



SAMSMRITI

The SAMS Journal

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*An organization's journey to excellence begins once it ceases to
sacrifice quality for speed.*

- Neil Beyersdorf

**School of Management
Sambhram Academy of Management Studies
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SAMBHRAM GROUP OF INSTITUTIONS

In 1991 a group of experts who were a perfect blend from industry and academic forayed in to Higher Education and established Sambhram Group of Institutions (SGI) at Bangalore. The team led by the founder Chairman Shri R. Venkatesh, consists of eminent educationists, distinguished personalities and philanthropists with a global perspective who have laid solid foundation and are nurturing it to grow phenomenally. The SGI forayed into Higher Education sector and established its cradle in the IT hub Bangalore launching the Management Program at the outset.

With a humble and genuine beginning the SGI from then till now have the following Institutions under its aegis:

- School of Management (Post Graduate Wing of Commerce and Management)
- Sambhram Academy of Management Studies(SAMS)- Bangalore
- Sambhram Centre for Indian Management
- Sambhram Institute of Technology - Bangalore
- Sambhram College of Hotel Management - KGF
- Sambhram Institute of Medical Sciences and Research- KGF
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- Sambhram Pre-University College – Bangalore
- Sambhram Degree College -Chittoor
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SCHOOL OF MANAGEMENT

The School of Management is the Post Graduate Wing of Commerce and Management offering MBA and M.Com Programs affiliated to Bangalore University. The Programs are accredited by NAAC and recognized by AICTE, New Delhi; started in 1999 with a vision to impart education in the field of professional management with the mission of providing work-oriented education combined with ethical values and character building in the context of new millennium and successfully marched towards creating its brand name, popularity and reputation in the competitive academic world.

The School is marching towards excellence in all its spheres ranging from teaching to research and consultancy to gain competitive edge in a socially responsible manner. It has been rated as one of the best B-Schools in South India for the past several years; it is also ranked AA+ by Career 360 in its All India B-School Survey, 2018

Our International collaboration has achieved a great milestone in the past. Some of the prominent collaborations include Kenyatta University, Kenya; ; Accounting Research Institute, Universiti Teknologi MARA, Malaysia; University of the West of England; Florida University and Michigan State University. The School has also signed an MoU with S-Vyasa Yoga University for promoting research activities in the campus. Faculties who are doctorates will be guiding Research Scholars and will also be conducting various seminars and workshops to provide inputs to the scholars. The MoU was also signed with De Montford University, UK under which students who have completed one year in MBA Program can pursue their second year MBA in this University and get foreign degree.

We strive to explore new horizons across industry and government interfaces, cross sectional learning from one's diverse peer group and involve in current events to shape the economy through academic-corporate engagement. We believe in providing practical exposure to students apart from building strong layers of theoretical base. In this endeavor, we organize number of Guest Lectures-cum- Seminars by inviting experts from industry and academia; arrange frequent industrial visits to imbibe a sense of corporate culture and functionalities. We have both academic and activity clubs that help students to unfold their potentials and add value in order to make them employable. The School has built an excellent faculty pool with experience and a rich intellectual capital base, state-of-the-art infrastructure, technology-savvy campus along with other bests towards ensuring quality.

EDITORIAL

Author(s) who are learned and wise should know that there could be some crazy ones in their professional or personal lives who could give lot of quick fixes and brush the wisdom; so let's not conclude many to be stupid. At the same time an academician/author has to respect him/her self to believe to be true, unique, and original and the only one of the kind and no one can replace such self. With this prefix we value each other's contribution in this issue of our Journal and value their wisdom. We also believe the authors must have used their clear sense of wisdom penning down these articles published in this Issue of "SAMSMRITI" that are priceless and we discern their true value.

We are deeply humbled to receive the article from Shri N R Narayana Murthy, the legendary Corporate Icon on 'Lessons on Leadership'; his odyssey with Infosys is the great inspirational lesson not only for us but, we are sure, for all the readers of the Journal. The article of Dr Cristol is the result of an exploratory survey of innovative Management Education system; again it's on self training by the leader-managers by themselves to manage the whole gamut of all societal affairs.

Today, in the transitional period in every respect, we search for something paradigm shift and Prof Tripathi and Prof Wolfgang C Amann have presented something unique in the piece on ethics, transparency and knowledge relevance in management towards phronetic management research; the ethical foundation in the process of knowledge creation. Dr Zabiulla's paper aimed at modelling conditional volatility in stock returns and trading volume of 30 stocks of S&P BSE Sensex by using two asymmetric volatility models EGARCH and TGARCH with and without trading volume effects. Being an expert in this subject the author talks of trading nitty-gritties and has tried to tell the readers and other finance experts the internal dynamics of widely traded Sensex stocks.

Dr Normah Omar dealt with financial scandals and heightened concerns over money laundering to support terrorism and racketeering and the necessity to further define the auditor's and accountant's responsibility for detecting fraud within organizations. This paper addresses the nature, features and the extent relating to academic and career development in forensic accounting. John Pradeep Kumar's capital structure decision is one of the important financial decisions that a firm has to take in order to align the interest of shareholders and the business. His study examines the determinants of capital structure of selected twenty companies in India using the emerging data set. Suresh Babu talks of Strategic Managers of Twenty First Century, the role to be played by the HR Professionals in the direction. The dialogue between Mr. Ramesh Shankar S and the Editor-in-Chief touches various fields and does not remain confined to specifics. We have been publishing such kind of interviews with experts across the Corporate World to provide wisdom to the Manager-Leaders of tomorrow.

To all sundry we would like to say : we have to compete within our competence, and never beyond our scope. As managers we have to master any challenge life places in our path. Let's take a simple idea and live with it to the heights and to the depths ; such philosophy will facilitate our journey to be the best management professionals.

K C Mishra
Editor-in-Chief

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Lessons from the Infosys Journey¹

REFLECTIONS

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SHRI N R NARAYANA MURTHY

Founder

Infosys Limited, Bangalore

Infosys was founded in 1981 by seven software professionals from different backgrounds with complementary skills, a similar value system, a modest capital of US\$250, and a powerful idea; the idea was to specialize in developing large, customized quality software applications for global customers and leveraging the Global Delivery Model (GDM). We split the software development task to two groups. The first set of tasks were undertaken out of client's office and the second set of tasks that had lower interaction levels with the client were delivered out of talent-rich, process-driven, scalable, and cost competitive development centres in countries like India. This model was further enhanced by the 24-hour productive day created by combining the time difference between the US and India, allowing us to deliver quality software on time and within budgeted cost to our customers.

1. Forming Infosys

During the 1980s, the business environment in India was not conducive for entrepreneurship; the landscape was dominated by a handful of family-owned conglomerates. Byzantine government regulations and import restrictions made it extremely difficult for any new business to start or succeed. In the backdrop of these challenging times, Infosys was started from humble beginnings. We were strong on hard work, commitment, energy, enthusiasm, and confidence. By overcoming challenges, we remained focused on building the company. As of March 31, 2012 Infosys had annual revenues of US\$6.99 billion and net income of US\$1.72 billion. Infosys has been voted the most respected, the best employer, the best managed, and the best in corporate governance in India. Over the past three decades of this journey, I have learnt several lessons. One of the important lessons has been of leadership and its role in the success of a company. Before I share my lessons on leadership, let me share my perspectives on who is a leader and what is leadership?

2. Who is a Leader? What is Leadership?

The primary task of a leader is to be a change agent whose core responsibility is to raise the aspirations of the people. The leader has to make them more confident, energetic, enthusiastic, hopeful, and determined to seek a glorious future for the company, community, and for themselves.

¹Reprint of author's article published in 2012

Many a times, leaders have to walk the untraded path, the road less travelled, and have to take huge risks. Robert Kennedy summed up the leadership challenge best when, borrowing the words of George Bernard Shaw, he said, "Most people see things as they are and wonder why; I dream of things that never were and say, 'why not?'"². To me, this is perhaps the best description of the leadership challenge. The challenge is to see what most people do not see, to accept what most people wonder about and are scared of, and then say, "I will take up this challenge because it is inspirational, honourable, and it is the right thing to do."

Building Infosys, to the company it is today, was a constant endeavour to make the impossible look possible. It was about raising the aspirations of our employees, making them dream big, and enabling them to achieve those aspirations. In 1981, when we were just seven people starting Infosys, we set out to become the most-respected global corporation. It seemed audacious then but it was made possible by our aspirations and action.

