modelling and/or that new factors emerge as being material. This deployment will also give an idea of practical issues such as run-time, cost and other issues that might not have surfaced in the model building stage. When the model is finally fully deployed, it generates more new data, which can then be used to improve modelling or build future models. In the COD example, once the predictive algorithm is deployed, it generates a probability of payment for each new transaction. The high likelihood of payment deliveries are then sent out and the actual payment behaviour is observed.

Classic Uses Of Predictive Analytics
In Retail

Retail Marketing
Direct marketing campaigns are one of the most popular applications of predictive analytics in retail. Since predictive analytics is a powerful personalisation tool, it can be used to tackle questions such as which product or coupon to offer to a particular customer, what medium to use for sending the offer, when to send the offer, etc. Each of these questions would require different outcome measurements as well as success criteria. Increasing customer spend, reducing the number of days since the last visit or purchase and increasing redemption of coupons are all possible outcomes of interest.

With the availability of structured and unstructured data, customer data can include demographic and purchase history information as well as other behaviour from sources such as social media or third party data. Such data can be a rich source of marketing insights at the individual customer level. The use of predictive analytics for personalisation must be carried out carefully, keeping in mind ethical and cultural sensitivities. This powerful tool can cause awkward deployments, as in the recent case of the megastore Target, which used customer data to predict customer pregnancy and extend offers accordingly. Some customers (and their relatives) were extremely upset by the discovery of their situation.

A word of caution: Do not ignore data that yields negative results, such as defaulters in loan applications or non-purchasers in a marketing campaign. For example, in a marketing campaign, customers were sent redemption coupons and redeem rates were captured. While companies are typically interested only in redeeming customers, data on the non-redeemers is crucial for developing future campaigns. These data are then used to study and analyse the relationship between outcome (redemption in this case) and predictors (customer demographic data, etc.). A database of only redeemed coupons would not be conducive to knowing what type of customers did not use the coupon. Knowing who redeemed is as important as knowing who did not redeem.

Employee Training
Another important area in retail is professional development. A company can apply predictive analytics to employee and programme information in order to determine who to send to a particular training programme. Information on employees’ past performance, course performance, demographics, training mode and other information that correlates with post-training employee performance is used to predict the chances of success for each employee, or alternatively, to choose the employees most likely to benefit from the training programme.

Also, training programmes could be analysed as another dimension of training to weed out inefficient trainings and improve upon factors that could yield better end-performance of trainees.

Customer Churn
Customer churn is a major concern for retailers. In many membership-driven business models such as mobile phone schemes, one must deploy limited resources judiciously. Whom to target? What should the message be? What could be the channel and what product mix would aid retention of customers? Such questions can be tackled by predictive analytics to identify customers who are most likely to churn so that they can be contacted appropriately.

Stocking Levels in Fashion Retail
In the case of leading fashion brands, achieving a
balance between customer satisfaction and inventory levels is tough. Stores retailing fashion clothing must remain stocked optimally to ensure availability and variety, while minimising stockouts as well as “stale” merchandise. Predictive analytics offers methods for forecasting demand patterns and optimising store capacity, variety and even cross-product elasticity.

Practitioners’ Tips for Predictive Analytics

With the growing experience of retailers venturing into predictive analytics, some of the pitfalls that are known and frequently encountered by practitioners of predictive analytics offer useful lessons.

While there is always a temptation to get that “aha moment” on new insights borne out of predictive analytics, one must bear in mind that it is only correlation and not causation that we can infer by the ability to predict an outcome from a set of predictors.

It is possible to be awed by the variety of models and algorithms and also because different models may yield varying results. They could well be designed and intended to yield answers to different questions, but it is crucial to have a particular goal formulated in the words of predictive analytics.

One key determinant of success is support and even leadership from upper management. Predictive analytics can lead to successes, but there is often a learning period in which there will be failures. Managerial support must extend to allowing failures, as long as they result in lessons learnt.

As a concluding tip, we circle back to the original thought that business and statistics go together in predictive analytics. When applying findings from the analytics component, one must carefully align outcomes to reality and not just apply them mechanically. Without business knowledge, deploying analytics can be useless at best, and disastrous at worst.

Conclusion: Predictive analysis for a more personalised service

Predictive analytics can be leveraged to reduce the burden on customers, employees, suppliers, society and nature in general by offering more personalised and insightful decisions. In India, where diversity is extremely broad in many dimensions, predictive analytics can help scale up “white glove” service to large numbers of people, transactions and events. Moreover, region-specific customs, realities and modes of operation (such as cash on delivery) open the door to many new questions that can be tackled with predictive analytics. Creativity is therefore the key to new predictive analytics applications. Using predictive analytics, companies can strengthen their relationships with their stakeholders as well as reduce the uncertainty that plagues so many of their operations.
Global and Local Patterns of Sales

Merchandising managers and retail buying executives frequently decide on the assortment of products to be carried in a retail store. Product variety is important for decision making, and so are the consumer demographics served by the retail store as well as meeting the inventory constraints at the location. While consumer products and brand name items can be marketed using pricing, promotions, bundling and other techniques, this is usually not the case for commercially used commodity products such as oil, steel and plastics, where markets are competitive and pricing and product differentiation are not salient sales tools. For retailers selling such products, product assortment and availability are important determinants of sales success, while price is usually closely tied to the cost of the product. Retailers with multiple stores in different geographical locations have the problem of deciding on the most profitable product assortment for each store, and frequently do not have a common metric to compare the profitability of different stores, given the differences in product assortment and the diverse demographics served by the stores (see Figure 1). Measuring such a commodity retail store’s sales effectiveness is usually achieved through metrics such as total revenue, average turnover and operating

Figure 1: Growth and Product Assortment Decisions across Multiple Retail Stores

<table>
<thead>
<tr>
<th>Branches</th>
<th>Products</th>
<th>Clients</th>
<th>Industries</th>
</tr>
</thead>
<tbody>
<tr>
<td>B1</td>
<td>P1</td>
<td>C1</td>
<td>SIC1 (Nationwide leading plastics wholesaler)</td>
</tr>
<tr>
<td>B2</td>
<td>P2</td>
<td>C2</td>
<td>SIC2 ($500 million revenue)</td>
</tr>
<tr>
<td>B3</td>
<td>P3</td>
<td>C3</td>
<td>SIC3 (Ad-hoc branch growth projections)</td>
</tr>
<tr>
<td>B4</td>
<td>PN</td>
<td>CM</td>
<td></td>
</tr>
</tbody>
</table>

BY RAM GOPAL
margin. While useful, these efficiency measures do not usually provide growth goals for managerial decision making and planning.

To achieve the best product assortment and performance for a given store, a first step involves identifying global patterns of sales of associated products through data mining of transaction information of the different stores of a firm (see Table 1). However, without a method to identify demographics around a given retail store and estimate differentiated sales opportunities for existing stores, a centralised retail director may set similar growth goals for all the stores, which we have frequently observed to be the case in industry engagements. It is not uncommon, therefore, to find some stores that easily exceed expectations, while others seem to lag significantly behind the goals. It is possible that the stores that do not meet goals are already performing at peak efficiency. This creates subsequent planning problems as well as personnel related equity and performance disparities.

In this article, we present a data mining and optimisation based product assortment and performance assessment methodology for each store of a firm. Our methodology allows a merchandising manager to glean global knowledge from sales patterns and identify frequently purchased itemsets. We use a dataset from an industry leading plastics manufacturer and retailer in the United States to demonstrate the utility of our model.

Frequently Purchased and Revenue Generating Itemsets
The complete set of transactions captures the purchase behaviour of client companies. To extract product dependencies, a commonly used approach in data mining is frequent itemset analysis over transactions. However, a concern that arises with frequent itemset analysis is the large number of itemsets that are generated. Moreover, the frequent itemset analysis reveals what product combinations are purchased; it does not consider how much of a product is purchased in each frequent itemset. This is an important consideration as some frequent itemsets can enhance the sales of a product while others can dampen it. Translating this knowledge into a viable decision-making model to further firm objectives has remained an unaddressed challenge.

Key among these objectives is the development of efficiency measures for each of the stores and related product assortment selections.

We developed a robust mechanism to prune the large number of resulting itemsets and also developed a metric to identify revenue generating items that can subsequently be used to choose beneficial itemsets (see Table 2). Using data from one of the industry’s largest plastics manufacturers and distributors in the United States, we show that when the itemsets, after pruning, are examined for a given industry segment, the initial set of product association rules (in the magnitude of tens of millions) can be significantly decreased. After pruning, the resulting number of itemsets is reduced to a very manageable size (in the magnitude of hundreds). Our computational results also show

<table>
<thead>
<tr>
<th>Industry Segment</th>
<th>Transactions</th>
<th>No. of Itemsets with Lift &gt;1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>90</td>
<td>27,239,972</td>
</tr>
<tr>
<td>2</td>
<td>560</td>
<td>120,912</td>
</tr>
<tr>
<td>3</td>
<td>305</td>
<td>11,052</td>
</tr>
<tr>
<td>4</td>
<td>177</td>
<td>3,141,893</td>
</tr>
<tr>
<td>Total</td>
<td>1132</td>
<td>30,513,829</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Itemset</th>
<th>Product Number</th>
<th>Impact on Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>42 40</td>
<td>Positive Positive</td>
</tr>
<tr>
<td>[25, 1, 23, 7]</td>
<td>25 1 23 7</td>
<td>Negative Positive Positive Negative</td>
</tr>
<tr>
<td>[39, 36]</td>
<td>39 36</td>
<td>Negative Negative</td>
</tr>
<tr>
<td>[44, 60, 40]</td>
<td>44 60 40</td>
<td>Negative Positive Negative</td>
</tr>
<tr>
<td>[43, 41]</td>
<td>43 41</td>
<td>Positive Positive</td>
</tr>
</tbody>
</table>
that frequently purchased itemsets that are bought by one industry segment significantly differ from those bought by another, with only a small number of overlapping products. This suggests that product offerings in a given store should be carefully calibrated depending on the industry segment potential around the store location.

Efficiency Metric for Performance Evaluation and Growth Projection

We developed a metric to measure and compare store performance using an average, or quartile, or other ranking measure, which helps to provide differentiated growth goals for each store. This metric utilises global knowledge to optimise a store’s product assortment by taking into account the local constraints around a given store. In addition to the value created for existing stores, the methodology can also be extended to determine locations to open new stores based on location demographics.

Our analysis compares current and optimal revenues across 10 stores based on the “average” revenue capture ratio (see Figure 2). For most stores, the optimal revenues are higher than the current revenues, signifying that these stores are currently performing below average and can be targeted for growth to meet the average revenue capture ratio for all the stores.

When the same analysis is performed with a “90th percentile” revenue capture ratio, some stores remain in the 90th percentile while others drop out – suggesting that these stores could improve under the “90th percentile” metric criterion (see Figure 3).

In industry, it is the usual practice to fix growth goals for all stores at the same rate, only to subsequently find that some stores easily achieve the goals, while others do not. That is the reason we see stores that are already performing at the highest level and cannot be expected to improve growth on par with other stores that have a better potential to grow. We can thus label these high performing stores as “turnips,” because as managers well know, “you cannot squeeze blood out of a turnip.” Our method can identify lower performing stores, and as managerial incentives are frequently tied to growth performance, the firm can set data-driven differential growth projections for stores, as opposed to a “one size fits all” target.

Ram Gopal is the GE Endowed Professor of Business and Head of the Department of Operations and Information Management in the School of Business, University of Connecticut and a visiting scholar at the Indian School of Business (ISB).
The use of the Internet as a medium to deliver promotional material to prospective customers has grown tremendously in recent years. Despite the current economic slowdown, Internet advertisement (ad) revenue in the United States increased by 15% during 2009 to reach US$26 billion in 2010. This trend is expected to continue — an estimate predicts that Internet advertising will reach US$77 billion in 2016 and will constitute 35% of all advertising spending, overtaking television advertising.

The ability of advertisers to accurately quantify the success of their Internet ad campaigns has been one of the most important factors driving this growth. When an ad is shown to a visitor on the website of an advertising publisher, the visitor’s click behaviour can be tracked. This is important for the advertiser because a click usually signals the visitor’s interest in the ad content. Therefore, we should not be surprised to find that many ad revenue models used on the Internet are based on the cost-per-click model. In this model, the advertiser pays only for a click, and not for an impression (i.e., the event where a visitor is shown an ad).

In addition to the advertiser and the publisher, an intermediary (i.e., an Internet advertising firm) usually matches an advertiser’s ads with a publisher’s website and with a web user who visits the website. The problem we address in this study is from the perspective of Chitika, an Internet advertising firm operating in the Boston area.

