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**Innovative Practices for Competitive Advantage through
Behavioral Finance**

Rani Ladha ¹
Bindu P Menon ²

¹Professor, Indian Institute of Management Kozhikode, IIMK Campus PO, Kozhikode-673570, email: rani.ladha@iimk.ac.in

Innovative Practices for Competitive Advantage through Behavioral Finance

The field of behavioral finance itself can be considered an innovation. The two key building blocks of behavioural finance are cognitive psychology and limits to arbitrage. It provides a way to reconcile some of the market and individual anomalies observed under the traditional finance paradigm. Behavioural Finance complements the traditional finance models by incorporating individual biases and psychology. This paper attempts to apply behavioural concepts to the field of investment management. With increased globalization it may be necessary to incorporate individual preferences in product development, offerings and positioning to gain a competitive advantage. While the field of investment management has continuously evolved with several innovations, this paper suggests that application of behavioural concepts is the next stage in that evolution. It is already being applied in several contexts and has a few policy implications.

Keywords: Innovation, behavioral finance, socially responsible investing

Introduction

Competitiveness is a relative concept, encompasses several ideas, and is interdisciplinary. Specifically, is one firm more competitive than another because it has greater profits, greater market share, better cost management, better human capital, or better use of resources? Jay Barney (1991) provided the resource-based view (RBV) of a firm to achieve competitive advantage. The idea is that firms possess resources, some of which enable them to achieve competitive advantage, leading to superior long-term performance. Thus, resources that are valuable, rare, inimitable, or non-substitutable provide a long-term sustainable competitive advantage for a firm. The longer the firm is able to protect against resource imitation, transfer, or substitution the greater its competitive advantage. In general, empirical studies using the theory have strongly supported the resource-based view.

Michael Porter (1979) with the development of his five forces model helped visualize competition in multiple dimensions. Porter's model is often used to identify the competitive forces that a business or industry is operating in. This model brought out the competitive advantage by highlighting the opportunities that were available to the company along with the possible threats that it was facing.

Brandenburg and Nalebuff (1996) provide an alternate to Porter's five force model by incorporating cooperation along with competition and analyzing the firms' actions from a game-theoretic perspective in their Value net framework. They incorporate the sources of value in a firm's interactions, how can the total value created be increased and how can a firm enhance its value and share in the long-run industry growth.

All the efforts to understand competitiveness or competitive advantage be it the RBV, Porter's model, the Value net or otherwise, can be seen as the effort by a firm to continuously evolve by developing new and different products and processes. Global competitiveness just extends the idea of competition to the international arena. Does the firm have a competitive advantage on the international platform? Under this analysis, the role of the government becomes critical in providing the necessary business environment and stimulus. In simple terms, global competitiveness pertains to the ability of a firm (or a [nation](#)) to [develop](#) and provide [products](#) and [services](#) that satisfy the local and world [markets](#) at [prices](#) that are [competitive](#) and yet [provide adequate returns](#) to the firm for the utilization of its resources.

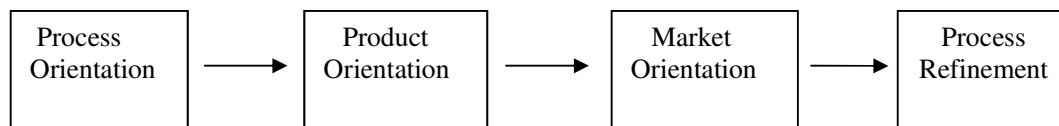
Innovation plays an important role in terms of one-upping competition for sustained growth and survival, whether in the domestic or international markets. Innovation is the ability of a firm to evolve naturally, depending on the business environment and create the appropriate products and processes to meet the ever increasing needs of the end consumer. Innovation for competitive advantage is a cradle-to-grave philosophy. It is more than just creativity. It is taking a creative idea to a commercial platform in order to gain an edge over competition. Successful innovation includes but is not limited to creativity, research, understating of the business environment, being customer-focused, cost effective and being able to operationalize it.