By founding Infosys, heading it as the CEO for the first 21 years and as the chairman of the board for the first 25 years, I have learnt many lessons on leadership.

3. Articulate a Powerful Vision

What is the first and foremost task of a leader? It is creating a grand vision and a purpose which is noble, lofty and inspirational. It is a dream that should excite and energize everybody in the community or a corporation. The leader has to craft and articulate a vision in which everyone sees a better future for him or her. The vision has to be powerful enough to make every tired mind and body that leaves the office in the evening to return the next day saying, "I am proud to belong to this company and I will work hard to make it a better company."

When the seven of us met in the small room in my apartment in Bombay in May 1981, we had a four-hour long discussion to define the vision for the company. After many deliberations on whether we should be the largest Software Services Company, largest job creators, or have the highest market capitalization, I suggested, we should be the most-respected software services company in the world. If you seek respect, you will not short-change your customers, you will be fair to your colleagues in the company, you will be transparent with your investors, you will treat your vendor partners with care and understanding, you will not violate the laws of the land in whatever country you operate, and you will live in harmony in whatever society you operate in. My conviction is that such a pursuit will bring revenues, jobs, profits, and market capitalization.

My fellow founders concurred with this vision. They perceived this vision for Infosys as something that was larger than life. They found it more inspirational than merely chasing profits, revenues, and market capitalization. Over the years, we have worked steadfastly to fulfil this vision. As a result, our revenues and profits have grown, jobs have been created, and market capitalization has increased.

4. Communicate Vision and Values

After defining a powerful and attractive vision, a leader has to communicate that vision to a large number of people in the organization. It is very unlikely that leaders will be able to talk to everyone of their employees. To overcome this challenge, a leader should create mechanisms and processes through which the vision and values of the company can be constantly communicated and reinforced.

²Robert Kennedy recited this version of what Shaw wrote in *Back to Methuselah* (1947, Oxford University Press) so often that many sources credit the words to him with no mention of Shaw. Kennedy himself usually noted that he was quoting Shaw in his speeches, although his version was actually a paraphrase of Shaw rather than an exact quote.

For example, today, Infosys is a company with 150,000 people; we operate in 33 countries and have employees from 88 nationalities. No matter how hard we try, it is not possible for us to interact one-on-one with every one of our employees. Hence, we use several indirect and surrogate mechanisms to communicate our vision to a large group of people in the company: simple and powerful quotes, multiple tiers of leaders, meeting in small groups and, most importantly, leadership-by-example.

Communication is most impactful and yields best results when it is simple, and direct. Ideas should be conveyed through powerful statements or quotes. At Infosys, our vision is to be a globally respected corporation. This is a good vision but would have failed unless we brought exhilaration, joy, enthusiasm, and energy to the minds of our people to translate this vision to reality. Hence, we use the famous adage, “a plausible impossibility is better than a convincing possibility” to make every Infoscion remember that their mission is to satisfy our customers by making the plausibly impossible happen. We want them to reach for the impossible in every situation because it is plausible, it is inspirational, and it is desirable rather than reach for the mundane and easily attainable goals in satisfying the customer.

Similarly, we use other quotes to facilitate easy and direct communication of our values, duties, obligations, beliefs, dreams, and aspirations; for example, our value system is communicated by the simple adage, “The softest pillow is a clear conscience.” Our commitment to transparency is communicated by the adage, “When in doubt, disclose.”

5. Demonstrate Commitment to Values

A value system is the protocol for behaviour of an individual in a group which is required to enhance the trust, confidence, energy, enthusiasm, and hope of every other individual in the group. Value system is extremely essential as working towards an inspirational objective involves team work and sacrifice from every member of the corporation. The leader should lead the way by demonstrating commitment to values on a regular basis so as to not make the value system a pure rhetoric.

Let me share an example; in 1995 we had to wait for a few months for permission from the Government of India to start an office in Boston. So we decided to invest the money, earmarked for setting up the new office, in the secondary market and get some returns in the interim. It turned out that we did not have enough expertise to invest successfully in the secondary market, and we made some losses. At that time, according to the Indian General Accepted Accounting Principle (GAAP), it was not mandatory to provide the details of the losses in non-core business activities. Since we had made a commitment to our shareholders that we would bring them the bad news early and pro-actively, I said, “I want to be known to our shareholders as an honest person first, and then a smart person. So, let us give them full details of our losses.” We communicated the loss to our shareholders with the assurance that we will learn from our mistakes. While many of my friends in the Indian corporate world were surprised by this move, shareholders were happy about our transparency.

Today, Infosys has many recognition schemes in the company to honour employees who imbibe and practice Infosys values. We honour those individuals who have demonstrated Infosys values best in their day-to-day action as Value Champions.

6. Build Trust

Every inspirational objective requires tremendous courage, hard work, team work and sacrifice. How do leaders ensure that their people commit to such hard work and sacrifice in

the hope of a better future? To get such commitment from employees, a leader has to become trustworthy.

When a leader articulates a vision to a group or a function, it is generally seen as pure rhetoric or, at best, a statement of lofty purpose. There is no data to prove that the inspirational objective will be met. There is an element of risk, as a leader leads the team on a road less travelled or, sometimes, even on a road not travelled at all. To overcome this fear, a leader has to create and nurture a bond of trust with the employees for them to follow.

At Infosys, we have looked at various instruments to create trust. After considerable thinking and researching, we realized that the best instrument for creating trust is to demonstrate our commitment to our vision and values through leadership-by-example or “walking-the-talk.” More than anything else, this will help leaders in earning the trust and commitment of their people.

7. Demonstrate Courage

I was once asked by the CEO of a Fortune 10 Corporation the first attribute that a leader must have if his other attributes must find utterance. It took me 10 seconds to say “courage;” he asked me, ‘Why do you think courage is the most important attribute of a leader?’ I said, “if you want to walk the untraded path, if you want to dream big, if you want the organization to take risks, if you want to have conviction, if you want to go against the conventional wisdom, if you want to take tough and unpopular decisions, if you want to communicate to your people that a plausible impossibility is better than a convincing possibility, then you must have courage”.

He seemed quite satisfied. I do not know of any great leader, whether in a corporation or a nation, who did not demonstrate courage. This is a key attribute that is at the heart of leadership; without courage other attributes will not find utterance.

In 1994, one of our large clients, who contributed a quarter of Infosys revenues, was looking to renegotiate billing rates. We had an internal discussion and came to the conclusion that re-deciding rates would probably dilute our commitment to that customer and let them down in front of their customers. Therefore, we decided to hold to our stance and refused to sign the contract at lower rate. While this resulted in short pain from the loss of a large client, we gained in our determination to be open and honest with our customers.

8. Be Open and Fair

I believe that being open and fair is another powerful way by which leaders can earn the trust of their people. In the Indian culture, family is a very strong unit and brings the best of sacrifice, kindness, openness and fairness from the members. So, I often tell my colleagues, “When you deal with your colleagues, you have to operate as if you are in a family.” So, at Infosys, all doors are open at all points of time; any employee is welcome to walk into the office of anyone to discuss issues. The best way of ensuring fairness in a transaction is to use data and facts to decide on the merits of the transaction. By doing so, the confidence of the employees is boosted by the fairness and openness in the system. Even those who lose a transaction are likely to say, “My boss tried hard to be fair to me. Next time, if I have better data and facts on my side, I will win.” This way the people are confident to work smarter and harder even after they lose a transaction. Our commitment to openness and fairness is exemplified by the famous adage, “In God we trust, everybody else brings data to the table!” It is the duty of a good leader to create open and fair systems in the organization to create a trusting environment.

9. Create an Inclusive Environment

Another important leadership lesson I have learnt in motivating people is the power of inclusion. Self esteem is a great motivator for human beings. Self-esteem gets enhanced when people participate in making decisions that affects them. In other words, a leader cannot create two classes of people those that rule and those that are ruled. An inclusive system enhances the self-esteem, enthusiasm, energy, confidence, and hope of everyone in the organization. Such a system helps people deal with their fellow colleagues; with respect, dignity and affection a good leader will spend time and energy in creating such an inclusive system to create a collective harmony.