To Show or Not To Show: How to Manage Internet Advertisement Campaigns

BY SUBODHA KUMAR

Is it always beneficial to show advertisements to the visitors of a website? How can firms use user profiling to make this decision? Professor Subodha Kumar writes from his research on an actual implementation at Chitika, an Internet advertising firm operating in the Boston area.
The implementation, which began in March 2010, has resulted in a revenue increase of about US$3,000 per day for Chitika. Based on the data collected between March 2010 and September 2010, we estimate the total increase in revenue to be approximately US$1.2 million per year.
2010, we estimate the total increase in revenue to be approximately US$1.2 million per year. This revenue increase occurred because Chitika was able to sign up more publishers under the Chitika Premium programme. Over the past year, Chitika used its Premium programme to partner with a large advertising aggregator to show ads in the United Kingdom. As part of the trial process, Chitika was asked to demonstrate a CTR of 0.015 (1.5%). Our methodology provided a CTR of 0.0151 (1.51%), and Chitika won the contract, which has contributed to a huge revenue increase for the company.

In December 2010, Chitika began offering another service, Chitika Select. Most of Chitika’s publishers had come on board to use Chitika Premium with the expectation that Chitika would show ads only to visitors coming to the site from search engines (i.e., search traffic). This was a good starting point. Although Chitika had ads for visitors who came to its website from other sources (e.g., by directly typing in the company’s URL), it chose not to show the ads to these visitors because doing so might dilute the CTR.

Chitika Select offers publishers the opportunity to expand their ad usage, thereby driving more revenue, with the assurance that the expanded coverage will not dilute the Premium CTR by more than 25%. Without a way to control the CTR dilution, the coverage expansion could seriously hurt the CTR and risk losing some publishers completely. However, with Chitika Select, Chitika was able to guarantee a specific CTR level, thus giving the publishers this option with assurance. The Select offering expanded the use of Chitika’s service across a large percentage of the network traffic. Whereas with Chitika Premium, Chitika accepted only search traffic and collapsed the ads for nonsearch traffic, the Select service allowed it to show ads to a much larger traffic base. As a result, Chitika generated an additional 25% in revenue.

Potential Opportunity for Chitika: Inclusion of Advertiser Constraints

Although this problem is similar to the one described above, its solution must also respect the performance constraints of both the publisher and the advertiser. In addition to the publisher’s constraint about exceeding a given CTR, the advertiser often poses an additional constraint, a cost-per-conversion constraint. The advertiser’s constraint requires that the cost-per-conversion value is below a specified constant. The cost-per-conversion value is the ratio of the total advertising cost, that is, the per-click cost times the number of clicks, divided by the number of conversions (e.g., a sale or registration) that are generated from the clicks. To solve this problem, we use the data analytics step to predict both the probability of a click and the probability of a conversion. The decision to show an ad depends on both probabilities, that is, we use two thresholds (one for the click probability and the other for the conversion probability), both of which must be satisfied to display an ad. Again, we vary these thresholds over the planning horizon, depending on current CTR and the current conversion rate. The inclusion of advertiser constraints often applies to situations in which Chitika contracts directly with the merchant for ad display, rather than obtaining these ads from a partner. Using the extended model, Chitika was able to win a contract to show ads for a partner who specialises in conversion-based payment schemes. This partner charges merchants on a cost-per-conversion basis, but pays Chitika on a per-click basis. However, to retain this business, Chitika must deliver a sufficient number of conversions to the merchant and must also keep the publisher satisfied by using its website space efficiently.

1For a more detailed analysis, see the following article: R. Mookerjee, S. Kumar, and V.S. Mookerjee, “To Show or Not Show: Using User Profiling to Manage Internet Advertisement Campaigns at Chitika.” Interfaces 42.5 (September-October 2012): 449-464. This article contains (edited and summarised) excerpts from the original article.

Subodha Kumar is Associate Professor and Shelley and Joe Tertorice’70 Faculty Research Fellow in Information and Operations Management Department at Mays Business School, Texas A&M University, and a visiting scholar at the Indian School of Business (ISB).
Features

16 KICKING BACK ON KICKBACKS: AN EXPERIMENT IN ASYMMETRIC LIABILITY
19 SOVEREIGN DEBT, GOVERNMENT MYOPIA, AND THE FINANCIAL SECTOR
22 LEAVING A TRAIL OF CARBON FOOTPRINTS
26 NOKIA LIFE TOOLS: TAPPING INTO INDIA’S EMERGING MARKETS
29 COMPETING THROUGH INNOVATION
32 THE MYOPIA OF FAR-SIGHTEDNESS
Kicking Back on Kickbacks: An Experiment in Asymmetric Liability

BY TARUN JAIN

Can a radical proposal to tackle harassment bribery work in practice? Professor Tarun Jain and his colleagues conducted an experiment to study the potential impact of implementing an asymmetric liability policy for bribe givers and takers. In this article, he presents his findings from the study.

On the anti-corruption website, www.ipaidabribe.com, the stories told by citizens are not of fixed sales for wireless spectrum or mining licences, MPs who vote for cash or of bungled Commonwealth Games, but of marriage registrars and excise officers. "The inspector who visited our factory immediately asked for ₹5,000 else work will get slow down," complained one person from Mumbai. A gentleman from Erode who explained to the inspector that a bribe demand of ₹750 was unjustified since the passport fee itself was ₹1,000 was warned that he would never receive his passport. One perceptive (and perhaps heartbroken) suitor wrote about marriage registration, "I was asked a minimum of 500 in order to get an interview with the magistrate. But at the end I didn’t get married, so should I ask for a refund?"

It is difficult to match the corrosive impact that daily demands for petty bribes have on the economy. Not only do these demands grate on our sense of justice, but they also have a potentially large economic impact in terms of lost enterprise and productivity. Such harassment bribes, where officials hold up paperwork in order to extort bribes from citizens, are ignored in the media in favour of bigger scams involving multiple crores of rupees. The anti-bribery laws are of no help. The law views citizens who pay bribes as willing participants, and therefore, as equally liable and subject to prosecution. So citizens are reluctant to come forth, except on low-cost platforms such as ipaidabribe.com.

In 2011, the then Chief Economic Advisor to the Indian government, Kaushik Basu, suggested "a small but fairly radical idea" to combat harassment bribery. Observing that treating both the bribe taker and the bribe giver as liable for corruption creates a large disincentive for citizens to report the transaction, Basu proposed that the law should be amended so that only the bribe recipient is liable and prosecuted whereas the giver is offered impunity. This way, Basu reasoned, upset and enraged citizens who are held up by corrupt officials have an incentive to report the bribe transaction after it has taken place. Officials, realising that the citizens are more likely to report them, will calculate that they are more likely to get caught and reduce their demand for bribes as a result. Taking the argument to its conclusion, Basu predicted that implementing the asymmetric liability policy will yield no harassment bribes in the long term.

Basu was careful to point out that his proposal did not apply to collusive bribes, where a citizen (or businessman) conspires with officials for preferential treatment, say in awarding contracts. In collusive bribes, both the official and the citizen are better off after the transaction; instead, the cost of corruption is borne by someone else in society. For example, if a bad driver gets a licence by bribing an official at the transport office, then the rest of us must bear more dings, bumps and frayed nerves when this person takes to the roads.

Such asymmetric liability rules are not entirely novel. In the US, whistleblowers in corporate fraud cases enjoy impunity from prosecution. And officials
used the same principle during the Prohibition era (1920-33), when production, distribution and sale of alcohol was illegal, but the consumption of alcohol was not. After all, someone was required to testify for the prosecution and who better than the customers of the local speakeasy!

Nonetheless, a proposal to legalise bribery from a top economic advisor, even written as a personal comment, brought forth a burst of commentary in the media. The Economist thought it was an idea worth pursuing, as did Le Monde newspaper in Paris. But of citizens at large, 55% reported experience in paying bribes and 63% were familiar with the anti-corruption laws in India. To motivate participants to take their roles seriously, they received cash earnings based on their decisions in the experiment.

In the experiment, an official has the option of either providing a service without a bribe demand (and receiving only his salary), or asking for a bribe and potentially adding to his salary. If he decides to ask for a bribe, then the citizen chooses from three options. First, she may take a principled stand and refuse to pay. Consider taking an injured relative to a hospital and being faced with a bribe demand for admission. In this case, refusing to pay might lead to considerable delays in treatment and worse health outcomes. So such a stand would be very costly to her even though the moral point is made. The second option is to pay quietly, whereas the third option is to pay but then report the transaction. In both cases, prosecution is probabilistic in line with Dreze’s critique, but the chance of success is 40% if the citizen reports the transaction and 5% if she does not. There are two versions of the experiment — first with symmetric liability where both the official and citizen are prosecuted (the status quo) and second where only the official is prosecuted (Basu’s proposed change).

We found strong evidence that Basu’s proposal works. 25% of citizens reported bribe demands in the symmetric case, which increased to 59% in the asymmetric case. Looking at officials, while 38% asked for bribes in the symmetric treatment, this fell to 24% with asymmetric liability as officials feared the impact of greater reporting by citizens.

25% of citizens reported bribe demands in the symmetric case, which increased to 59% in the asymmetric case. Looking at officials, while 38% asked for bribes in the symmetric treatment, this fell to 24% with asymmetric liability as officials feared the impact of greater reporting by citizens.
reports a telephone linesman for demanding a bribe, and the linesman is not punished, the citizen might find herself with no phone service for a long time. To test the impact of this objection, we conduct another treatment where officials who escape punishment can retaliate against citizens. In our formulation, retaliation is never an optimal strategy, but hangs as a threat that can be used by a vengeful official.

We find that the impact of asymmetric punishment is mitigated considerably when retaliation enters the formulation. Only 42% of citizens report bribe demands and 37% of officials demand bribes.

These results find something for everyone. Basu’s proposal has bite in curbing harassment corruption, but implementation requires a careful legal package that protects whistleblowers from potential retaliation. Such measures could include anonymity for whistleblowers, crowd-sourced information gathering, and frequent transfers even among the lower bureaucracy to break up the networks that facilitate retaliation.

Kaushik Basu himself wrote that he received a number of letters from ordinary citizens across the country, thanking him “for not treating me as a criminal when a government officer came to harass me.” Since then Basu has moved on to a new job as the Chief Economist of the World Bank where he can consider his proposal for a large number of developing countries, in addition to India. Meanwhile, I hope the debate on corruption will be informed by the results of experiments such as ours.

Professor Jain would like to thank Sonalika Sinha for her assistance in writing, and Urvashi Jain, K Jayashree, Megha Juneja and Preeti Rao in conducting the experiments described in the article.


Why do governments repay external sovereign borrowing? Models where countries service their external debt for fear of being excluded from capital markets for a sustained period seem very persuasive, yet are at odds with the fact that defaulters seem to be able to return to borrowing in international capital markets after a short while. With sovereign debt in industrial countries at extremely high levels, understanding why sovereigns repay foreign creditors, and what their debt capacity might be, is an important concern for policy makers and investors around the world.

A Theory
A number of recent papers offer a persuasive explanation of why rich industrialised countries service their debt without being subject to coordinated punishment. As a country becomes more developed and moves to issuing debt in its own currency, more and more of the debt is held by domestic financial institutions or is critical to facilitating domestic financial transactions. Default on domestic bond holdings now automatically hurts domestic activity by rendering domestic banks insolvent or reducing activity in financial markets (see Bolton and Jeanne, 2011 or Gennaioli, Martin and Rossi, 2011). If the government cannot default selectively on foreign holders of its debt, either because it does not know who owns what or cannot track sales by foreigners to domestics (see Guembel and Sussman, 2009 and Broner, Martin and Ventura, 2010 for rationales), then it has a strong incentive to avoid default and make net debt repayments to all, including foreign holders of its debt.

What is less clear is why an emerging market or a poor country that has a relatively underdeveloped financial sector, and hence little direct costs of default, would be willing to service its debt. Government short termism may explain this. We argue in Acharya and Rajan (2011) that myopic governments seeking electoral popularity can nevertheless commit credibly to service external debt. Short horizon governments do not care about a growing accumulation of debt that has to be serviced – they can pass it on to the successor government – but they do care about current cash flows. So long as cash inflows from new borrowing exceed old debt service, they are willing to continue servicing the debt because it provides net new resources. Default would only shut off the money spigot for much of the duration of their remaining expected time in government.