Global Competitiveness and Innovation

In the earlier days, gaining competitive advantage implied refining processes and internal systems for operational and cost efficiency. Early on the strategy was on product differentiation, cost and pricing effectiveness and market segmentation. Competitive advantage was due to achieving economies of scale or maximizing the benefits through refining processes. With the emerging economies growing and the world becoming more globalized both financially and informationally firms have enhanced their capabilities and competitiveness by entering into joint venture (JV) with

local firms or by redefining the way to operate in some markets such as in considering the bottom of the pyramid. The need to reach niche markets or volume markets for strategic advantage led to a wave of mergers and joint ventures. The key feature of such a strategy was that every industry and company sought to identify and understand their own strengths and weakness besides analyzing the strengths and weaknesses of several other organizations. The focus was on working together in a joint venture to understand the local culture and market and at the same time minimize the risk of operating in a new environment. Essentially it was viewed as a win-win situation where in each firm 'learns' from the other. With increased globalization and the need to enter new markets like the markets of the BRIC nations (Brazil, Russia, India and China) incorporating country risk, individual attitude to risk local preferences and perceptions has become a critical aspect of gaining global competitive advantage. One way to incorporate individual preferences and perceptions could be by using tools of behavioural decision making which draws upon the literature from psychology. This paper attempts to demonstrate that innovation and thus competitive advantage in the investment field could be achieved by incorporating current research in the field of behavioural finance (BF).

Innovation as we have witnessed could be thought of as being period dependant and following a specific cycle.



Given the importance of the triple bottom line approach where in **People**, **Planet** and **Profits** are considered as significant, it is necessary to incorporate social and environmental aspects along with individual preferences and biases for long term economic sustainability of a firm. The approach to decision making has to be interdisciplinary. Firms have to adapt to cater to the need of individuals' perceptions to gain competitive advantage. This paper discusses how behavioural aspects have been incorporated into the economic and public policy in a few countries. A point to note is that any policy undertaken by a firm has to be flexible and monitored constantly for feedback due to changing individual perceptions.

Based on individual perception and preferences investment management firms are currently redefining their goals of investment. Till recently, investment management firms only focused on the economic returns from an investment. Lately, in the west there has been a significant growth of socially responsible investing (SRI) funds.

Behavioural Decision Making Approach

The field of Behavioural Finance (BF) can itself be considered as an innovation! The traditional finance models were developed based on two underlying hypothesis: individual rationality and market efficiency. We draw upon the discussion in Barberis and Thaler (2002), regarding individual rationality and market efficiency. Individuals are considered rational in the sense that they are expected utility maximizers and utility is defined over the final wealth. They have consistent beliefs that are correct and sufficient information for rational decision making. Market efficiency implies that there are no frictions and all information is embedded in the market price of a security, which equals its fundamental value.

BF proposes two alternate foundations: individuals are 'normal' and markets are not efficient, even if it is difficult to beat the market (Statman, 2008). Individuals are 'normal' in the sense they make decisions based on their experience and biases. Specifically, individuals dislike losses and will try to avoid it even at the cost of seeming irrational, at times. This idea is based on the early experimental work of Daniel Kahneman and Amos Tversky (1979), wherein BF draws upon cognitive psychology to understand and explain individual belief formation and decision making. A slew of theoretical papers on market efficiency documents that irrational traders can exist in the economy for long periods of time and influence prices such that the observed price need not be the asset's fundamental value. This is the idea behind 'limits to arbitrage'. Thus cognitive psychology and limits to arbitrage form the basis or backbone of the BF literature and modeling.

Kahneman and Tversky, based on experimental evidence modeled individual decision making using prospect theory as an alternative to expected utility maximization. In prospect theory, utility is defined over gains and losses rather than final wealth and outcomes are evaluated relative to a reference point. BF focuses on *how* individuals are making decisions rather than how they *should* be making decisions. Such an examination sheds light on factors that influence individual behaviour. BF does not

replace but complements and adds to traditional models in finance by incorporating investor and market psychology. The decision making process is given importance, not just the final outcome.

In prospect theory gains and loss have a psychological value not just the final outcome. The reaction of individuals to gains and losses is not symmetric. Specifically, the decline in utility due to loss of x is greater than the increase in utility due to gain of x . Thus, in the region of gains, individuals are risk averse or willing to accept a 100% sure gain vs. a lottery or gamble. However, in the region of loss individuals are risk seeker and may prefer a lottery or gamble due to their aversion to 100% sure loss. This loss aversion is a psychological reaction and not captured in the expected utility maximization principle. The loss and gain is relative to reference point, which could change depending on individual perception and biases.