10. Practice Good Corporate Governance

Practicing good corporate governance is the first duty of a good leader. Corporate governance is the governance mechanism used in a company to maximize shareholder value, on a sustainable basis, while ensuring fairness, transparency, and accountability with every stakeholder customers, employees, investors, vendor partners, government-of-the-land, and the society. At Infosys we adhere to the best global practices of corporate governance. In fact Infosys adopted the stringent US GAAP many years before other companies in India did.

11. Lay Down a Clear Operating Philosophy

As the embodiment of corporate leadership, a CEO has additional responsibility for ensuring the sustainability of the corporation. I define a CEO's job as ensuring PSPD ensuring predictability of revenues by a good forecasting system that derives data from the trenches; sustaining those predictions by ensuring sales, producing, and delivering quality products and services on time, raising invoices and collecting money on time; ensuring good profits, achieved legally and ethically; and finally, ensuring that the business is de-risked through systems and processes that ensure minimization of risk to the corporation in every dimension of its operation.

12. A Leader is Nothing Without People to Lead

A final lesson that I have learnt is that "leadership is not about oneself." It is about raising aspirations and creating confidence, joy, hope, enthusiasm, and energy of others. To do this, a leader must behave in a manner that will make people flock to seek help, solace, guidance, confidence, and joy. Good leaders are generous, confident, decisive, firm yet courteous, and make people feel an inch taller in their presence. Good leaders are also not afraid to show their frailties, share their emotions, and dissipate any thoughts of superiority among their people. Above all, a leader should be humble. They should act according to the adage, "Take your work seriously but do not take yourself too seriously."

By imbibing all of these attributes, a leader can become a role model worthy of emulation by people.



DENIS CRISTOL

*Director, Innovative Training CNFPT,
Visiting Researcher, CREF Paris Ouest Nanterre*

1. Introduction

The following text describes the results of an exploratory survey of management education systems. These formats, without being designated by their creators, are similar to "self-training accompanied for leaders". If the term is more often used in the context of personalized educational workshops (Carré et al, 2003), the approach could well be adapted to managers. A first part recalls the context of the survey and the choice of ten places of training. These places are identified, in theory, as "innovative". The purpose of the survey is to identify how the specificities observed are innovative. A second part shows how "pedagogical innovations" are carried by School leaders and their teams, how the specific time management constraint is necessary as well as the need to rely on concrete projects, to capture attention and motivation of the leaders. A third part considers a set of questions to change pedagogical practices. It explores the characteristics of what could constitute a Course of "Self-Training Accompanied" for the training of the Leaders by revisiting the meeting of course and dispositions of the learners (Lameul et al 2009). The conclusion proposes key points to build a course as self-training course accompanied.

2. The Purpose and Context of the Investigation

Management teachings are often criticized for their propensity to create conformism (Mintzberg, 2005), to keep the actual contexts of exercise at a distance (Riveline in Garel and Godelier 2004 p36), to focus on tools and methods (Pezet et al; 2010), to convey a managerial ideology (De Gaulejac 2009), even to help consolidate a "social technology" (Rodin, 2011). While the criticisms made are vivid there is nevertheless a variety of renewing teaching approaches and the mainstream of teaching and learning management practices. The purpose of the survey is:

- (a) To identify engineering and pedagogical methods, the role of learners, the ability to exit existing patterns of thought, conducting research, completed projects, engineering evaluation.
- (b) To highlight the evolution of the way of learning in a context where, on the one hand, digital offers a wealth of information, and on the other hand, knowledge is more and more distributed.

The survey method is based on: the analysis of the proposed courses, the study of the résumé of the course drivers, the reading of the websites and the conduct of interviews from 1h30 to 2h with the organizers of the course. This collection is produced by a former consultant to the HRD of a group of 2, 20,000 employees, responsible for training programs for managers within this company. The sample is chosen with a heuristic aim; it is less about providing evidence that a particular course is innovative, than to bring out issues and problems from a variety of practices. For reasons of confidentiality, the personalities and Schools surveyed will be identified by a reference number. The interview grid identifies the deployment of innovative practices and standard course formats (see appendix). The article proposes to highlight the main lessons on:

- The way leaders learn
- The original points
- The changing role of educational teams
- Evaluation engineering
- The reform of teaching practices
- Leadership training throughout their career

The following section presents the main results

2. The Results of the Survey on the Studied Course

The Way Leaders Learn: Time Control and the Relationship to Reality

For leaders the key points in learning are the time available for training, and the relationship to concrete situations (Borensztein, 2007). It is at the crossroads of these two unavoidable that the question arises of their decision to enter the course that is proposed to them. There would be no managerial maturation of the leader, without commitment on issues that concern him in his ecosystem. This is the difference between a pre-established program with a predictability of what is going to happen and "management learning" (Ramsey, 2014) where the learner's journey occupies an essential place (Cristol, Rechou, 2012). The constant reference to experience is adapted to managers whose function is to decide in an unpredictable and complex environment. The course presented is described as "accompanied self-training" because they take into account the specificity of these learners to build their own framework of action.

Providers or Producers of Knowledge

The term course can be understood from a training engineering perspective stipulating stages, pedagogical modalities, the arrangement of methods, the verification of prerequisites and achievements but it is interesting to insist on the effect of modelling produced by a managerial training and to keep in mind that a course can also be from the point of view of the philosopher (Agamben, 2007): "All that has, one way or another, the ability to capture to orient, to determine to intercept, to model, to control, and to ensure the actions and behaviours the opinions and the speeches of the living beings".

The course, therefore, proceeds from a technical-pedagogical organization and also from the effects produced when it is used; the leaders followed in their pathways as knowledge providers and non-knowledge producers. This remark by one of the interviewees echoes the criticism of management courses that confirm managers' responses according to stereotypes of action (Mintzberg, 2005). One of the common points of the talks is the role of active questioning and the building of their knowledge by the leaders themselves. These are placed in the active position. The different approaches: project or case study, present practically for each course, inverted class in a large business school or engineering school engage in logic of questioning. "I love learning, but I hate being taught" is Churchill's quote for characterizing this situation. This is why the proposed course leads to soliciting people's intelligence and

confronting them with a variety of challenges: cases, projects, immersions, difficult readings (research text), and body and mind movement.

Diversity of Participants: Strength to Learn

The diversity of participants is identified as "an accelerator to learn to lead in a complex environment". It is indeed the confrontation of different perspectives that shifts the gaze on the world. This diversity also makes it possible to translate the "charismatic leader" into the "leader who develops collective intra-preneurship"; this transition marks the changes towards a more collaborative management perceived by the interviewees. It would be learning to put aside one's ego to do with others, doing with diversity makes it possible to learn how to take ownership of projects by the employees themselves.

The Reflexive Posture of Leaders

The sense of commitment to learning and reflection on the role of leaders would be key points in a transformation process. The pre-requisite time for registration is an element of motivational construction and selection time. Leadership training is less a contribution of managerial techniques than the construction of a leadership posture. It's about learning to think for oneself; but to carry out a work on oneself and to lead to a deep change, the development of the self-awareness designated in the great Swiss Business School as "self-awareness" is a necessary step. It would be a question of accepting to be jostled in one's certainties to build one's own benchmarks and this goes through pedagogical biases.

4. The Original Points of the Course

Educational Biases

The courses are original in the way they combine elements of pedagogical biases, particular care is given to the types of interactions that are generated throughout the relationship with the organizing institution. Inductive pedagogy and the group are privileged; the starting point is the reality. Thus, the contributions of contents are limited to the just necessary to create a common language between the participants. The engineering of the course is varied and it draws on rich pedagogical panoply. The elements to be combined draw on large pedagogical panoply; in fact, the studied course proposes an active pedagogy including a variety of pedagogical approaches such as:

Table 1: Salient Features of Educational Course

<i>Course Architecture</i>	Initial Contract, Learning Agreement, Selection Continuum of Sessions "each session remembering the previous session", Learning networks, lunches organized to create networks, Co-construction of sequences or complete course with participants
<i>Mobilization of Experiences</i>	Feedback, "Debriefing session organized around the discomforts experienced by participants in the process of personal transformation", Problem solving and team learning according to supervised methods (action learning, or practice analysis workshop, or trans-disciplinary teamwork, Field survey, active experimentation, Learning Journey, Around the World, Travelling Abroad, Immersion out of the scope of the company and experience report, Project to lead, internship
<i>Reflection and Contributions</i>	Online contributions prior to the course, Theory courses based on innovative pedagogies, Case studies and video

	allowing a return on how to work in a group, Investment in professional or literary readings, Essay writing, wiki implementation for collaborative writing, Access to libraries and resource centres (widespread) Research
<i>Maturation of Postures</i>	Narrative detours, Questioning, dialogue, maieutics, indoor weather, Professional development and leadership workshops, Co-eLab (innovation workshop), design workshops, Use of quarterly management barometers, Accompaniment Individual telephone accompaniment, long-term support, individual or group coaching

Educational bias sometimes leads to resistance from the teaching profession; this is the case of the inverted class which upset the learning approach of learners and also teachers. But it is also technology that fundamentally changes things and leads teachers to compete with direct access to knowledge. Technology is changing their place in the provision of knowledge about which learners are autonomous. This is also the case when the projects treated are real projects brought by the participants themselves or by client companies.