Thus, we have a simple rationale for why developing countries may be able to borrow despite the absence of any visible mode of punishment other than a temporary suspension of lending; lenders anticipate the developing country will become rich, will be subject then to higher domestic costs of defaulting and
will eventually service its accumulated debt. In the meantime, the country’s short horizon government is unlikely to be worried about debt accumulation, so long as lenders are willing to lend it enough to roll over its old debts plus a little more. Knowing this, creditors are willing to lend to it today.

Key in this narrative are the policies that a developing country government has to follow to convince creditors that it, and future governments, will not default. To ensure that the country’s debt capacity grows, it has to raise the future government’s ability to pay (that is, ensure that the future government has enough revenues) as well as raise its willingness to pay (that is, ensure that the future penalties to default outweigh the benefits of not paying). The need to tap debt markets for current spending gives even the myopic government of a developing country a stake in increasing debt capacity. The policies that it follows will, however, potentially reduce the country’s growth as well as increase its exposure to risk.

Interestingly, as the rate at which a government discounts the future falls (i.e., becomes less myopic), its willingness to default on legacy debt increases. The long horizon government internalises the future cost of paying back new borrowing, as well as the distortions that stem from policies required to expand debt capacity. This makes borrowing less attractive, and since for a developing country government the ability to borrow more is the only reason to service legacy debt, the long horizon government has more incentive to default (or less capacity to borrow in the first place). Similarly, developing countries with more productive technology may also have lower debt capacity because the distortional taxation needed to sustain access to debt markets will be more costly for such countries.

Implications

Because the costs of default are sizeable in our model only when the country becomes rich, the nature of developing country defaults and rich country defaults are likely to be very different. Developing countries are more likely to default when revenue shortfalls or increases in expenditure lead to a buildup of debt that can imply net debt outflows for some time. The reason for default is not that the country cannot pay but that the time path of prospective payments does not make it worthwhile for the current government to maintain access to debt markets. For rich countries, however, the direct cost of default is substantial, and default looms only when the country simply does not have the political and economic ability to raise the revenues needed to repay debt.

The ongoing sovereign crisis in Europe raises some fundamental issues that our model can speak to. For instance, our model explains why some governments keep current on their debt, even when most market participants suggest that it would be better for them to default. So long as the Euro area and multilateral institutions are willing to provide funding to tide the country over, myopic governments see no benefit in default, no matter how much debt accumulates. That does not mean, however, that servicing debt or taking actions that maintain or expand long-term debt capacity are optimal.

For rich countries, the direct cost of default is substantial, and default looms only when the country simply does not have the political and economic ability to raise the revenues needed to repay debt, as in the case of Greece. When rich countries are in danger of default, outside agencies that lend them more without helping these countries expand productivity and growth are only postponing the inevitable messy restructuring. Rich country defaults are more likely to be solvency defaults rather than liquidity defaults, and a simple rescheduling of debt without significant haircuts to face value is unlikely to help the country regain access to private markets.

Another interesting development in the ongoing sovereign debt crisis in Europe is the extreme degree of dependence of the health of a country’s banking sector on the health of the government, and vice versa. Acharya, Drechsler and Schnabl (2010) document that the 91 European banks stress-tested in 2010 held sovereign bonds on average up to a sixth of their risk-weighted assets, and that within these sovereign bond holdings, there was a “home bias” in that banks held a substantial portion in their own government bonds (see Figure 1; for information on EU country codes please see Figure 2). Indeed, the home bias in sovereign bond holdings was the highest for countries with the greatest risk of government debt default, suggesting they are positively correlated. Countries that are at greater risk of default also have banks whose portfolios are stuffed with their own government debt.

One explanation is that banks are buyers of last resort for their government’s debt, and this is why risky countries that find no other takers, stuff their banks with their paper. An alternative explanation (see Diamond and Rajan, 2011) is that banks have a natural advantage in loading up on risks that will
materialise when they themselves are likely to be in default. However, a third, not mutually exclusive, explanation is ours — that countries have to prove to new bondholders their enduring resolve to service their foreign debt, and this is best done by making the costs of default on domestic debt prohibitively costly.

In this vein, consider the recent proposal of the Euro area think tank, Bruegel, for Euro area sovereigns to issue two kinds of debt, one (blue bond) that is guaranteed by all Euro area countries and will be held by domestic banks, and another (red bond) that is the responsibility of the issuing country only and which domestic banks will be prohibited from holding. Our model points out that there is very little reason for a country to service the red bonds. These will not be held by key domestic financial institutions, and therefore, will not cause many ripples if they are defaulted on. This will make it hard for a country to borrow sizeable amounts through red bond issuances, which may indeed be the subtle intent of the proposal.

Countries that are at greater risk of default also have banks whose portfolios are stuffed with their own government debt.

Figure 2: Country Codes

<table>
<thead>
<tr>
<th>Short Name (English)</th>
<th>Official Name</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>Kingdom of Belgium</td>
<td>BE</td>
</tr>
<tr>
<td>Denmark</td>
<td>Kingdom of Denmark</td>
<td>DK</td>
</tr>
<tr>
<td>Germany</td>
<td>Federal Republic of Germany</td>
<td>DE</td>
</tr>
<tr>
<td>Ireland</td>
<td>Ireland</td>
<td>IE</td>
</tr>
<tr>
<td>Greece</td>
<td>Hellenic Republic</td>
<td>EL/GR</td>
</tr>
<tr>
<td>Spain</td>
<td>Kingdom of Spain</td>
<td>ES</td>
</tr>
<tr>
<td>France</td>
<td>French Republic</td>
<td>FR</td>
</tr>
<tr>
<td>Italy</td>
<td>Italian Republic</td>
<td>IT</td>
</tr>
<tr>
<td>Cyprus</td>
<td>Republic of Cyprus</td>
<td>CY</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>Grand Duchy of Luxembourg</td>
<td>LU</td>
</tr>
<tr>
<td>Hungary</td>
<td>Hungary</td>
<td>HU</td>
</tr>
<tr>
<td>Malta</td>
<td>Republic of Malta</td>
<td>MT</td>
</tr>
<tr>
<td>Netherlands</td>
<td>Kingdom of Netherlands</td>
<td>NL</td>
</tr>
<tr>
<td>Austria</td>
<td>Republic of Austria</td>
<td>AT</td>
</tr>
<tr>
<td>Poland</td>
<td>Republic of Poland</td>
<td>PL</td>
</tr>
<tr>
<td>Portugal</td>
<td>Portugese Republic</td>
<td>PT</td>
</tr>
<tr>
<td>Slovenia</td>
<td>Republic of Slovenia</td>
<td>SI</td>
</tr>
<tr>
<td>Finland</td>
<td>Republic of Finland</td>
<td>FI</td>
</tr>
<tr>
<td>Sweden</td>
<td>Kingdom of Sweden</td>
<td>SE</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>United Kingdom of Great Britian and Northern Ireland</td>
<td>UK</td>
</tr>
</tbody>
</table>

Source: publications.europa.eu/code/pdf/370000en.htm

Figure 1: The share of sovereign bonds of banks in a nation that is in the form of home-government bonds

Source: European stress test data released in June 2010


Leaving a Trail of Carbon Footprints

BY RAM GANESHAN

Greenhouse gas emissions, if left unchecked, can have disastrous consequences on the Earth. Professor Ram Ganeshan traces the carbon footprints of different entities and calls for a concerted response to reduce our impact on the planet.

There will be no polar ice by 2060 … Somewhere along that path, the polar bear drops out.
— Larry Schweiger, President, National Wildlife Federation.

A “carbon footprint” of an entity — a country, city, event, firm, product or service — is the total amount of greenhouse gas emissions (GHG) it produces. Greenhouse gases other than carbon dioxide (CO₂), such as methane, nitrous oxide, sulfur hexafluoride and others, are converted to their “CO₂ equivalent” (CO₂-e) weight so that a single number can represent the environmental impact of the product. Since the 1750s, atmospheric concentrations of carbon dioxide have risen from about 280 to 379 parts per million (ppm). GHG emissions have led to a 0.6°C increase in the global average surface temperature since 1900. If the current trends in emissions continue, the Intergovernmental Panel on Climate Change (IPCC) estimates that global temperatures will rise a further 1.4°C to 5.8°C by 2100. Scientists agree that such increases will have disastrous effects — disrupting ecosystems (about 30% of plant and animal species will face extinction); increasing and intensifying environmental and climate disasters; endangering the world’s food supply and causing widespread health issues. The consequences will negatively impact a large portion of the world’s population, especially in impoverished countries.

There is widespread agreement today to keep the global average temperature from increasing by more than two degrees Celsius above pre-industrial levels. Scientists estimate that total emissions going forward should not exceed 565 billion tonnes by mid-century. The total GHG emissions in 2009 were in the order of 31.6 billion tonnes, and trends indicate that global emissions are increasing by about three percent every year. At this rate, it will take just over 15 years to hit the 565 billion tonne number. Reversing this alarming trend will involve concerted carbon management efforts at all levels — countries, cities, local governments, corporations and individuals. My intent is to give you a glimpse of the carbon footprints of various entities — countries, cities, companies and products. Following the adage of “what gets measured gets managed,” carbon footprints can help identify hotspots where action can be taken to mitigate emissions.

Footprint of Countries and Cities
Exhibit 1 shows the footprint of the 20 largest GHG emitting countries in 2009. The Kyoto protocol, signed in 1990 under the “common but differentiated responsibility” principle, set binding targets for 37 industrialised countries (also called “Annex I”) for reducing GHG emissions by the end of 2012. The United States did not ratify the Kyoto protocol. China, India and Brazil — as developing economies — were exempt from emission reduction targets. Attempts to extend the Kyoto treaty beyond 2012 have thus far failed. However, the Copenhagen...
Accord endorsed “the scientific view that the increase in global temperature should be below two degrees Celsius” and that Annex I countries will “commit to economy-wide emissions targets for 2020.” The Accord also recognised that developing nations would have to “implement mitigation actions,” report their emissions and subject these to verification.

Cities, as the hub of social and economic activity, are both significant contributors of GHG emissions and highly vulnerable to climate change. City governments oversee infrastructure, host and promote businesses and provide services for their citizens.

Cities have a major role to play in GHG mitigation. First, city governments and services can have a substantial carbon footprint. For example, New York City government operations account for 3.47 million metric tonnes of CO₂ annually (see Exhibit 1). Tokyo’s city government emissions are 2.06 million metric tonnes annually. Using renewable energy, expanding and improving the efficiency of public transport, retrofitting public buildings and street lighting, managing waste streams and increasing green spaces all reduce the footprint and enable a better quality of life. Second, cities have a significant impact on how their citizens live and how corporations conduct business. Engaging citizens and businesses through incentives and joint partnerships will galvanize cities to become climate neutral. For example, Portland and Seattle (US), Tokyo (Canada) and Yokohama (Japan) have targeted an 80% decrease in CO₂eq emissions by 2050 over 1990 levels. Rotterdam (Netherlands) has pledged a cut in emissions by 50% and London (UK) has proposed a cut of 60% in emissions by 2025 over 1990 levels.

Firm and Product Footprints

Businesses are responsible for 20-25% of the world’s GHG emissions. Their emissions are a result of their production processes and facilities, the resources they consume, extraction and processing of relevant raw materials in supplier operations and the impact of their product or service on their customers.

Exhibit 2, based on data collected by the non-profit organisation Carbon Disclosure Project,
Exhibit 2: GHG Emissions of Major Industrial Sectors

<table>
<thead>
<tr>
<th>Sector</th>
<th>Average Emissions (Million Tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer Discretionary</td>
<td>2,211,491</td>
</tr>
<tr>
<td>Consumer Staples</td>
<td>2,983,398</td>
</tr>
<tr>
<td>Energy</td>
<td>177,326</td>
</tr>
<tr>
<td>Financials</td>
<td>507,019</td>
</tr>
<tr>
<td>Healthcare</td>
<td>3,419,695</td>
</tr>
<tr>
<td>Industrials</td>
<td>1,173,674</td>
</tr>
<tr>
<td>Information Technology</td>
<td>9,452,121</td>
</tr>
<tr>
<td>Materials</td>
<td>816,591</td>
</tr>
<tr>
<td>Telecommunication Services</td>
<td>21,376,191</td>
</tr>
<tr>
<td>Utilities</td>
<td></td>
</tr>
</tbody>
</table>

shows the average emissions of firms in different industrial sectors. Not surprisingly, the energy sector has the largest emissions. While energy generation, transportation and storage are responsible for large GHG emissions, the use of energy by other industrial sectors, residences, automobiles, trains and planes are responsible for most of the emission attribution in this sector. The solution to reducing emissions in this industry is obviously complex—a national energy policy incorporating renewable sources, fuel efficiency standards, urban planning and transportation, all of which have an important role to play in this sector’s emissions, would need to be implemented. At the very least, any carbon mitigation project a firm works on must engage its supply chain partners. For example, to manufacture its electronic devices such as the iconic iPhone, Apple sources components from all over the world, subcontracts production and assembly primarily in Asia and sells its products in its own retail outlets and through several other distribution channels. The emissions from supplier operations, production, transportation and product use by customers is about 50 times the emissions from its own operations.