Loss aversion is demonstrated when individuals fail to sell an investment although it is worth less than they paid for it, hoping that the price will go up. Not just with money, but even with product development, say new software, one never gets rid of the 'old' features easily. Other related individual biases documented are mental accounting, endowment effect, framing effect, heuristic for decision making, anchoring and overconfidence, to name a few. All these help establish a pattern of investor behavior when applied to the fields of finance and investment management.

BF Applications to Investment Management

Bernatzi and Thaler (2001), document that investors do not optimally diversify their portfolio of holdings. They further demonstrate that even when individuals diversify their holdings they do so in a naïve manner. Shiller (1981), documents that there is excessive volume of trading on the world stock exchanges. If markets are efficient trading should occur only as a market correction and not at the level observed. On the other hand Samuelson and Zeckhauser (1988) confirm that individuals are subject to the status quo bias, where in they do not rebalance their retirement portfolio despite uncertain returns and being at a different point in the life cycle.

Odean (1989), and Shefrin and Statman (1985), document that individuals hold on to losing stocks longer than they should and sell winning stocks earlier than they should, displaying a disposition effect. Several studies document that individuals split their

investments evenly between prior winners and losers. Barber, Odean & Luzheng (2000), note that mutual fund managers often invest in past winners despite studies documenting mean reversals. Thus individual investors and experts often take decisions based on heuristics using partial information (at times falling prey to the confirmation bias) rather than after extensive analysis. On an average, both investors and experts in the financial services sector display significant psychological biases in their asset allocation and investment strategies.

The investments arena, including banking, insurance, wealth management and mutual fund industry has undergone significant changes to incorporate varying and shifting investor needs and due to automation and technology. Improved internet access, advances in telecommunication, and overall computing capabilities have led to significant growth in e-banking, mobile banking and e-investing where an individual could use the computer to conduct personal and business transactions. Demat accounts and e-trading are innovation by the financial services industry to satisfy the growing customer needs. The insurance and mutual funds industry use aspects of BF and psychology for product positioning and influencing investor goals and decisions.

Shefrin (2002) illustrates that at some point most finance professionals and practitioners get swayed by their emotions and may not be making decisions that are entirely optimal. Yet, many of the financial decision-making models do not factor this. Consider the world markets at several points in the recent past. When there is a drop in one market it has often led to a greater than anticipated drop in other financial markets due to investors panic and without too much fundamental change in the underlying asset valuation. This is the group think, or herding bias that investors are subject to. At times investors may not even reflect upon the intrinsic valuation and act based on the overall market reaction, which could be considered irrational.

Investment and wealth management advisory services incorporate the psychological needs of investors by trying to determine an individual investors' risk appetite via questionnaires or discussions. Financial planners often suggest a matching system when clients seek their inputs. The matching system ensures that the investor gets the cash flows at specific points in time to meet the various family needs like child's education, marriage, or retirement to name a few. The financial planners' goal is to satisfy the investor needs in a manner that is acceptable considering individual reactions

to market movements. Within the broad framework one has to customize offerings to suit specific requirements and concerns of investors. Further research and application of BF to investment management would yield rich results since the biases exhibited by individuals follow a systematic pattern. In fact the term popularized by Dan Ariely (2008), and several others researchers is that individuals are ‘predictably irrational’

By customizing appropriately financial advisors could help individuals debias and overcome some of their psychological biases. Mullainathan et.al (2011), document that the final outcome may not be optimal due to the adviser’s self interest, the adviser not understanding or capturing the investor needs correctly, or the investors not assimilating and acting upon the advice accurately. They use an audit study methodology to obtain and analyze data. In this study, trained auditors visit financial advisers posing as clients. The auditors record the information requested, the advice given and other aspects of the interaction. As part of the research process, auditors have an exit interview with the experimenter and provide a written document of their experience and the advice given. As noted in the paper, their findings raise two important questions, does the financial planner’s incentive structure have any bearing on the quality and advice given? Secondly, how does the investor rate the advice given and his experience of the process? This study is particularly interesting in that in the process of attempting to overcome some psychological bias of individual investors a new bias, that of the financial planner is introduced into the decision making process.

Another bias that investors exhibit is the framing effect wherein the way the question or decision is framed influences the final outcome or choice. Consider the case of retirement planning. Research shows that individuals choose a plan when it is presented in a positive frame to that in a negative frame. Several financial service organizations adopt this policy and incorporate it as part of their sales training programs.