The Limits of Pedagogy

Even if a complete development of the leader is a finality displayed, apart from the cognitive dimension, the entirety of the human being is finally little approached. The Swiss Business School offers a physical opening through sport, taking advantage of the possibility of organizing mountain walks, another major French Business School plays learning within networks and the University privately encourages spiritual reflection, the Changing Role and Place of Educational Teams. Teachers 'practice echo learners', practice stakeholders are constituted as faculty, teaching team or co-facilitators; they rarely intervene alone.

The Interviews Highlight Postures of Learning Facilitator, Coach or Coach

They can also intervene in pairs; in these approaches that I describe as accompanied self-training, there is a variety in the suggested guidance. In some experiments, the intervening team is trained in pedagogy and participates in sharing sessions. She is led to take a step back on her own practices to engage in reflection within the groups of participants. For several course, the teaching team is placed in a position to learn collectively to transmit this posture to the teams of leaders in learning. "The team must live the same course as the accompanied leaders"; if the teaching team is engaged in a work of co-professionalization it can also use the lever of research.

5. The Use of Research

Institutions of higher learning use researchers to irrigate state-of-the-art knowledge systems. The search is used either:

- Thanks to an extension capacity; it is a prerequisite for the speakers of the Canadian Business School
- By working on real cases in a major French Business School
- On international cases studied filmed and debriefed in "study room" and modelled by teams in the Swiss Business School
- By placing learners in a position to learn from their case by the research they carry out themselves; partnerships are established: with research institutions are established, or with industry.

The French Business School also opens its research centre on innovation and organizes "morning" every 15 days which benefits a variety of audiences. These openings for research would allow leaders to make connections on their own.

The system of the "team academy" developed in Finland explicitly aims at the formation to the creation of companies by the action. In 3 years learners have to create companies to finance their training and go around the world. The proposed challenges concern both learners and the stakeholders. They place the speakers in the position of coaches and less in that of teachers. It is a question of "animating a coherent system in which the development of the person and the active experimentation are closely linked". Some of the course drivers studied is also trained in coaching; everyone questions the posture of the speakers as individuals or as a team. Pedagogical choices involve postural changes; for example, the codesign feature proposed by the private university requires the training of the teaching staff at the codesign. Continuing training of teams may be the subject of personal investment in techniques such as NLP, Gestalt or other at the choice of the participants or more frequently exchanges of practices.

6. Management of Teaching Teams

The system of the International Corporate University organizes program management with "target committees" that review programs and "partner committees" in which educational leaders co-develop a common dynamic International course syllabus which is about setting up a culture of evaluation to drive course aimed at the demanding public.

Evaluation Engineering

Individual Evaluation

Hot and cold assessments are used on the basis of quiz or graduation test. Sometimes these forms of evaluation are based on questionnaires requiring more than 2 hours to answer them or on in-depth interviews. Self-evaluation, free or based on questionnaires or managerial skills repository is also developed. This self-evaluation is part of the self-direction of its learning by the learners themselves.

Group Evaluation

The evaluation is sometimes carried out among peers and can also be carried out continuously in small groups. The evaluation criteria can be defined upstream of each project by the participants themselves or for the initial training in the form of a challenge to be taken up in "24 hours". The forms of group evaluation noted are part of the reciprocity present in the different learning course.

Effects Assessment

The evaluation also focuses on the evolution of learning and mental representations; she is more interested in what the course produces. It can focus on the appreciation of the people that the managers serve (customers, employees, and stakeholders).

7. Reforms of Teaching Practices

Innovation as a Pedagogical Engine

Innovation appears at the heart of institutional programs in constant reflection on the training of leaders. The pedagogical leaders of the interviewed course are personally involved in the definition and evolution of the courses for which they are responsible. The innovations thus carried out sometimes result in a renewal of teaching teams. Indeed, the accompaniment of the teaching team should be in mirror of that experienced by the participants and a part of the teachers, trainers or researchers is not ready. Some pedagogical leaders mention the idea of "de-linearizing" the curriculum, breaking it up and engaging in "non-predictive" pedagogy. In

this perspective the challenge is to put the other in the position of learner and creator of his knowledge.

Learning Spaces

The renewal of pedagogical practices for the training of leaders also involves the development of spaces to facilitate meetings and work in small groups. Thus, there are no classrooms but open-space in the academy team and the study-rooms of the Swiss Business School allow to film interactions between participants for further learning about group dynamics. Certain pedagogical practices give rise to the production of "philosophical furniture" and large panels intended to be exhibited on places of passage as community of innovators. The aesthetics of these spaces contribute to the pleasure of learning leadership training throughout their career.

The Pleasure of Learning

One of the key points in this self-learning course is to provide a motivating context to arouse curiosity which is a question of giving to the leader's new and surprising experiences and debriefing these experiences to make them discover the evolution of the world, to give them the pleasure to meet and exchange together on what they have achieved in their enterprises. Time to learn participation in a long learning time can be "a unique opportunity in one's life" to build one's own model and not to achieve a standard management model. For a School leader support in the long term is even the essence of a process of learning by oneself. One of the conditions of such an investment would be that the leader progresses simultaneously in a work on oneself and on his operational projects. "Short internships are useless," says the CEO of the great French Business School.

The collective dynamics of learning investment in a work of self-knowledge would be better achieved in groups than alone. The injunction to learn is powerless; however, the training of a group in the realization of an activity is an engine. The other leaders contribute to a "reflection partnership"; some course drivers are formed only with leaders who wish, it is from their desires that it is possible to co-build from their own environment. The course accompanying self-training takes into account the motivation to learn and the questions that these meetings pose to the course designers.

The Pilot's Question

In each of the innovation stories reported the position of the educational leader is crucial. He starts the action; he shakes up the habits and proposes an original vision. It acts much towards the participants as towards the pedagogical team that it is to take to postures or different ways of teaching, most often in withdrawal or in mirror of the leaders to train.

The Question of the Ends

The question of the ends is at the meeting point of the intentions pursued by the institutions, the pedagogical leaders, the pedagogical teams, and those of the learners and their companies. Pedagogical course and how to enter and learn from them occupied most of the interviews; the contents appeared secondary in what was the essence of the course. The question of goals is the heart: is training used to change the career of an individual? To provide an organization or a society with new skills and points of view, to meet operational efficiency needs, to adapt to new styles of subordination, depending on the weighting of the different intentions, the pedagogical design and its implementation will vary considerably.