Apple’s strategy to reduce GHG emissions in production includes reducing material use in devices and packaging, elimination of certain hazardous materials and designing the product with appropriate materials such as aluminum and glass so that they can be recycled at their end-of-life. The design also incorporates energy efficient components and monitoring software so the emissions from product use are reduced.

The CO₂ emissions of a product or service include activities throughout its life cycle, right from

Exhibit 3: Footprints of Common Products

<table>
<thead>
<tr>
<th>Consumer Electronics</th>
<th>Travel And Lifestyle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple’s 2011 27-inch iMac (lifetime)</td>
<td>2011 Mercedes E350 Bluetec (annual)</td>
</tr>
<tr>
<td>Dell Latitude E6400</td>
<td>One year of “Mad meat eater” diet</td>
</tr>
<tr>
<td>Using cell phone for a year</td>
<td>2011 Smart-for-two coupe (annual)</td>
</tr>
<tr>
<td>Apple’s iPad2 over a lifetime</td>
<td>2011 Toyota Prius (annual)</td>
</tr>
<tr>
<td>Apple’s iPhone4 over a lifetime</td>
<td>One year of vegetarian diet</td>
</tr>
<tr>
<td>Running TV for a year</td>
<td>Fly 1000km Business class/passenger</td>
</tr>
<tr>
<td>A typical Nokia phone over a lifetime</td>
<td>Fly 1000km Coach class/passenger</td>
</tr>
<tr>
<td>Running a computer for 100 hours</td>
<td>One year of vegan diet</td>
</tr>
<tr>
<td>60 Watt Incandescent bulb (1 week)</td>
<td>Levi 501 Original jeans</td>
</tr>
<tr>
<td>13 Watt CFL light bulb</td>
<td>Load of laundry (40°C), line dried</td>
</tr>
</tbody>
</table>

Our Digital Social Life

<table>
<thead>
<tr>
<th>Activity</th>
<th>CO₂-Eq (Kilograms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Downloading music</td>
<td>0.4000</td>
</tr>
<tr>
<td>Email message with attachment</td>
<td>0.050</td>
</tr>
<tr>
<td>100 Google searches (0.2g/search)</td>
<td>0.020</td>
</tr>
<tr>
<td>Normal email message</td>
<td>0.0040</td>
</tr>
<tr>
<td>Ten spam emails (0.3g/email)</td>
<td>0.0030</td>
</tr>
<tr>
<td>Hundred tweets (0.02g/tweet)</td>
<td>0.0020</td>
</tr>
<tr>
<td>100 text messages (0.014g/text)</td>
<td>0.0014</td>
</tr>
</tbody>
</table>

Food

<table>
<thead>
<tr>
<th>Item</th>
<th>CO₂-Eq (Kilograms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indian Thali Dinner</td>
<td>5.370</td>
</tr>
<tr>
<td>Fat Tire Amber Ale</td>
<td>3.175</td>
</tr>
<tr>
<td>Cheeseburger</td>
<td>2.350</td>
</tr>
<tr>
<td>Slice of Pepperoni pizza</td>
<td>0.644</td>
</tr>
<tr>
<td>Black coffee (12oz)</td>
<td>0.284</td>
</tr>
<tr>
<td>Coca Cola (330ml can)</td>
<td>0.170</td>
</tr>
<tr>
<td>Walkers potato chips (25g)</td>
<td>0.080</td>
</tr>
</tbody>
</table>
The CO₂ emissions of a product or service include activities throughout its life cycle, right from extraction and processing of raw materials, production and use to end-of-life. Exhibit 3 shows the CO₂ eq of some common products and services.

The standard process to compute the footprint of an entity is to map the supply chain, identify key activities in the product life cycle and compute emissions. This analysis will identify carbon “hotspots” in the supply chain so that appropriate actions can be taken to reduce emissions in those activities. This would typically involve engaging suppliers and customers to redesign products that have a smaller GHG impact, increasing efficiencies of processes, use of renewable energy and reclaiming products after use to create raw material. For example, PepsiCo calculated the footprint of half a gallon (1.9 litres) of orange juice to be 3.75 pounds (1.7 kg). PepsiCo discovered that the biggest contributor to the footprint was growing the orange trees. Approximately 35% of the footprint is from the nitrogen fertiliser used in orange groves. The company has since been working with its growers to use low-carbon fertilisers. If successful, PepsiCo projects that this change could reduce the total carbon footprint of Tropicana juice by as much as 15%.

Towards a sustainable solution
The IPCC reports that to stabilise carbon dioxide levels between 445 and 490 ppm, resulting in an estimated global temperature increase of 2 to 2.4 degrees Celsius above pre-industrial levels, emissions would need to peak around 2015, along with a 50% to 85% reduction on 2000 levels by 2050. While the current trajectory of public policy and organisational response to sustainable development is encouraging, it falls well short of the reductions recommended to maintain CO₂ concentrations in the 445-490 ppm range, leaving much of humankind susceptible to the risks of climate change. Hopefully, we, as nations, local and city governments, companies and consumers of products and services, can redouble our efforts to significantly reduce our footprints. This effort needs to be focused on how we generate and use energy, increase the efficiency — both ecological and economic — of our industrial and agricultural processes, and finally, how we “close the loop” or conserve and reuse natural resources in supply chains.

We humans are very innovative. Come 2060, I may not be around, but I sure hope those polar bears are.

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*See Bill McKibben, the American environmentalist and founder of 350.org’s riveting article “Global Warming’s Terrifying New Math” in *Rolling Stone*, July 19, 2012, for a compelling argument.*
Nokia Life Tools: Tapping into India’s Emerging Markets

ARIFF KACHRA AND M B SARKAR

D. Shivakumar, Vice-President and Managing Director of Nokia India had to decide whether to undertake an all-India launch of Nokia Life Tools (NLT), Nokia’s newest service offering for emerging markets. Given the pilot’s success, the decision seemed simple on the surface; however, there were critical underlying challenges to consider, making Shivakumar’s task far more difficult than it appeared. This case has been written by Kirti Madhok Sud.

It was June 2009, and D Shivakumar, Vice-President and managing director, Nokia India, pondered over the presentation on Nokia Life Tools (NLT) by Jawahar Kanjilal, Nokia’s global head of Emerging Market Services (EMS). Nokia developed NLT in response to an in-house survey on consumer preferences for mobile phone services and applications in emerging markets in 2008. NLT-related applications were aimed primarily at rural and semi-urban populations, offering agricultural information and education and entertainment services without requiring the use of general packet radio service (GPRS) or Internet connectivity. The NLT pilot was a runaway success, with over 70% consumer adoption and retention rates.

The key question on Shivakumar’s mind was this: Should Nokia India launch the NLT service based on the encouraging results of the recently-concluded pilot programme? Was the optimism of the EMS team justified, given that several crucial elements of the new service were still works in progress?

The Mobile Phone Boom: India Connects

Aided by favourable legislation and an underserved telecommunication market, the mobile telephone boom over the last 10 years put the ₹333 billion mobile device industry on a high-growth trajectory in India. In 2008, the main players in the Indian mobile device industry were international giants Nokia, Samsung and Sony Ericsson. However, the “price sensitive” Indian consumer was quick to lap up smaller Indian and Chinese brands when these stormed the Indian market in 2008-2009. Unwilling to have their revenues throttled by smaller players, big mobile phone manufacturers launched “smartphones”—devices with advanced capability and connectivity. As manufacturers brought down smartphone prices, sales doubled in this segment, and the lucrative Indian market witnessed several new global entrants.

Most Indian consumers were driven by voice services versus data services, and their purchase decisions were usually based on price, peer recommendations and brand awareness. Certain basic features such as radio and camera were necessary for even entry-level phones. Internet connectivity was essential for high-end phones. In 2009, India’s urban subscription base of 260 million was twice that of rural areas. Further, a new customer segment of 80 million buyers had emerged in India: the “rurali”

In 2009, India’s urban subscription base of 260 million was twice that of rural areas.

customer, a term that referred to rural consumers and low-income urban consumers. To serve different customer segments, mobile device sellers offered
products at different price points, ranging from devices priced below ₹2,000 to those priced above ₹20,000. Mobile phones were sold by general stores as well as high-end concept stores, depending on their price and customer segment. It was predicted that the mobile phone sector would show robust growth in India until at least 2013, with the rural segment accounting for over 40% of the growth.

Nokia India: Industry Leader
Nokia made its debut in India in 1995, achieving a formidable 62.5% market share by value by 2009 and recording revenues of over ₹250 billion. Its consumer base covered a sixth of the country’s population. Nokia’s success was largely due to its specific focus on the mobile phone market, its crucial distribution partnerships, early investments in manufacturing and brand-building and its development of innovative product features, such as mobile phones with built-in FM radio and flashlights that were unique to India. Local manufacturing enabled Nokia India to maintain steady supplies of entry-level devices at affordable prices.

Not only was Nokia an industry leader in urban India, it controlled the largest handset distribution network in rural markets as well. Nokia planned to increase its fleet of rural vehicles and launch educational programmes for first-time users on the benefits of mobile devices. Supporting Nokia’s distribution network was a robust information technology (IT) backbone. Aspects that set Nokia India apart from its competitors − investment in R&D and a dedicated team that concentrated on developing products for markets with high populations and low penetration − facilitated the exponential growth of Nokia’s mobile phone business.

Aspects that set Nokia India apart from its competitors − investment in R&D and a dedicated team that concentrated on developing products for markets with high populations and low penetration − facilitated the exponential growth of Nokia’s mobile phone business.

The pilot NLT service, launched in December 2008 in Maharashtra, was simple, elegant, and worked on very basic devices. The company settled on a low price model with an innovative billing cycle for NLT. Nokia worked with various partners such as Idea Cellular (a mobile operator) to provide content for the NLT offering as the company did not have this expertise in-house. The adoption of NLT was directly proportionate to the sale of new devices, as the service came embedded in the device. In the low-end handset segment, a single handset was frequently shared by family members; thus, for NLT to be seen as a valuable proposition, the right portfolio of services had to be offered to the entire family unit. NLT offerings attracted customers that the company had not expected. Feedback from subscribers revealed that NLT had a wide appeal and a higher-than-industry retention rate.

Key Challenges of a National Roll-out
Nokia knew that NLT’s business model would only be sustainable if it was rolled out nationally. This
presented the first challenge: information content had to be available from a pan-Indian perspective with region-wise relevance and language considerations. Though NLT was simple enough to implement during the pilot phase as there was only one region to consider, a national roll-out offered different challenges since there were no vendors offering pan-Indian customised information. However Nokia chose to counter this hurdle, it came with its own challenges and costs.

Another area of concern was the collection of revenue from users. Nokia had two billing options for NLT: a pre-paid voucher model and/or integrating billing with the operator’s billing system. Running a pre-paid management system would require additional channel investments and would put Nokia and the operators in direct competition for service dollars. However, the advantage of this system was the steady revenue stream it would provide to retailers, offering them a tangible incentive to sell NLT. Under the operator model, subscribers would pay for the NLT service out of their pre-paid balances with operators, and revenues would be shared. Implementing this system would require complex development and integration. A pan-national launch of NLT would ideally involve bringing all operators on board — a long-drawn-out and time-consuming exercise.

Selling a service was substantially different from selling a device. Asking retailers to sell a service at the point of sale — i.e., to identify different market segments and demonstrate the personalised utility of NLT to each — presented a challenge. Should Nokia invest in disproportionately larger retail incentives to gain initial traction or should it invest in creating consumer pull? This question had to be answered before the impending national roll-out.

A Strong Base for NLT
The core team overseeing NLT’s pilot was the four-member EMS team. As this team evaluated the circumstances surrounding a national introduction of the NLT pilot, Nokia’s well-entrenched Indian operations, backed by global systems and processes, provided reassurance and stability. To help develop shared objectives, the team regularly presented NLT updates at the monthly Nokia India management meetings. Securing Shivakumar’s leadership and support was pivotal to NLT pilot’s success.

NLT’s Future
During his presentation, Kanjilal stated that following NLT’s impending national roll-out, the primary focus for the first few years would be on customer acquisition and engagement and also on ensuring a sustainable, low-cost business model. He was confident that once this was established, subsequent monetisation would not be an issue.