Yet another example would be buying of life insurance by individuals which can be viewed as an aversion to loss. Individuals display mental accounting bias in several ways. An examples would be extensive usage of credit cards where in one over spends since the money is coming from ‘another’ account later. Individuals display differential attitude in spending a windfall profit or bonus vs. hard earned monthly salary. The size of the unexpected bonus matters! When it is large an individual tends to save it but

small amounts are used immediately for pleasure. Individuals would normally not touch their retirement or pension money but incur heavy interest payments (higher than what they earn on their pension fund) on their credit card or other debts.

Kashyap and Iyer (2009), explain that often when individuals invest in a mutual fund they consider both the economic and non-economic aspects of the investment. Their study shows that in the United States growing number of individuals seem to want to invest in a responsible manner. This has led to the growth of several socially responsible funds or socially responsible investing (SRI). SRI is a broad area and includes environment, energy, water, waste management, and herbal and natural products, but is not restricted only to these. In Europe and Australia too there has been a significant growth in the number of SRI funds. In India, there is only one such fund which is not a top performing one. A study to identify individual investing behaviour in India and what motivates the individuals would enhance SRI product development and positioning. Product development could use the research from BF and psychology to incorporate individual perceptions and beliefs. Despite the income divide in India, the SRI market would be sizeable if positioned and framed appropriately. To attract a large number of Indian investors to invest in these funds, it is necessary to understand the key drivers of SRI behaviour in India. At the outset these funds may be a niche offering and can be modified based on investor feedback and greater understanding of the market and consumer dynamics. Public policy or oversight is necessary to ensure that firms which comprise the SRI funds are actually operating in a socially responsible manner. One side benefit would be in India being perceived as a 'responsible' country and thus being able to compete globally and attract foreign capital more easily. Good governance, business transparency and an effective public policy are necessary controls for this to happen.

BF and Public Policy

Blending psychology with economics and finance may help in better implementation of policy as it captures the sentiment of the individuals and the larger population. Even if a policy is sound on paper it may not produce the desired result and that probably can be determined using psychology to understand individual behaviour patterns. To increase savings in New Zealand the government instituted an opt-in vs. opt-out policy called the Kiwisaver. Individuals were automatically enrolled in a savings plan unless

they specially opt-out. This led to an overall increase in the savings. Similarly a study of organ donation in several European countries produced surprising results with Germany having 12% opting for organ donation while in Austria 99.98% opted for organ donation. Further analysis revealed that it was the framing of the policy which was opt-in in Germany and opt-out in Austria. As expected, individuals chose the status quo option most often.

Another example of where understanding individual behaviour helped policy implementation is in increasing fertilizer usage in Africa. Farmers in Africa were well aware of advantages of fertilizers to increase crop yield. Yet, the usage low. Deeper examination of the reasons for this revealed that it was due to timing of the fertilizer availability and the farmers' cash flow. Fertilizer providers approach farmers at the beginning of the farming season when impact of usage is the highest. At that point farmers have the lowest income as it is the farthest point from the harvest season. By changing the payment scheme, savings scheme, and providing loans at appropriate points helped increase the usage of fertilizers and the overall harvest. There are several other examples that demonstrate how understanding individual biases and needs are important for efficient implementation of a policy.

In India, the investment environment would benefit greatly with effective policy measures in place to ensure that firms are operating in a socially and environmentally responsible manner. One of the important applications of behavioral finance is that understanding the psychology of human behavior in financial markets facilitates the formulation of macroeconomic policy and devising new financial instruments. Behavioral finance could be used well to implement a public policy for distribution of instruments such as SRI Funds.

Conclusions

Past research has focused on the returns or performance of different financial instruments and funds. By drawing upon cognitive psychology and BF we suggest that the future lies in understanding investor behavior and incorporating it in fund development and positioning. As mentioned in Lehmann (2005), investor behavior is nothing but “consumer behavior for a particular, and particularly important, product category.”

With a better grasp of individual biases and beliefs it will be possible to merge the economic and non economic needs and goals of individuals. Incorporating the social and environmental aspects along with individual preferences will lead to long term economic sustainability of a firm. This in turn will help with capital flow and improved environment for investments both for domestic and global customers.

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Indian Institute of Management Kozhikode

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<i>Author(s):</i>	<i>Institution(s)</i>
Rani Ladha	Assistant Professor Indian Institute of Management Kozhikode IIMK Campus PO Kozhikode, Kerala 673 570. Phone: 0495- 2809232 email: rani.ladha@iimk.ac.in
Bindu P Menon	
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