8. Conclusion

Technical Pedagogy or Political Choice

If this survey reveals practices that have been mobilized, it is important to place them in their contexts at the risk of seeing only the technical dimension of pedagogy. In each case the course

are biases that inspire a vision of the world, relationships of each leader with his role and mission, his team and his organization. The pilot of the course is often a leading personality, himself a leader, researcher, and author or particularly involved in managerial development issues. The course aimed to create a proactive engagement in the professional environment to help the leaders to create their own knowledge on their own. This posture is a common trait that drives the reform of the relationship to knowledge not only of learners but also and above all, educational teams the choice of a managerial model or the construction of one's own model. For the course to meet the learners' requirements (Lameul et al, 2009) it is a question of exposing these to situations from which they will build knowledge. Playing with the discovery of a new way of learning is a solution to adopt new practices and position oneself as long as you can register freely (Cristol, 2015). The interviews reveal a rejection of the leaders of behavioural injunctions; if some Schools explicitly refuse the use of management models, it is to give everyone the opportunity to build their own. In conclusion, we can propose that a self-directed coaching course for executives could adopt some or all of the following recommendations:

- Contract of the initial objectives
- Learning situation allowing the conception by the leaders of their own knowledge
- Design of course taking into account time constraints
- Parallel evolution of the teaching team transforming into a resource team
- Constant reference to experience
- Self-positioning, self-evaluation, free choice of individual and collective projects

If each educational institution produces its educational responses to the demands of its environment, it seems to innovate whenever it builds more freedom to learn

Annexure: Format of the Course

<i>I. No</i>	<i>Sample</i>	<i>Name of the Course</i>	<i>Target Audience</i>	<i>Duration</i>
1	Consultant Professor	Business School Institute of Internal Management	750 Senior Managers	6 2-day Seminars
2	Consultant, former research director	Corporate University	300 Senior Executives in office	3 days every 2 months for two years
3	CEOs of an Engineering School	Professional development and leadership workshops Master's Degree in Innovation and Transformation	Engineering students Public mixed pupils and professionals	5 Seminars of 2 days 50 days
4	Director of Programs at an international Corporate University	Common Corporate	Common local Local specific 10,000 Managers	Variable duration according to the programs
5	Ex-University College Consultant	Team Academy	Future Entrepreneurs	3 years

6	Consultant ex CEO of a Company. Int. Editor, Ex Director of Research at a Business School	Accompaniment of a leader to support his co-leadership skills	Managers with their teams	A 2-day seminar and a tailor-made process
7	DGA of a large Business School	Flipped learning in initial training Executive MBA in continuing education	360 master students 50 executives	2 years 45 days out of 11 months
8	Coordinating Professor at a Canadian Business School	Intensive Organizational Development Program	Leaders	6 days / 3 months
9	CEO of a Private University	Workshop of Innovation and Co-Design Pedagogy by project. Electronic co-development laboratory	Mixed groups from 3 engineering schools	3 months
10	Director of Communications at a major Business School, Switzerland	Program building on talent	International Leaders	12 days

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Ethics, Transparency and Knowledge Relevance in Management: Towards Phronetic Management Research

ARTICLE

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Abstract: The last three decades have witnessed emergence of a new school of thought, questioning the relevance and morality in the knowledge creation process in different non-science disciplines. Particularly, the focus of this school has been on the research creation process in the discipline of Social Sciences and Management. The current article aims to identify the main reasons that give rise to current ethics and challenges related issues in subject area of Management. The article also offers Phronetic Management Research (PMR) as an alternative paradigm for addressing these challenges. The article is based on review of published literature and experience-based critical analysis. Article critically examines how most of the emerging challenges are linked to the process of knowledge creation in Management and, therefore, in order to improve the relevance, it suggests some key action areas.

Key Words: Development, Ethics, Management, Phronesis, Research

1. Introduction

The increasing participation of businesses in making development related decisions can be viewed as a major trend in modern concept of economic development across contexts. However, these decisions are not made in vacuum; and technically such decisions must be supported on thorough analysis of the 'development-problem' in focus. The knowledge creation process in the discipline Management, both public as well as for business, play a major role in finding evidences to support the decision-making. This is quite evident by the decisions made by the businesses and government now which will have far reaching impact on the life of different stakeholders like workers, consumers and citizens in the time to come and, therefore, we must ensure the research process which serves as foundation to such decisions, is rigorous and transparent (Davis, 2015).

This is quite clear that ethics play a major role in transparent knowledge creation in any discipline. No knowledge can be useful and meaningful unless it has sound ethical foundation, rooted in the process of knowledge creation itself. The situation in the disciplines of social sciences and management is no different. Scholars (Flyvbjerg, 2001; Ghoshal, 2005) have questioned the way we create knowledge which is largely influenced by interests of a few powerful stakeholders in the context and often ignoring the reality on the ground. For example, a number of development projects' viability and sustainability decision i.e. economic, environmental and social, are initially based on the glorified picture of the project impact. But, as the evidence shows (Flyvbjerg, 2001), with the project progress, most of these projects start delivering reverse results than the earlier projected outcomes before start of the project. It can be construction of infrastructure project or a social development project or decision regarding introduction of a new drug, the situation appears to be no different. The major question is who

is responsible for creating positive picture in beginning and the larger ethical question is whether those responsible for creating such supporting decision evidences, are really creating knowledge with transparency and rigor, considering long-term impact on stakeholders with relatively weak-power to influence decisions? Bent Flyvbjerg's 'Phronetic Planning Research' (Flyvbjerg, 2004) is a pioneering work in this area, suggesting the way forward to improve the knowledge creation process related to development planning. Based on Flyvbjerg (2004) and Amann et al. (2017), the article proposes how 'Phronetic Management Research (PMR)' framework can be used in improving transparency and rigor in entire management research value-chain with strong ethical foundations. More specifically, we explore the following questions in the subsequent sections of the article:

- a) What are main ethical issues related to knowledge creation process in discipline of management?
- b) How PMR can be used as an alternative paradigm to management research to address the ethical challenges identified above?
- c) What are essential features of PMR? and
- d) How we adopt PMR as a research approach in knowledge creation process in management?

2. Management Research: Broader Ethical Challenges

The power-politics of the stakeholders is an important factor influencing the outcome of social-science research (Flyvbjerg, 1998, 2001) and often consideration of this factor is ignored in research due to one reason or another (Amann et. al. 2017). Particularly, when the outcome of the research is likely to influence the economic or other interests of the stakeholders with strong relative power, the problem deepens further. For example; assume a mega infrastructure project, say a 2000 miles express-way industrial corridor, is under consideration for approval by the Government, which is subject to debate on economic, social and environmental sustainability report conducted specially for the project in focus. Let's consider position of six important stakeholders: first, the government, which will gain reputation for promoting development and creating jobs; second, the target beneficiaries who ranges from industrial houses, logistics operators to people who will get employment; third, people whose farming and residential village area land going to be acquired on compensation basis along with the promise of employment to a member in the family; fourth, the business houses involved in construction and development of the infrastructure project; fifth, the NGOs and other environmental/social groups opposing the project on the ground that it will disturb the established social, environmental and economic eco-system which is currently in harmony; and finally sixth, the tax-payer whose money is at stake for promoting development. The bottom line for decision is the research-based sustainability report, which is to be undertaken by an independent third-party research agency to be selected competitively and research project itself is more than million-dollar contract, which no research agency would like to miss for its' own sustainability. However, most of the research agencies targeting the project have good experience of conducting similar research and these agencies know that any recommendation against the will of powerful stakeholders will cost them loss of many similar projects in future. Assuming everything is to take-place transparently and fairly, at least as defined theoretically in the legal procedure, here are two ethical questions to ponder on:

- a) Could we assume that no one would influence the research findings, particularly when terms of reference of research says that final report must have approval of the client (Government in this hypothetical case) before submission?
- b) Could we assume that by following all legal procedures for commissioning research would also ensure full ethical compliance (one must not forget that being fully legal

doesn't necessarily mean being fully ethical in view of a number of other variables in play)?

These ethical challenges must be addressed and can only be addressed through a transparent research approach based on sound ethical foundations but the question is how? The above example is just one scenario, we everyday come across a number of similar examples, both in public sector as well as private sector decision-making situations, which reflect how a little dilution in transparency and ethical considerations in research process may affect the future of millions and millions of people in long-run. Don't we need a more prudent approach to research in sensitive situations?

Now let's examine some of the issues related to established conventions and methodologies of so called 'scientific research' in Social Sciences and Management. Flyvbjerg (1998, 2001) questioned the so much epistemological influence in Social Science research, which is completely borrowed from the 'knowledge creation tradition' of the other science disciplines, in which behavioural influences not to the extent as in Social Sciences. Anything confirming to the defined procedures is accepted as a 'reality' without considering a number of social, individual, political and other influences. This 'scientific orientation' challenges the very notion of scientific nature of the research findings and its' applicability for decision-making involving far-reaching impact. In context of Management, Ghoshal (2005), Tripathi (2012), Amann et. al. (2017) considered faulty knowledge creation process in the discipline as a major source of increasing knowledge irrelevance, which is far from the reality. Rosanas (2006) identified methodology, ideology, theory-practice distance and too much narrow specialization focus as some of the problem areas in management research. In order to create knowledge within established methodological boundaries of research in a particular specialization area, the researchers may ignore the required inter-disciplinary focus, needed for desired relevance.