Although Shivakumar shared the EMS team’s excitement, he knew that introducing NLT across India would present many challenges. He also realised that simply acquiring customers was not a sustainable strategy if profits did not follow. The NLT national roll-out, thus, appeared to be a low hanging fruit that was ready to be grabbed. The question was whether the fruit would turn out to be sweet or bitter.

The case summary was written by Arohini Narain, Centre for Teaching, Learning and Case Development (CTLC) at the Indian School of Business (ISB).
In the past decade, the Indian industry has not only grown at a rapid rate, but has also established a global presence. This growth and internationalisation has been in product (e.g., Ranbaxy, Mahindra and Mahindra) and service businesses (e.g., Bharti Airtel) catering to end consumers (e.g., Tata Chemicals) as well as businesses (e.g., Wipro). The engine driving this growth within both India, as well as internationally, has been innovation.

Building Blocks of Indian Innovative Organisations

Low cost but skilled employees
Indian firms have a significant edge in terms of the costs of talented staff relative to developed world firms. It has been estimated that the earnings of scientists and engineers in India are less than 10% of that of their peers in the US or Europe, an advantage Indian firms have and continue to aggressively take advantage of, to push their innovation agendas forward. Ranbaxy, for example, has leveraged low cost R&D talent to produce innovative drug delivery systems, including the one-a-day version of ciprofloxacin, which it has licensed to Bayer Healthcare, the inventor of the original ciprofloxacin molecule, for US$65 million plus royalties on on-going sales for markets outside India.1

Wipro has leveraged lower manpower costs to build R&D and design capabilities, which have enabled it to become a chip design laboratory for the world and a leader in owning patents in chip design.

Innovative Business Models

Innovation in Indian businesses is not limited to leveraging low-cost labour alone, it goes well beyond that to encompass collaborative models of product development and commercialisation. The Tata Swach water purifier is a great example of a collaborative effort among several Tata Group companies. The Tata Swach was conceptualised by Tata Consultancy Services, designed by Tata Research, Development and Design Centre (TRDDC) and produced by Tata Chemicals, with Titan Industries contributing to the development of special assembly presses to mass produce the units. It purifies water using processed rice husk ash impregnated with nano silver particles to destroy disease causing organisms and is the cheapest water purifier in the world, selling for ₹1,200. The Tata Swach meets the US Environmental Protection Agency standards and can purify water at the incredibly low cost of 10 paise/litre!

Novartis’s Anjya Parivar, which delivers TB treatment to the poor in India, particularly the rural poor, is another example of a collaborative

Innovation is the key contributor to the growth and internationalisation of Indian industry in recent years, suggests Professor Amitava Chattopadhyay. In this article, he discusses the building blocks of innovative organisations that have enabled them to compete effectively in India and abroad, and also considers the impediments that prevent Indian businesses from achieving their full growth potential.

Competing through Innovation

BY AMITAVA CHATTOPADHYAY
In addition to talented and low-cost personnel, firms must also have the capacity to generate consumer insights and disseminate them throughout the organisation.

and successful new business model. Under the Arogya Parivar initiative, health educators cover a beat of some 20 villages on bicycles, helping poor villagers navigate the various steps in the diagnosis and effective treatment of TB, including ensuring compliance with the entire treatment. The initiative brings together government-funded village level health workers, private diagnostic clinics, qualified physicians and stockists. The programme has been extremely successful, with Novartis now introducing this in other countries.

Consumer Insight
Successful development of innovative new products, services, and business models takes more than just low cost and skilled personnel. In a paper we published around twelve years ago, we showed that to unlock creativity and produce innovative outcomes, one needs to focus on the intended consumers of the to-be-designed product or service. Such a focus increased the uniqueness and usefulness of the new offerings, implying that in addition to talented and low-cost personnel, firms must also have the capacity to generate consumer insights and disseminate them throughout the organisation. Consumer insight generation requires an understanding of the important pain points of potential customers — not just current customers. The questions one needs to ask are typically not amenable to quantitative research, or at times, even to the direct questioning of consumers. It requires first-hand experience or observation of a broad set of potential consumers. Thus, the Tata Swach innovation came from TCL’s direct experience of helping victims of the 2004 tsunami, and the Arogya Parivar initiative was informed by ethnographic research undertaken by MART that targeted patients belonging to the R2 and R3 socio-economic classifications. Their research revealed that TB was a serious problem, and while there was a free government programme for the detection and treatment of TB, patients were often not able or willing to take advantage of it for a number of reasons. Poor patients felt intimidated about dealing with the bureaucracy involved, the lack of adequate diagnostic infrastructure and the unavailability of the medicines due to lack of stock in the government hospitals. Moreover, patients did not understand the need for full compliance with the treatment protocol, and often stopped taking the medications as soon as they felt better, reducing the success of the programme in curing their TB. This led the Arogya Parivar initiative to articulate, develop and offer a comprehensive, end-to-end programme for the diagnosis and treatment of TB at a modest cost that was affordable for bottom-of-pyramid consumers, while also being profitable.

Culture of Innovation
Building a business around innovation requires more than recruiting talent, spending more on R&D and business model innovation and generating consumer insights; it also requires creating a culture of innovation. Three factors are crucial for creating a culture of innovation: the environment’s openness to innovation and change, leadership, and in-company programmes and initiatives that reinforce and reward culture-supporting behaviour.

Wipro invests in building a culture of innovation, which is enshrined as one of its core values. The company has an internal “Innovation Council” that functions like an internal venture capital firm. Employees can approach the council to get funding to support work on their own business ideas for up to three years. Around 800 Wipro employees work on such projects at any given time. The company also offers innovation awards to its clients and encourages employees to report on the innovations that they have helped their clients achieve. Finally, the firm also offers an annual Applied Innovation Award to leading innovators, including competitors. This award is given in collaboration with the IT Association of America, the International Association of Outsourcing Professionals and Forbes.com. These initiatives collectively reinforce and reward a culture of innovation, ensuring its internalisation.

Key Impediments to Growth
While many firms, such as the ones described above, are exceptional in identifying current and potential customer needs, and developing and delivering
appropriate solutions, there are gaps. These gaps are particularly significant when one looks beyond customer acquisition to services aimed at supporting and retaining customers.

Bharti Airtel is one such example. The company has done a remarkable job in bringing affordable telephony to consumers in India. While it has managed call quality and coverage by cleverly generating and leveraging consumer insights to pinpoint where best to deploy resources, and has managed costs by developing an innovative business model that has allowed it to convert the fixed up-front cost of infrastructure development into a variable cost, its post purchase support service infrastructure is inadequate.

Airtel’s prepaid services account for the majority of its sales volume, but it is unable to serve these customers nationally across India with a single voice. There are silos by geography (circles); thus, the service level offered to a customer who is, say from Mumbai, while she is in Delhi is inadequate. One can spend, for instance, ₹1,000 to buy prepaid talk time on a Maharashtra prepaid SIM in Delhi and receive only a paltry one rupee worth of actual talk time. The vendor who sells the talk time neither knows nor cares about this. More importantly, Airtel neither disseminates this information effectively to its consumer base, nor appears to have the desire or mechanism to make restitution when such events occur. More integrated players such as Reliance Infocomm and new entrants such as Russia’s MTS are easily changing the rules and creating seamless offerings across India, which could leave Airtel and others following a strategy of regional silos flat-footed in the long run.

Fenesta is another interesting example. This company custom builds high-quality UPVC windows, a novel building product in India. However, its distribution model, which uses a complex web of third parties to sell the windows, book the orders and install them, is fragile. Fenesta appears to be over committed in terms of delivery schedules and fails to meet delivery commitments. Installers often do a poor job, and customers seeking to resolve problems become mired in a blame game as to who in this loose network is responsible, leaving them dangling and dissatisfied. Such frustrations destroy any possibility of a repeat purchase and lead to the generation of negative word of mouth, all of which are damaging for future business.

Thus, while many Indian firms effectively compete in India and in international markets, the competition is typically only in terms of the technical aspects of product innovation at competitive costs, rather than in terms of creating a differentiated customer experience, which is ultimately the only way to generate loyalty and obtain premium margins.

In terms of the softer aspects of managing customers’ expectations and dealing with customer relationships, there continues to be a significant lag compared to multinationals from developed countries. This opens an avenue for attack by established MNCs. LG Electronics, for instance, is leveraging this weakness to further strengthen its already strong business in India. Thus, if the newly resurgent Indian businesses are to flourish in India and abroad, they need to think and act more carefully to manage the targeted consumers’ experience.

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One of my most enduring memories from childhood is of my mother warning me, usually as I was getting ready to play a game of cricket with my friends, to “work hard now, so that you can relax and enjoy in the future.” I can, to this day, vividly remember feeling fragmented by my desire to play with my friends on the one hand, and the pressure to obey my mother’s dictum on the other. Chances are that if you come from a family that values education and believes that “enjoyment should be earned and not taken for granted,” you can relate to this feeling of fragmentation, which is really the feeling of being torn between the desire to enjoy the present and the concern that enjoying the present may jeopardise the future.

At first blush, it might appear that the future orientation that our parents, teachers and well-wishers instil in us is a good thing. Indeed, most of us believe that we didn’t receive a strong enough dose of “far-sightedness” in our formative years. Many of us believe that we give in to temptation (e.g., eating a tasty dessert) too easily, that we are lazier than we would like to be (e.g., we procrastinate too often), or that we don’t save enough for the future. Thus, many of us carry with us significant anxiety about the future and guilt about our inability to control our myopic impulses.

Suffer Now, Be Happy Later
One would think that we would be averse to experiencing these negative emotions. However, that is not the case. In fact, most of us don’t want to rid ourselves of these negative emotions. Why? Because, at some level, we feel that these negative emotions are justified — we feel that we deserve to feel guilty for eating that tasty-but-unhealthy cake or that we deserve to feel anxious because we aren’t saving enough for the future. Moreover, we believe that the guilt and anxiety serve a purpose, that they goad us to adopt the far-sighted perspective that has so far eluded us. For example, we believe that guilt will lead us to make healthier food choices and that anxiety will drive us to save more money in the future.

Whether or not guilt and anxiety lead us to adopt a more far-sighted perspective, they certainly fuel the zeal with which we admonish our children to curb
The more insecure we feel about our future, the more feverishly we goad our children to achieve the security that is eluding us. Thus, most of us end up doling out precisely the kind of advice that we used to abhor receiving as children, and by doing so, we ensure that our children and future generations will be just as fragmented as we currently are.

The irony of the “suffer now, be happy later” philosophy is that the happy future never arrives. As the saying goes, “tomorrow never comes.” Thus, we discover – usually when it is too late and we are “shorter of breath and one day closer to death,” to quote the lyrics of a Pink Floyd song – that we were happiest as children, and that future orientation comes at a significant cost to our present happiness.

A smart person will realise that a life of constant vigilance about the future is not good, but he will also recognise that the solution is not to completely ignore the future. In other words, he will realise the importance of striking a fine balance between trading off current enjoyment for future enjoyment.

How does one execute this trade-off? What can you do to maximise your overall – that is, the combination of present and future – enjoyment? This is the question to which I turn in the rest of this article. In brief, there are four principles that you can use to maximise overall happiness from life.

Knowing what is Enough

The first principle has to do with recognising a simple, yet profound, truth: *There is nothing in the material world that can make you feel fully and completely secure about your future.* In other words, there is no amount of money, fame, power and control that can guarantee that you no longer need to worry about the future. When you attain the amount of money or success that you once thought would be enough to finally feel secure, you realise that you want even more.

This doesn’t mean that a person who doesn’t have any savings shouldn’t aim to save for the future. Rather, it means that once you embark on the journey of ensuring that your future is secure and comfortable, you should be careful to not fall prey to the desire to go beyond what is enough to secure your “basic needs,” because if you do, you run into the danger of being caught in a never-ending spiral that makes you perpetually future-oriented.

In other words, if you believe that the amount of money or possessions you currently have – and the revenue stream that you can reasonably expect in the future – guarantee that you and those who depend on you will never go hungry or without a roof over your heads, you should ease off on being far-sighted and focus, instead, on enjoying the present.

Most people are afraid to do this, however, because they fear that if they take their eyes off the future, those around them who continue to be hungry for future success will overtake them in the “game of life.” This leads us to the second principle.