Based on the faulty knowledge creation process, we have created management theories which are often reflected in the management practices that produces more harm than the good. Combining the above observations, we come across some interesting scenarios:

- a) Could we expect transparent and ethical management behavior from managers in the different stakeholder organizations (in our hypothetical case say Government, Businesses and Research Agencies) that have been trained for decision-making on the basis of management theories, which hold no longer relevance in practice?
- b) Could we expect such a pre-defined and static research approach to address the realistic information need in the given context with focus on 'common-good' considerations?

If not how to address these issues, shouldn't we try to tailor research methodology itself according to transparency need and degree of impact of the decision? How we can move further with more ethical and transparent research system that considers the voice of millions of weaker stakeholders whose interests are, practically, ignored in finding of so-called 'scientific research' that also, sometime, becomes a product of the strong power-politics?

Now summarizing the discussion, some of the major ethical challenges in the knowledge creation process can be considered as under:

- a) Power influence of stronger stakeholder influence on the research process;
- b) Lack of ethical considerations, which move beyond mere legal compliance, in the research process;

- c) Lack of transparency in process of finding the 'facts' about the 'reality' in the given context;
- d) Static research methodology boundaries that prevent voice of majority of stakeholders with weaker power; and
- e) Unwillingness of the major beneficiaries of such an established eco-system to challenge and reform the research process itself.

In the next section, we will examine how PMR (Amann et.al. 2017) can be used as an alternative paradigm to address some, if not all, of these challenges for a fairly acceptable and transparent research system.

3. PMR: Enhancing Transparency in Management Research

PMR is an approach to management research, which aim to complement the existing research methodology in the management with greater emphasis on 'contextual' realities and ethical considerations. Stakeholder need-consideration is a primary driving force in PMR, as it critically analyzes whether the research-solution is meaningful for larger number of stakeholders. However, the PMR is not a particular research tool or method and rather offers a framework of using existing tools and techniques with larger ethical considerations. In other words, we can say that the PMR is an approach to management research with focus on: enhancing transparency in research process; including all stakeholder considerations even those with relatively weaker power-influence; and focusing on contextual realities.

PMR is based on 'Phronetic Planning Research(Flybjerg, 2004)', which is an approach that compliments the existing approach to development research and aims to study planning based on a contemporary interpretation of the classical Greek concept of phronesis. The origin of the concept is rooted in three intellectual virtues given by Aristotle: episteme; techne; and phronesis. The research with episteme focus look towards the universal truth while the research with techne focus is likely to search for the 'better' but the definition of the 'better' can be influenced by the stakeholder with higher degree of power. However, research with Phronesis focus would aim at problem-solving in pragmatic manner and by including the considerations of all who are likely to be influenced by the research finding.

Compared to conventional approach, Phronetic Planning Research aims to replace rationalism with communicative knowledge creation and focuses on problem-solving in the given context. It also ensures transparency in communicating the research results with the stakeholders and incorporating the feedback using appropriate tools, including application of modern Information and Communication Technologies (ICT). While basic assumptions remain the same, PMR moves further in terms of in scope and involves other management functions as well in addition to Planning. If we consider our hypothetical example discussed in section 2.0, a PMR researcher would ensure that all the stakeholders have access to research procedure and ongoing finding and based on dialogue and feedback, the PMR researcher would try to modify the findings. However, in the process of the research, the researcher may use all established methods, tools and techniques acceptable for knowledge creation in the body of the knowledge.

4. Enhancing Relevance of Research through PMR

Regarding the desired characteristics of good management research, Amann et. al. (2017, p. 119 - 120) suggested that: "It should be relevant to the context but without compromising the required rigor in the process; it must be capable of including the values, interests and concerns of all important stakeholders who are likely to be influenced by the outcome of the research and thus, helping in distinguishing between 'good' and 'bad'; it should be collaborative

involving actors from different sides including practice and knowledge-creation; it should not seek generalization rather ‘truth’ of impact should be focus of analysis; it should be creative, original or cumulative (where the existing knowledge is being applied or tested in a new context); and it should not be following causal or functional dimension rather it must be oriented towards intentional mode of explanation.”

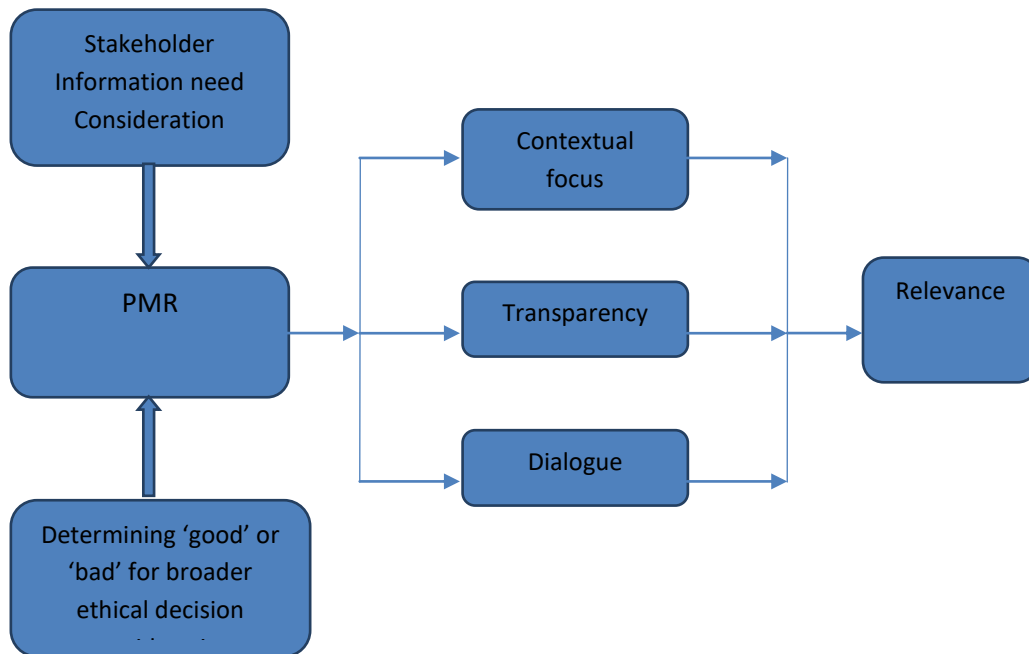


Fig 1: Research Relevance and PMR

Phronetic Management Research (PMR) approach is developed on the basis of the above considerations. We can see that once the above desired parameters are met in the research process, most of the ethical challenges identified in the section 2.0 of the article get addressed. Based on PMR, as an approach to management research, would (Amann et.al. 2017): include wider stakeholder-groups using appropriate methods depending on suitability of the context; be able to answer the issue of ‘good’ or ‘bad’ from the perspective of different stakeholders; consider the context specific issues; not attempt to generalize the finding rather would analyze the ‘truth’ in terms contextual impact; and include accepted research methods in use.

Often scholars debate on ‘rigor’ vs. ‘relevance’ in the research process. The PMR approach doesn’t consider these two dimensions in isolation and mutually exclusive. When ‘rigor’ is for right purpose (i.e. ethical motive), using right method in right direction, it helps in enhancing the relevance of the findings in a natural way. We can see that right purpose i.e. ‘good for whom’, is the primary question in PMR. As presented in figure 1, focus on contextual realities make PMR highly relevance-focused approach of research. It aims to encourage real-time dialogue among the researchers while the research-work is in progress, and, therefore, further enhancing the relevance to stakeholders through increased transparency in the research process.

5. Steps in Adopting PMR

The starting point in PMR is to analyze the context in terms of impact of the research findings on different beneficiary groups. Based on Flyvbjerg (2004, p.290), Amann et al (2017) proposed four fundamental questions a researcher must ask in PMR: Where are we heading with the current solution both in short-term and long-term? Who gains and who loses, and by which mechanisms of power? Is this solution desirable? What, if anything, should we do about it?

Flyvbjerg (2004, p. 495) suggests nine specific steps, which in context of PMR can be summarized as following seven steps:

- (a) Focus on values i.e. balancing value-rationality and instrumental rationality
- (b) Place power-structure of the stakeholders at the core of analysis
- (c) Get close to reality by emphasizing “little things”
- (d) Look at practice before discourse
- (e) Study cases and other material related to the contexts
- (f) Move beyond agency and structure
- (g) Do dialogue with a polyphony of voices

As it can be seen that the first two questions relate directly to the four fundamental questions suggested by Flyvbjerg (2004) and Amann et al (2017); the analysis of these questions in the given context would help researcher to design a sound research plan with extra care of vulnerable linkages. Therefore, the answer to these questions would help in preparing a ground for data collection and analysis in a transparent manner. During the entire process, maintaining transparent communication with the stakeholders is an essential requirement of the PMR. The selection of appropriate data-collection/ analysis tools and techniques would also depend largely on the analysis of the above questions. This must be noted that identification of vulnerable areas that can adversely influence ethical consideration is also an important requirement at this stage, which will help in preparing strategy for transparent and ethical research at later stage. Rest the research process remains similar to conventional research.

6. Concluding Thoughts

The decision making in both public sector as well private sector relies heavily on the information, which is outcome of the research process. However, increasing number of ethical failure cases questions the role of research and researchers in protecting the ethics. One can see that most of these ethical failures can be linked to deliberate (or innocent) manipulation in information/ knowledge creation process at some point of time. With this problem at focus, we tried to analyze a number of ethical challenges in research process in subject area of management like stakeholder power-politics and lack of ethical orientation of managers. Based on available literature, we found how PMR can be used as an alternative approach to ensure ethical and transparent research, relevant to the given context. However, this can be noted that PMR is an alternative approach to research and not a tool or technique of research. The concept is still in phase of evolution and, therefore, requires continuous dialogue and debate for improvement.

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Modelling Conditional Volatility in Stock Returns and Trading Volume of Indian Stock Market

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Abstract: The role of information releases in asset pricing has created enormous interest among researchers, academics and practitioners. The general perspective of the market is that higher the level of trading volume, the greater the movement in share prices and vice-versa. But, this may not hold true every time. Lower trading volume may also induce the larger jumps in prices. The study aimed at modelling conditional volatility in stock returns and trading volume of 30 stocks of S&P BSE Sensex by using two asymmetric volatility models EGARCH and TGARCH with and without trading volume effects. Further, the study explores the impact of information flow on volatility with the inclusion of trading activity. The volatility persistence for individual stocks seems to be mixed. The results support that trading volume is an important variable in explaining conditional volatility in stock returns.

Key Words: Heteroskedasticity, Information releases, Trading Volume, Volatility

1. Introduction

Stock prices and trading volume are induced by information releases and the role of information in asset pricing has created enormous interest among researchers, academics and practitioners. The general perspective of the market is that higher the level of trading volume, the greater the movement in share prices and vice-versa. But, this may not hold true every time. Lower trading volume may also induce the larger jumps in prices.

A number of studies have addressed the role of trading volume as an important variable in price formation models. The relationship between price changes and trading volume is investigated by Karpoff (1987), Schwert (1989), Hiemstra and Jones (1994), Wang (1994), Chordia and Swaminathan (2000), Ghysels et al (2000), Ranter and Leal (2001), Ciner (2002), Darrat et al. (2003), Gagnon and Karolyi (2009), Ederington and Guan (2010), Sabbaghi (2011), Chen (2012), Asai and Brugal (2013), Bagchi (2014), Hsieh (2014), Shahzada et al. (2014) among others. The use of conditional volatility models have been proved successful in modeling the conditional volatility of equity stocks and the markets in which they trade (Lamoureux and Lastrapes, 1990; Gallant et al., 1992; Srinivasan and Ibrahim, 2010; Sabbaghi, 2011; among others).

There has been a very little research done in this context as far as Indian markets are concerned (see Karmakar, 2005; Srinivasan and Ibrahim, 2010; Tripathy, 2010; Tripathy and Gil-Alana, 2010). The objective of this study is to model conditional volatility in stock returns and trading volume of Indian stock market by using a reasonably more recent database post financial crisis. The contribution of this paper is three fold: Firstly, this study helps to identify the internal

dynamics of widely traded Sensex stocks. Secondly, it models the conditional volatility between stock returns and trading volume by using EGARCH and TARCH models with and without trading volume effects. Thirdly, there is no study using emerging market data in this field. Therefore, the present study seeks to extend the existing knowledge base and literature.

The organization of this paper is as follows. Section 2 reviews the previous literature. Section 3 discusses the data and methodology. Section 4 presents the empirical results, and Section 5 concludes the paper.

2. Literature Review

Several studies have been conducted to examine the linkages between trading volume and stock return volatility by using econometric models. Augmenting GARCH models with trading volume, Lamoureux and Lastrapes (1990) found that trading volume considered as a proxy for information flow helps to explain conditional volatility. They provided evidence that GARCH effects and persistence levels disappeared once trading volume is incorporated into the conditional variance equation. Blume et al. (1994) showed the relationship between trading volume, information precision, and price fluctuations. They found that traders who use the information contained in volume obtained higher-quality private signals than traders who do not. The finding that average trade size contains no information would seem to be inconsistent with the volume-based technical trading activities observed in security markets. Jones et al. (1994) reported striking evidence for the role of the frequency of trades in determining the volatility of returns. They found that the positive relation between volatility and volume actually reflects the positive relation between volatility and the frequency of transactions. Brailsford (1996) investigated the effect of information arrivals on the volatility persistence in the Australian stock market and found that the inclusion of contemporaneous trading volume in the conditional variance equation dramatically reduced volatility persistence of stock returns.

Ragunathan and Peker (1997) found a strong contemporaneous effect of trading volume on volatility in the Sydney Futures Exchange. Chordia and Swaminathan (2000) studied the interaction between trading volume and predictability of short-term stock returns and found that daily returns of stocks with high trading volume lead daily returns of stocks with low trading volume. They concluded that trading volume plays a significant role in the dissemination of market wide information. Ghysels et al. (2000) investigated the causality between the series of returns and transaction volumes in high frequency data of the Alcatel stock on the Paris Stock Exchange. They found co-movements between volumes and transaction prices. Using standard Granger causality test, they reported that there is a causal relation between stock returns and volume. Chordia, Subrahmanyam, and Anshuman (2001) found that the volatility of trading activity is negatively associated with stock returns in the cross-section, after controlling for size, book-to-market, momentum, and the level of share turnover. Bohl and Henke (2003) investigated the relationship between daily returns and trading volume for 20 Polish stocks. The results indicated that in the majority of cases volatility persistence tends to disappear when trading volume is included in the conditional variance equation.

Darrat et al. (2003) examined the contemporaneous correlation and lead-lag relation between trading volume and return volatility in all constituent stocks of Dow Jones industrial average (DJIA) using individual and pooled Granger-causality tests. Majority of the DJIA stock failed to show contemporaneous correlation between volume and volatility. Significant lead-lag relationship was evident. Kim (2005) studied the stock market linkages in the advanced Asia-Pacific stock markets of Australia, Hong Kong, Japan and Singapore with the US. The study found significant contemporaneous return and volatility linkages. Dynamic information spillover effects in terms of returns, volatility and trading volume from the US and Japan did not produce time-varying influence. Significant dynamic information spillover effects from the US were found in all the Asia-Pacific markets, but the Japanese information flows were relatively weak and the effects

were country specific. Karmakar (2005) estimated conditional volatility models to capture the features of stock market volatility of India and evaluated the models in terms of out-of-sample forecast accuracy. Besides, the presence of leverage effect in Indian companies was also investigated. The study found that the GARCH (1, 1) model provided good forecast of market volatility. Xu et al. (2006) examined volume and volatility dynamics of Dow Jones 30 stocks. Time-consistent VAR model was used to identify the informed and uninformed components of return volatility and to estimate the speed of price adjustment to new information. The study found that volatility and volume are persistent and highly correlated with past volatility and volume. Girard and Biswas (2007) examined the relationship between volatility and trading volume in some developed and emerging markets. They found that emerging markets showed a greater response to large information shocks as compared to developed markets. In addition, emerging markets also exhibited greater sensitivity to unexpected volume.