Redefining Success

The second principle is based on another basic truth: *Success is determined more by the pursuit of intrinsic motivation than by the desire for extrinsic rewards.*

As Simon Sinek, leadership expert and author of *Start with Why*, articulates so well in his TED talk, and as several other scholars have noted, most of us mistakenly believe that success comes from being driven by the desire to be successful, wealthy or superior. In reality, success comes to those who have invested a considerable amount of time, effort and energy into pursuing something in which they are
truly and inherently interested – their “passion” or “calling.” Most of the successful people we can think of – be it Steve Jobs and Narayan Murthy from the business world, or Mozart and AR Rahman from the music world – have invested several thousand hours completely immersed in an activity of deep personal interest to themselves. It is the expertise that they gained in the domain of their choosing that was instrumental in their success, not their desire to be rich and famous.

Thus, the second principle has to do with sacrificing your present enjoyment for future enjoyment only when doing so helps improve a skill that you enjoy exercising – and not when it is aimed at enhancing your future wealth, fame, power or control.

Developing the ‘Satisficer’ mindset

The third principle has to do with developing what Barry Schwarz, author of the book, *The Paradox of Choice*, calls the “satisficer” (as opposed to the “maximiser”) mindset. Imagine that you are on vacation in the Maldives. You had expected to spend time lazing on the beach, but unfortunately, after you arrived, it began to rain and now you are stuck in your hotel room. How would you react?

If you are a maximiser, your mind will constantly turn to your “ideal state” of the world (e.g., the weather is sunny) and you will start to feel frustrated about the current state of affairs. As a result, you will complain to those around you, which in turn will generate negativity around you. Instead, if you adopt a “satisficer” mindset, your attention will turn to maximising your enjoyment given the current constraints. You will not get caught up in trying to change things, but rather, will attempt to be as happy as you can be given the current reality.

Most of us, especially those of us who have been conditioned by the value of far-sightedness, constantly operate from the maximiser mindset. That is, whatever may be the situation in which we find ourselves, our mind is occupied by the desire to improve the situation. Consequently, we forget to enjoy the positives of the situation and instead worry about its negatives.

Shifting from the maximiser to the satisficer mindset is not easy, particularly as the maximiser mindset has proven useful to us in the past. Indeed, trying to fix the “negatives” is an important way of generating new ideas. However, the truth is that if we allow the maximiser mindset to govern us, rather than making sure that we govern it, we will likely never be able to relax and enjoy the present moment. Enjoying the present – as children do so naturally – involves the ability to temporarily put on hold the maximiser mindset and replace it with the satisficer mindset.

How does one decide when to adopt a “satisficer” versus a “maximiser” mindset?

Only you can decide when you would rather be a satisficer than a maximiser in a particular situation, but one thing is certain: If you never feel like adopting the satisficer mindset (e.g., you are on maximiser mode even when you are on a beach vacation and the weather is glorious), then something is wrong. I would go so far as to say that you should try to operate from the satisficer mindset for at least one or two hours each day as the situation warrants. Thus, when you are with your family and friends or by yourself, when you aren’t thinking of work or can’t work even if want to, you can exercise the satisficer mindset by being grateful for all the positives in your life, rather than complain about all the negatives in it.

Over time, as you practise the satisficer mindset, you will discover that most of us operate from the maximiser mindset for far longer than is useful for us, either from the perspective of enhancing happiness or from that of being productive. The truth is, the less we are preoccupied with the desire to control and change the external environment, the more relaxed we will be, and hence, the more creative we will become. Numerous studies have shown a direct and strong correlation between being relaxed and creativity.
change the external environment, the more relaxed we will be, and hence, the more creative we will become. Numerous studies have shown a direct and strong correlation between being relaxed and creativity.

Guilt is not Good
The fourth and final principle, like the third, has to do with unlearning. In this case, it is about unlearning the belief that the guilt, stress and anxiety that we experience when we feel insecure about the future are useful.

The truth is that the guiltier we feel and the more anxious we become, the less capable we are of focusing on the really important future priorities in our lives. Studies show that the more stressed and guilty we feel about consuming unhealthy-but-tasty food, the greater is our propensity to consume such food in the future. Likewise, studies have also found that the more insecure and stressed we feel, the less weight we accord to our intrinsic motivations over extrinsic rewards. Thus, far from helping us become far-sighted in the right ways, guilt and anxiety take us in the opposite direction: they steer us towards decisions that erode our future happiness.

The most reliable way to overcome guilt and anxiety is to recognise that these emotions are the symptoms of a more deep-rooted problem: the problem of being conditioned by a society in which everyone is feverishly and intensely insecure about the future. Only by being able to accept — without passing judgement — the fact that you have been conditioned over several decades to experience future-oriented guilt and anxiety, will you be able to shed these feelings. The more you are at peace with this truth, the greater the speed with which you will be able to shed your conditioning and the faster you will arrive at the capacity to reside in the moment.

When you do arrive at the point where you can routinely – and seemingly at will — experience the bliss of an unfragmented mind, you will recognise an all-important truth: the conventional notions of far-sightedness, which emphasise sacrificing present enjoyment for future money, power, fame and control are, in fact, severely myopic. They steer us toward a life in which we will never be happy, either in the present or in the future.

Given that everything we do — including our pursuit of wealth, fame, power, control and success — is aimed at leading a happier and more fulfilling life, what can be more myopic than sacrificing both our short-term and long-term happiness?
Face to Face

37   ENABLING MOVEMENTS WITH A PURPOSE
40   CONTRACTS AND THE FINANCIAL CRISIS
There has been a lot of discussion on the extent to which Twitter, Facebook and other media platforms have been the enabling factors in social movements. They have received a lot of credit for this, but there have been questions – most notably from author Malcolm Gladwell – about whether they really made a difference. What is your view of the role of technology in catalysing movements for social change?

The debate about the role of Facebook and Twitter is a false debate. It is not about any one platform, but it is undeniable that technology is changing the participatory economics of movement building. We can now mobilise many more people seamlessly across geographies at a scale that was simply not possible before. It enables a set of new behaviours around participation. While these don’t necessarily replace old behaviours, they become important adjuncts to those old behaviours and enable certain things that were not possible before. For instance, if you are building a trans-national movement around an issue now, as we have seen with organisations such as Avaaz, All Out and 350.org, you can do that much more easily. Does that mean that Facebook is responsible for the Arab Spring? Of course not. The Arab Spring is a combination of activists doing classic activist work and going to the square, but they were able to mobilise much more quickly, effectively and seamlessly because of technology. If you study the Arab Spring, the role of the “We are all Khaled Said” Facebook page is important in giving people a sense of their own agency and their own power in that situation. Activists who had been working on the ground for years used these new tools at a critical moment and executed on a strategy related to the revolution.

Malcolm Gladwell has posited that weak-tie based organising is useless and only strong-tie based organising works. However, evidence from our work shows that if you get many people involved in low-barrier actions, more of those people self-select into higher-barrier, strong-tie based actions. Rather than there being a substitution effect, there is actually an endowment effect – the low commitment actions endow the high commitment actions. We see that with the Obama campaign, for example. They have a small group of field volunteers that comes from a much larger list of people on email lists. If the Obama campaign had tried to build this group of field volunteers without those weak-tie lists, they would never have got that many people as volunteers.

Does that mean that the key contribution of technology is that it broadens the funnel, expanding the universe of people who could be brought into the orbit of a social movement?

Broadening the funnel is one of a set of things. Creation and rapid dissemination of ideas and memes is another. The ‘Occupy’ movement, for example, was...
We can now mobilise many more people seamlessly across geographies at a scale that was simply not possible before. It enables a set of new behaviours around participation.

essentially a meme that got rapidly disseminated. Technology is also enabling a much more rapid scaling up of funding using micro-donations, which was not possible before. Part of the shift that you see is that people without access to institutional levers of power are able to make very impactful social change interventions with relatively few resources.

In the same way that media has been transformed by the fact that anyone can become a publisher, movement-building has been transformed by the fact that, to some extent, anyone can become a movement-builder. In some cases, that doesn’t remove traditional institutions from the equation. There is still a mainstream media, and that still matters. However, if you want to have a major impact, you don’t have to be a large organisation or a government or a celebrity. That is fundamentally different, because it is democratising access to these levers of change.

Is there a threshold level of technological sophistication at which technology can become an enabler for fostering social movements? How do we define “technology” for the purpose of determining what can be a technology-enabled mass movement?

What is fascinating is that you do not need very advanced technology to build social movements; you just use whatever tools are available. If you look at the anti-corruption movement in India, one of the key organising tools was the missed calls. Anna Hazare got, if I’m not mistaken, 35 million missed calls, which was effectively equivalent to signing a petition. This is super low-tech, based on the usage of existing technology. I find that very instructive. We have created a tool called “Crowdring” to enable missed calls as a campaign tool for the Global South.

Your organisation, Purpose, enables “movement entrepreneurship” through “digital mass participation.” What exactly is movement entrepreneurship and how does Purpose help such initiatives?

Purpose is the first of its kind – a home for this concept of the movement entrepreneur. A movement entrepreneur is someone who is able to make large social change interventions using digital tools, but not exclusively digital tools, without necessarily accessing the formal levers of institutional power. Purpose serves two functions for movement entrepreneurship: We create an environment and a space where this work of movement entrepreneurship can thrive, and we help launch movements that are aligned with our values, such as AllOut, The Rules and Meu Rio, which share a similar tactical and intellectual heritage to groups like GetUp and Avaaz, organisations that I was involved in starting before founding Purpose. We also work with existing organisations such as NGOs, foundations and others. That’s essentially the model of Purpose. Our projects are often global in scope. What we do most often is create transnational movements that are only possible in the sense that we now understand them since the advent of the Internet.

Do you think corporations have a role in fostering social movements?

In our work, corporations are both targets – on occasion, even adversaries – as well as partners. From the perspective of a corporation, mobilisation using movement-building techniques is something that makes sense in certain contexts. A large, established corporation that is not necessarily doing intrinsically good things for the world should first start by working on its internal transformation. Once they are on a clear path to accomplishing that, it makes sense to begin to share and promote those good deeds to the world and mobilize their consumers around that. Companies can also champion an issue that has some plausible connection to what they do, such as the brand like Dove embracing the idea of women’s body image and self-esteem.

In our world view, if a company’s economic engine is fundamentally about fixing a social problem, say the electric car industry or sustainable foods, then movement-building becomes a huge opportunity. Purpose is very excited about finding ways for scaling demand for such new products and services.
Educational institutions and campuses were ground zeroes for movements for social change in the 1960s and the 70s, with the Civil Rights and Anti-war movements in the US and movements in India. We now see movements with a broad-based participation from society, as in the ‘Occupy’ movement. Do you see this as a trend? What is the role of students and educational institutions in movements for social change?

I think it is probably partly driven by the Internet. The Internet has made it possible for a lot more people from a much broader section of society to get involved. Many movements that we start are dominated by people over 40, and that is a very interesting trend.

What is the role of students in social movements? They are still very important in some countries, like Chile, for example. There is still clearly a strong tradition of students organising movements. In the Obama campaign, students were very active in the field operations. As for the distribution of support for Obama, it was the 50-year-olds giving him the micro-donations and the 20-year-olds who were knocking door to door. It is the natural comparative advantage of different social groups.

From your experience, whether in your native Australia or in the US, and more recently from your work at Purpose, what are the lessons you have learned about social change and about incubating such movements and ensuring that they get traction?

Probably the most important lesson is that organisation design matters. We would never have succeeded with our work if we had created 2,000-people organisations. Organisations need to be lean and nimble and they need to have operational flexibility. They need to encourage risk-taking and tactical innovation. Essentially, they should feel and be like startups. They need to be relatively flat and highly collaborative. People often talk about technology, but I would argue that it is much more about organisational design. That is why at Purpose, we have a very multidisciplinary group, including behavioural economists, brand strategists, technologists and political organisers. Such intellectual diversity improves our work and makes it more interesting.

Do you think there are any problems that cannot be solved – “intractable” problems – when it comes to movement entrepreneurship? If there are 20 different worthy initiatives you could work on, how do you decide which battles are worth fighting and which ones are not?

The answer to every social problem is not mass participation. There are many other instruments. We think of social change in a very multi-dimensional way. There are tactics and instruments that you need to deploy as part of making social change happen. Sometimes these instruments are technical, sometimes they are policy matters, sometimes they are legal and sometimes they involve people and mass participation. The most effective interventions bring all of these together. If you are looking at a particular cause, you need public pressure, you need court cases, you probably need technical solutions for the lawmakers in those countries, you need legal efforts and you need mainstream media efforts. It involves a complex of factors. We believe in that school of thought, which is why at Purpose, we don’t just apply the movement hammer to every nail. When we do our work, we look at where we think a movement or mass participation would actually shift the dial, and where we don’t see that as already being in place.

You mentioned that Purpose has an interdisciplinary approach to addressing this challenge. Do you see the forces for the status quo also catching up and beginning to understand that this is a sophisticated space, and that if they need to preserve the status quo, they need to go about it in a similarly strategic manner?

In general, my answer is no. And the reason is that authenticity matters. You may have heard the term “astroturfing.” Astroturfing (where a small number of people that promote a cause create an impression of a mass movement) can work to some extent, but there is never a grassroots following behind astroturfing. There aren’t millions of people in a social movement for fossil fuels, for example. There are ads that try to create that impression, but ultimately you cannot fake authenticity. Authenticity is the secret sauce that decides what succeeds and what does not, and what takes off and what does not.

London-based Praveen Gonabal, an alumnus from the Class of 2006, works at Infosys in the strategic global sourcing deals group.
Contracts and the Financial Crisis

Douglas W Diamond is the Merton H Miller Distinguished Service Professor of Finance at University of Chicago’s Booth School of Business. He is the Centre for Analytical Finance (CAF) Academic Fellow 2012 and gave the keynote speech at the CAF summer research conference. In a conversation with Professor Krishnamurthy Subramanian of ISB, he recently discussed vulnerabilities in the financial sector that contribute to financial crises and the importance of meaningful financial regulation. Here are some highlights.

Let me begin with a question on capitalism. How do you let the invisible hand play its role and create economic welfare? The recent financial crisis has highlighted that you don’t really have free markets and that the markets get rigged. Is capitalism, in its true sense, ever possible?

I think that it shows that capitalism works, but that the financial sector (and its regulators) work on very difficult problems. Financial institutions such as banks, insurance companies and even hedge funds are a form of capitalism based on contracts and not just trade in financial markets. These contracts are the private sector’s way of dealing with hard problems which would otherwise cause a market failure in the market for lending and borrowing. Financial crises occur because many contracts written by financial institutions are not very stress tolerant. Bank runs on short-term deposits are the most prominent examples of this. If only few people show up to withdraw their money, the bank will be solvent, but if there is a big shock or if everybody panics and withdraws their money at the same time, the banking system will fail.

We have observed fragility in the financial system throughout history except for a relatively brief period from the 1940s to the 1980s, but this period was the exception rather than the rule. Capitalism in financial markets has had a bumpy road in the last few years. The problem is caused by the type of financial contracts written, but there are not necessarily better financial contracts to write. Even the best contracts can cause real problems periodically.

Due to the risk of a financial crisis, the government provides interventions such as deposit insurance or a lender of last resort. These government interventions are important to allow the private sector to provide financial products in a way that is less likely to bring the system down. There are some people who only look at a little piece of the picture and say, “It is government intervention in ‘too big to fail’ that causes the problem.” However, there is a problem to which government intervention is a partial solution, and unfortunately even with the partial solution, the problem remains. And if the government does not get it just right, ‘too big to fail’ adds to the problem and makes it worse. Seeing some financial crises does not mean that capitalism does not work. Providing liquidity to the economy is a tough problem that periodically causes crises.

One of the hard problems solved by the financial sector is that of lending where little information is available. Individuals would not make certain loans without collecting information or monitoring the
In general many difficult problems that free markets cannot solve are left to the government. And the government sometimes does not do very well with these problems. Nobody would do very well.

borrowers. These are the loans that banks make, but then we need to make sure that the banker properly collects and uses this information which depositors cannot see. This is a dark and opaque area, and it is prone to problems. We trust the bankers to operate on our behalf, and we try to write contracts to keep the bankers’ interests aligned with the depositors’ interests. But there are things bankers do in the dark that we don’t see, so we must rely on incentives. When the incentives don’t work, bankers do bad things. This is related to the issue of corruption in the financial sector. The financial sector tries to solve hard problems because their borrowers cannot be trusted, and the consequences of bankers getting information to overcome this when their depositors cannot see the information means that it is difficult to fully trust bankers. The financial sector needs regulation, and this is a very difficult form of regulation for the government to provide.

A good example of this is the LIBOR scandal. As I understand it, in 2007 and 2008, banks stopped lending to each other on an unsecured basis. We had the London Interbank Offered Rate (LIBOR rate) which is basically the ask price for unsecured lending between banks. Lending between banks stopped, but it was decided to keep up the fiction that it continued. In addition, many floating rate financial contracts were based on LIBOR. At this stage, banks were making up numbers because there were really none to report. The regulators either didn’t think about the consequences of this or they decided to ignore them. Bankers were making up numbers and making money on it because the numbers affected the lending and/or borrowing contracts they wrote. Do you blame the bankers? Yes. Do you blame the regulators? You should blame the regulators for not thinking that once they allowed this fiction to continue, there was going to be abuse.

In general many difficult problems that free markets cannot solve are left to the government. And the government sometimes does not do very well with these problems. Nobody would do very well. Similarly, I just argued that banks try to solve the hard financial problems. If you don’t regulate them or don’t enforce laws against fraud, then very bad things will happen. Even if you do regulate the financial sector and write the best contracts, there will be some financial crises.

We know the degree of incompleteness in contracts varies across countries as does the enforcement and ability to write sophisticated contracts. In a country like India, maybe the contracts are incomplete and this may be even more so compared to more developed economies like the US. Am I right in saying that these problems are exacerbated when contracts are more incomplete?

It comes down to the question of why they are so incomplete. Incompleteness may or may not be a cause; it may be a symptom of underlying problems. If you don’t have very good contract enforcement or you have legal institutions or courts that are not very active or are corrupt, then contracts are not going to work very well. For instance, bond markets where firms issue debt directly to households won’t work very well.

Jerry Caprio (formally of the World Bank, now at Williams College) had a phrase, “Learn to walk before you learn to run.” I think you have to try to get your banking regulation working and get corruption out of your banks before firms can issue debt directly to households. Firms are going to borrow from households through the banks, but if the banks themselves are corrupt or so tied to the government that they make the loans the government wants for political purposes rather than economic purposes, then capitalism won’t work very well.

Related to the point that you have to walk before you run, in India, there is a mix of a system which is still not able to walk very well, and where you have the government intervening with the wheels that come with democracy. For example, we have priority sector lending — where banks...
are mandated by the government to provide loans to a particular sector — and there are politicians who want banks to lend to their relatives. Do we have a particularly bad mix here?

It certainly can be a disaster if the government or government bureaucrats have much say on which particular loans are made. Even if they were well meaning, the bureaucrats would not have enough information to decide which loans to make, and typically, they would be more concerned about making loans to help get re-elected or to benefit their relatives. Generally, I think this type of government intervention is a bad idea. The invisible hand and the profit motive should get the credit to the right place. Clearly, the private sector is not going to provide a subsidy to anyone. If there is a certain sector that needs a subsidy for some reason, it will take government action to provide it. A subsidy might be needed to give a sector a big push to get started. In general, there are few good reasons to subsidise any particular sector.

You spoke of complex activities that banks undertake that may end up being dark and opaque, and why this makes financial regulation important. However, there may be regulators who lag behind the market and who do not understand the complex, opaque products that need to be regulated. Is it possible then, that you will have lax regulation, not enough regulation or perhaps too much regulation?

In designing regulations, you have to take into account the fact that regulators are going to be several steps behind. Thus, we need fairly simple, rules-based regulations, such as requirements that banks recapitalise themselves. There is a big on-going debate on capital requirements which limit the use of leverage. The debate focuses on specifying the minimum percentage of banks’ assets which must be bank capital. Choosing the number is not as important as mandating what the bank has to do when the capital goes below that number. If, at some point capital, gets low enough, you close the bank. The issues, however, are in the areas between being well capitalised and the point at which you are closed. What do you have to do when you are in that area? One of the simplest ways to make banks self-regulate is to ensure that the incentives of the bankers are reasonably aligned with society. When a bank is near the point of failure, its incentives are skewed and it will make decisions that the rest of society would not want.

Forcing a bank to recapitalise quickly would mean that it gets only a little bit undercapitalised. This would go a long way to improve incentives. It is also important to have independent audits to ensure that there is no crony lending or self-dealing. If such dealings are detected, there must be careful enforcement, with criminal penalties, after the fact. Realising that regulators are two steps behind and can, at best, figure out what happened a year ago means that the individual bankers must know that something bad will happen in the future if they do illicit things in the dark today.

Bank regulation is very important and it is very difficult. You need to make sure that regulators are not too captured by banks. There is also the problem of the revolving door, where the regulators become the bankers and the bankers become the regulators. A regulator may not cause too much trouble because he or she will not be one forever and hopes to be able to get a high paying private sector job in the future. One way to prevent this is to pay bank regulators more and make it a highly honourable profession. Only then can you get expertise without having a revolving door.
Knowledge Sessions

44 SUMMIT ON RISK AND GOVERNANCE SPARKS A CALL FOR CHANGE
46 DISRUPTIVE INNOVATION IN THE DIGITAL AGE
49 THE VICIOUS CYCLE OF CORPORATE FRAUD
Summit on Risk and Governance Sparks a Call for Change

How can we strengthen organisations and the financial system to mitigate risks and prevent disasters such as the devastating financial crisis of 2007-2009? Distinguished speakers from industry, academia and government recently shared their perspectives on risk management and governance at a summit organised in Mumbai by the ISB’s Centre for Investment.

The dangers of overdependence on financial models to predict crises, the importance of good corporate governance and conduct and persistent flaws in the world financial system were among the many timely and thought-provoking issues canvassed at the first Risk and Governance Summit held in Mumbai on August 23, 2012. The summit was hosted by the ISB’s Centre for Investment in partnership with Deloitte.

In his keynote speech, Anand Sinha, deputy governor of the Reserve Bank of India, set the tone for the summit with a wide-ranging talk that articulated several themes that resurfaced throughout the day.

The Limitations of Risk Models
A key theme that emerged concerned the use of models – abstract, largely quantitative depictions of complex financial systems – to manage risk. The global financial crisis of 2007-09 “triggered an intense interest in the nature of quantitative financial models and their inability to predict disasters,” he said, and called for “a paradigm change in risk modelling.”

He suggested that quantitative models should be treated as a supplement to decision making and that “primarily, qualitative judgement, experience and common sense should be the guiding factors.” Adding a cautionary note, he said, “There are risks beyond those that are measured by risk models.” His view was echoed by that of Eckhard Platen, professor of quantitative finance at the University of Technology, Sydney. Platen also commented on the limitations of modelling. “Quantitative methods are warning us,” he said, “and should be taken into account. There hasn’t been a perfect model and never [will be] a perfect understanding. However, there are warning signs.”

Elaborating on the shortcomings of the current usage of models, Richard Apostolik, president and CEO of the Global Association of Risk Professionals reiterated “nobody is looking at [modelling] in terms of groupthink.”

Empowering Directors
In his address, speaking within the context of the global financial crisis, Sinha observed there was a “fundamental lack of expertise” among bank directors, particularly among independent directors. There was, he said, “a general disconnect between the risks being taken by the banks [and] those that their boards of directors perceived them to be taking.”

Incomplete information hampered decision making, leading to complacency. He also pointed out that risk management was based on silos. “As the overall picture of the risks was not available to the boards or the top management, the consequent controls and mitigating measures also turned out to be inadequate.”

This concern was later reiterated by Usha Thorat, director of the Centre for Advanced Financial Research and Learning (CAFRAL) and former deputy governor of the Reserve Bank of India in her closing address.
Thorat noted that directors of public sector banks who were appointed to represent particular groups sometimes felt disempowered because they lacked knowledge of banking practices. Under her direction, CAFRAL had been conducting workshops “just to be able to give a little more confidence to directors who may not have knowledge of risk management.”

A Sustainable Approach
The next keynote speaker, Chanda Kochhar, managing director and CEO of ICICI Bank, identified four elements that could strengthen bank management: the right approach to governance, strong risk management, strong systems and appropriate incentives.

Good Governance
Corporate governance, Kochhar noted, “drives sustainable value creation by balancing the interests of different sets of stakeholders, making the right trade-offs between risks and returns and ensuring a long-term perspective.” Its benefits would elude companies that viewed it as a burden. “The attitude has to be that we will incorporate this because we believe it is good for us and for everybody associated with us,” she argued.

Another risk that could have deep implications for organisations and ought not to be overlooked, in her view, was “reputation risk”. “[The] trust of our stakeholders, once eroded, is very difficult to revive, however well capitalised and profitable a bank may be. One has to always strike a balance between good market performance [and] good corporate conduct,” she said.

Strengthening Risk Management
Banks should see risk management as a function that can help deliver sustainable returns. Speaking of her own experience at ICICI Bank, Kochhar remarked that she constantly saw a tussle between the business functions and the risk management functions. “If everything was cool or if they were always at loggerheads, the whole environment would become dysfunctional. But a slight tension is the healthiest way to operate,” she stated.

Building Effective Systems
Investing in systems that safeguard data integrity may seem mundane, but it is critical to risk management. “The same risk may reside in different parts of an organisation but unless it is seen in aggregation, the organisation will never know what the extent of risk is. [Global banks during the financial crisis] had very sophisticated and complex risk management techniques, but the approach of looking at [total risk] I think that was missing,” she warned.

Global Issues
The importance of balance was highlighted in a different context by Apostolik. “There is a balancing act,” he said, “between costs and the effectiveness of regulation.” In the United States, he remarked, some organisations found that they needed to hire more than 300 lawyers to address issues pertaining to the Dodd-Frank Act.

Apostolik raised an issue that had not been mentioned by other speakers, that is, the resolution and recovery of failing organisations. “There are so many inconsistencies in [recovery and resolution] in different jurisdictions around the world. It’s inevitable that we will have more bank failures, more bankruptcy [and] economic disruptions because of that. The whole area of recovery and resolution really needs to be looked through in greater detail,” he stated.

Thorat seemed to share Platen’s sense of foreboding. “We may have averted a very deep depression,” she said, “still, I think [there is a] huge amount of risk out there which comes again out of imbalances not having gone out of the system … It’s a really dysfunctional financial world that we are living in.” She concluded with a discussion of the difficulties of cross-border regulation. “We are all national regulators working with international financial institutions,” she said. Multinational companies operate all over the world, but ultimately come under national tax jurisdictions administered by national regulators. “There is fundamental inconsistency,” Thorat argued, “There cannot but be regulatory arbitrage, however much we have tried to harmonise the international rules.”
Experts from the industry and academia converged at the ISB recently for the Digital Summit 2012 where they shared their research and spoke about the latest trends in mobile and e-commerce, online advertising, social media, and data analytics, the current hotspots in the digital domain. Following are the key insights of the summit.

The Mobile Space

Keynote speaker Rajan Anandan, MD, Google predicted that India would become a “smart phone, mobile first, market” in which there would be huge potential for small and medium businesses who have never advertised before to advertise for the first time in the online medium. He noted that of the 12 million businesses in India with over five employees, only 150,000 have ever advertised in any medium. This represents a tremendous opportunity. The biggest bottleneck affecting the adoption of the Internet, according to Rajan, is the lack of affordable connectivity and availability of higher bandwidth. Professor Anindya Ghose of NYU’s Stern School of Business further expanded on the global mobile market. He spoke about how studies on the mobile industry and e-commerce have provided valuable insights on customer behaviour. He presented several research projects based on the data he has collected from businesses in the US, Africa and Korea. Speaking about advertising in the mobile platform, he added that the extent of discount given on location-based mobile coupons should change with the distance of the customer from the business establishment.

The Future of Social Media

Social media has fundamentally changed the way we respond and react to each other, and to events in the world, observed Dhiman Mookerjee of LinkedIn. Relationships matter, he said, because people connect with brands emotionally, and companies should seriously think about how they measure their success in this new medium. Adding to these observations, Vijayanta Gupta of Adobe looked at social media from the lens of the individual and the vast amount of information they encounter daily.

Data Analytics: New Perspectives

In his thought-provoking presentation, Professor Arun Sundararajan of NYU’s Stern School of Business described the value to business of digital anthropology, a new term he had coined. His main thesis was that analytics of big data is currently very technical and suggested that meshing together the insights of a social scientist with social media big data analytics will help companies derive competitive advantage in the future.
of personal data made available on the internet, from which emerges the concept of a digital self. This is the phenomenon driving the next era of digital marketing, stated Gupta.

Professor Ravi Bapna from the Carlson School of Management at the University of Minnesota cited instances from his research that highlighted how field experiments could be cleverly used in the space of social media to establish causal linkages between managerial interventions and customer responses. He also showed how new business models could arise out of these social media measures. One of his most fascinating studies revolved around a way to measure trust amongst friends in a social network (along the lines of Facebook) and how this trust could be used by businesses such as getaround.com for peer-to-peer car sharing and local car rentals.

Online Advertising: New Models
The growth of online advertising, as opposed to traditional advertising media, is creating the need for new models. Sharing insights from his acclaimed study, Professor Vijay Mookerjee of UT Dallas spoke at length about how user profiling can be used to identify web visitors who have a propensity to click on a display advertisement. This is one of the most important day-to-day problems being faced by agencies, advertisers and publishers who rely on advertising based revenue models. Professor Mookerjee’s approach was based on real-time data analytics and feedback and required a clever update in the architecture of a digital agency named Chitika with whom he worked to implement his model. This approach proved very successful in that it immediately improved Chitika’s revenues and also helped them get more clients on board.

Professor Arun Sundararajan delivering his talk at the summit.
Knowledge Sessions

A Lively Exchange of Ideas
The innovative thinking and research that marked the conference clearly highlighted what Ajit Balakrishnan, CEO, Rediff described as the potential of the information age and its power to disruptively innovate and transform the field of media as well as other domains. The future of this revolution lies in leveraging machine learning to dramatically improve productivity and create economies of scale to make services more affordable, he suggested.

The Summit featured several panel discussions where each panel was moderated by an academic expert and featured responses and comments by at least three industry experts. This stimulated a vibrant exchange of ideas between industry and academic experts about the current state and the future direction of the digital business domain.

Professor Amit Mehra and Associate Director of SRITNE Reema Gupta contributed to this report.

Rajan Anandan, Google MD, delivers the keynote address.
The Vicious Cycle of Corporate Fraud

Under what circumstances are corporate frauds perpetuated? How do frauds affect a company’s financial standing? A session on “Understanding Corporate Frauds” organised by the Ethics in Business Forum at ISB helped provide answers to such questions.

The Ethics in Business Forum at the ISB has organised several events in the last year aimed at generating interest among students regarding the importance of ethical leadership and the need to debate dilemmas in ethical decision making. The forum’s first two sessions, Inciting Authenticity and The Dean’s Dilemmas (presided by ISB Dean Ajit Rangnekar) were important steps in this direction.

In its third session, the forum welcomed Sandeep Baldava, Partner and Head of Fraud Investigation and Dispute Services at Ernst & Young, to lead a discussion on “Understanding Corporate Frauds.” A veteran in his field, Baldava has conducted over 200 investigations across various industries, government agencies and NGOs. His vast and diverse experiences formed the bedrock of his talk, which helped the ISB community grasp the minutiae of fraud, such as the context underlying fraud, the profile of fraudsters, and the role of ethics in fraud prevention. Poor judgement can escalate small indiscretions to frauds of alarming magnitude, and these are perpetuated over time due to enabling mechanisms and the involvement of multiple individuals.

Baldava explained the enabling mechanisms in terms of the fraud triangle of opportunity, pressure, and rationalisation – a person under pressure when given an opportunity would rationalise and commit a fraud. This formed the basis of a discussion in which he described the nature of the vicious circle of frauds, where everyone – from the government to corporate executives and creditors – defrauds one another. An interesting paradigm highlights the increased cost of corruption resulting from an increased risk to corruption in India due to the recent anti-corruption campaign. Another interesting fact that Baldava presented from his personal research suggested that 80% of individuals are vulnerable to committing fraud. A typical fraudster’s profile is that of an intelligent and educated individual with no prior criminal record, who appears normal in every other way and who believes that the act would go unnoticed.

Speaking about the impact of fraud on an organisation’s finances, Baldava stressed that globally, the monetary impact of fraud is as high as 4% to 5% of an organisation’s revenues and has an even bigger direct impact on the company’s bottom line. Industries, such as retail where the average revenue is only 5% suffer the most due to such fraud. To dismiss the misconception that regulation and the public sector are the breeding grounds for fraud, Baldava also presented research data from the private sector and NGOs. He discussed several intriguing case studies that included details of frauds in top IT companies, innovative cyber-crimes and land mining scams.

The theory of culture and its role in corruption was discredited as Baldava presented evidence that established the importance of jurisprudence delivery in inhibiting the incentives of committing fraud.

He concluded his talk with an apt quote from Albert Einstein: Relativity applies to physics, not ethics.
The student-led Finance Club at the ISB organised its Annual Finance Conclave, where 15 noted panellists – CEOs, business heads, regulators and noted lawyers – exchanged views on various topics and interacted with ISB students. From the discussions it emerged that SMEs are worst hit during financial crises because they lack the bargaining power. Some panel members conceded that securitisation of SME credit and factoring of their receivables can solve their financial woes. Hari Buggana, a panellist and MD of InAscent shared a nugget of wisdom that summed up the day’s discussions: “Entrepreneurs are genetically optimists; investors need to be pessimists to balance it.”

“And” was a fitting conjunction that subsumed the plethora of topics discussed by experts from companies, government and the media at the ISB Leadership Summit (ILS) 2012. Each year at the ILS, the student clubs at the ISB organise intellectually-stimulating discussions and invite experts to speak on a variety of topics from marketing challenges in India to the advances in the pharmaceutical industry. The Women in Business Club invited Kiran Bedi, the fearless former policewoman, who in her inimitable style spoke earnestly about the dichotomy that she has observed between the role of men and women in business. She ended her talk with practical advice to the women in the audience about how they can make their careers count.
The Energy, Manufacturing & Operations Club organised the Energy Summit 2012 at its Hyderabad campus to understand the perspective of industry leaders on the issue. In two panel discussions, experts discussed the “Opportunities and Challenges in meeting India’s energy demand.” Some of the challenges facing the Indian energy sector that were discussed included: the fluctuations in coal prices and supply shortages; the energy demand and supply gap; lack of gas transportation infrastructure; highly regulated gas prices; tariff rates for renewable energy power; and apprehensions around how renewable energy certificates will fare in promoting growth in renewable sector in the long run.

Dr Ajay Bakshi of Max Healthcare speaks on Leadership and Dreams

From being a neurosurgeon to being the CEO of Max Healthcare, Dr Ajay Bakshi has traversed many paths. He shared his thoughts on leadership with the ISB community at Mohali recently. Emphasising that leadership is not always about leading, Dr Bakshi stressed, “sometimes being a follower is just as important.” He spoke at length about three leadership styles: Representative leadership, leadership that is driven by dreams, and finally, leadership driven by luck. However, just having a dream is not enough, it is important to pursue the dream with determination, and qualities such as curiosity, openness and humility are just as important.
India Grows at Night, by celebrated author, Gurcharan Das, traces events in the country’s recent history and provides a philosophical insight into India’s bottom-up approach vis-à-vis China’s top-down approach of development. Based on his experiences, Das cites events that made headlines to support his argument that India has grown and prospered despite the lack of a strong state or governance because of its enduring adherence to the concept of “dharma.” The author defines dharma as an individual’s ability to act even when the state or government is weak or non-existent. Thus, by extension, if India grows while the “government sleeps,” how much more progress would India make with a government that was awake – or strong? He cites the example of Gurgaon, which in 25 years has transformed into a major industrial hub without a government; yet, he notes that if the city had had a municipality earlier, many people could have benefitted from better public services. What Das fails to reveal in the Gurgaon story is that the city without the municipality had severe shortages in water and electricity. The profit-driven private sector may not, after all, be the best option for building better cities.

Tracing India’s growth trajectory from the pre-Independence era to the present, Das blames India’s lack of progress in the years following independence on Nehruvian socialism. The country’s vast disparities and lack of maturity meant that socialism could not work. Eventually, as India embraced economic reforms, rapid growth followed. However, poor governance and a weakening rule of law meant that the country was beset with problems such as corruption and delayed justice, and Das discusses them in detail in successive chapters.

Perhaps, observes Das, it is time for another big change. He makes the case for a liberal state built on three pillars: “first, the power to act independently and resolutely; second, a rule of law which constrains political power and limits corruption; and third, democracy and accountability which allow the people to change their rulers when they start behaving badly.” The nation needs governance that does not encumber its spirit, but rather complements the positive attributes of the Indian character, and has the swiftness and flexibility to keep pace with the evolving times. With such governance, India could also grow during the day.

For most Indians familiar with the weaknesses in the system, this book does not offer any new insights. Neither does it offer a blueprint for implementing the changes that would lead the country to progress. In all fairness, Das admits candidly that the book is more about unearthing the reasons behind India’s current lack of progress than about providing practical solutions, though he does offer an idealistic formula for growth, which includes the formation of a new liberal political party and the awakening of the middle class. Thus, somewhat dissatisfyingly, the problem, though extensively and thoughtfully explored, remains unsolved. What the country needs now is not just idealistic fervour among its people but also a single-minded passion to translate these ideals into practical solutions.
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