Rashid (2007) investigated the dynamic association between daily stock index returns and percentage trading volume changes using the data set from Karachi Stock Exchange (KSE). The results showed the presence of linear unidirectional Granger causality from stock returns to volume, nonlinear Granger causality from volume to stock returns and linear Granger causality from percentage volume change to percentage in stock prices depends on the direction of the stock returns. Engle and Rangel (2008) estimated variant of GARCH models across 50 different countries and found that equity volatilities are higher when output growth, inflation, and short-term interest rates are more volatile. Chuang et al. (2009) used quantile regressions to investigate the causal relationship between stock return and volume, and showed that causal effects of volume on return are usually heterogeneous across quantiles and those of return on volume are more stable. Pati (2008) investigated the asymmetric impact of shocks on volatility and provided evidence of predictable time varying volatility, high persistence and leverage effect in Indian stock market. Fenghua and Xiaoguang (2009) indicated that the persistence-free trading volume can explain the heteroscedasticity of the return better than the unexpected trading volume.

Park (2010) employed the mixture of distribution hypothesis (MDH) and demonstrated that the effect of surprising information on the relationship between volatility and trading volume contrasts with that of general information. The results supported the use modified version of the MDH with surprising information. Srinivasan and Ibrahim (2010) attempted to model and forecast conditional variance of the SENSEX by using daily data. The result showed that the symmetric GARCH model performed better in forecasting conditional variance of the SENSEX Index return rather than the asymmetric GARCH models, despite the presence of leverage effect. Tripathy (2010) investigated the relationship between trading volume and stock returns volatility in Indian stock market and found evidence of leverage and asymmetric effect of trading volume in stock market. The results showed that bad news generated more impact on the volatility of share prices. Tripathy and Gil-Alana (2010) compared the different volatility models by taking daily closing, high, low and open values of the NSE returns from 2005-2008. The models were compared on the basis of their ability in explaining the ex-post volatility. The study concluded that the AGARCH and VIX models proved to be the best methods while Extreme Value Indicators (EVIs) gave the best forecasting performance followed by the GARCH and VIX models.

Sabbaghi (2011) investigated asymmetric volatility–trading volume relationship during global financial crisis of 2008. By employing EGARCH analysis for data from the G5 stock markets, the study suggested that trading volume is an important variable in explaining conditional volatility. Trading volume captured a significant fraction of asymmetric volatility effects during financial crisis period. Chen (2012) investigated empirical linkages between stock returns and trading volume during bull and bear markets using S&P 500 price index data. The study found strong evidence of asymmetry in contemporaneous correlation. Based on a joint two-state Markov-switching model, the results indicated strong evidence that the stock return is able to forecast

volume in both bear and bull markets. There is weaker evidence regarding the information content of trading volume to forecast stock returns. The forecastability is found only in bear markets. Asai and Brugal (2013) examined the interdependence of stock markets in Brazil and the US, based on information of daily return, range and trading volume. They used heterogeneous VAR model for forecasting volatility. They reported strong evidence for spillover effects. Kaizoji (2013) investigated the statistical properties of the returns and the trading volume. The study showed that as the interaction among the interacting traders strengthens both the returns and the trading volume present power-law behaviour.

Bagchi (2014) found both positive and negative relationship for return-volatility dynamics and showed that cognitive dissonance is responsible for return-volatility relationship. The study confirmed that volatility feedback theory is always not tenable for explaining return-volatility relationship. Hsieh (2014) examined the contemporaneous and causal relationship between stock returns, trading volume and volatility in Asian listed real estate companies and found that there are positive contemporaneous relationship between trading volume and both returns and absolute returns. The study found that current trading volume help to explain the returns indirectly by leading return volatility but trading volume does not explain future returns directly. Shahzada et al. (2014) studied the volume–volatility relationship in Australian stock market for the period between 2006 and 2010. The results indicated that the number of trades is the main driving factor for the volume–volatility relation. The average trade size played a role in explaining volatility but has a lower impact on volatility than the number of trades.

3. Data and Methodology

The dataset used for this study consists of daily closing prices and trading volume from January 4, 2010 to June 30, 2014¹ on the 30 stocks of S&P BSE Sensex. The rationale for selecting these stocks is that they represent the largest, most liquid and financially sound companies across key sectors of the Indian economy. They are very actively traded and experience most frequent flow of information into the market.

The data is extracted from the Prowess database maintained by Centre for Monitoring Indian Economy (CMIE). The daily closing prices are transformed to a time series of continuously compounded return by using the equation $R_t = (P_t / P_{t-1}) * 100$ where R_t is the logarithmic daily return at time t and P_{t-1} and P_t are daily closing share prices at two successive days $t - 1$ and t respectively.

Daily squared return, R_t^2 is used as a proxy for volatility is stock returns² while, one day lagged trading volume in its logarithmic form, $\ln V_{t-1}$ is used as a proxy for trading volume.

The study uses two asymmetric volatility models EGARCH and TGARCH with and without trading volume effects. A brief description of these models is presented below:

¹ The closing share prices and trading volume data for Coal India were available only from November 4, 2010. There are 1123 data points in the final dataset for all the stocks except for Coal India which included 911 data points.

² Daily squared return is used as a proxy for return volatility in earlier studies such as Bluhm and Yu (2000), Balaban et al. (2002), Vilasuso (2002), Yu (2002), Taylor (2004) and Ederington and Guan (2005).

EGARCH model without trading volume effect

Proposed by Nelson (1991), Exponential GARCH (EGARCH) models the logarithmic of the conditional variance and has an additional leverage term to capture asymmetry in volatility clustering. It does not impose the non-negative constraints on the parameters.

The specification of conditional variance equation is expressed as:

$$\log(\sigma_t^2) = \omega + \sum_{j=1}^q \beta_j \log(\sigma_{t-j}^2) + \sum_{i=1}^p \alpha \left| \frac{\varepsilon_{t-i}}{\sigma_{t-i}} \right| + \sum_{k=1}^r \gamma_k \frac{\varepsilon_{t-k}}{\sigma_{t-k}} \quad \dots\dots\dots (1)$$

In the model specification, β captures the volatility clustering effect, α measures the effect of news about volatility from the previous period on current period volatility and γ measures the leverage effect. The impact is asymmetric if $\gamma \neq 0$. If $\gamma = 0$, positive and negative shocks have the same effect on volatility, while $\gamma < 0$ indicates that the bad news has a bigger impact on volatility than good news of same magnitude.

TGARCH model without trading volume effect

Pioneered by Glosten et al. (1993) TGARCH model incorporates a dichotomous variable to check whether there is statistically significant difference when shocks are negative. Unlike EGARCH model, the leverage effect is quadratic in TGARCH model. The conditional variance equation can be represented as follows:

$$\sigma_t^2 = \gamma + \omega \varepsilon_{t-1}^2 + \eta \varepsilon_{t-1}^2 d_{t-1} + \psi \sigma_{t-1}^2 \quad \dots\dots\dots (2)$$

Where $d_t = 1$ if $\varepsilon_{t-1} < 0$ and $d_t = 0$ otherwise. The parameter η captures the asymmetrical effect of positive news and negative news. ω and ψ are the ARCH and GARCH terms respectively. Good news ($\varepsilon_{t-1} < 0$) and bad news ($\varepsilon_{t-1} > 0$) have differential impact on the conditional variance. Good news has an impact on ω , while bad news has an impact on $\omega + \eta$. If $\eta > 0$, bad news increases volatility, and we say that there is a leverage effect for the i -th order. The impact is asymmetric if $\eta \neq 0$. Negative η estimates shows that positive return shocks generate less volatility than negative shocks.

EGARCH model with trading volume effect

The conditional variance equation (Eq. 1 above) of EGARCH model is extended to include the effects of trading volume. The EGARCH model with trading volume effect is formally given by:

$$\log(\sigma_t^2) = \omega + \sum_{j=1}^q \beta_j \log(\sigma_{t-j}^2) + \sum_{i=1}^p \alpha \left| \frac{\varepsilon_{t-i}}{\sigma_{t-i}} \right| + \sum_{k=1}^r \gamma_k \frac{\varepsilon_{t-k}}{\sigma_{t-k}} + \zeta \ln V_{t-1} \quad \dots\dots\dots (3)$$

The coefficient on the trading volume variable, denoted by $\ln V_{t-1}$, captures the effect of the instantaneous rate of information arrival on conditional volatility.

TGARCH model with trading volume effect

The conditional variance equation (Eq. 3 above) of TGARCH model is extended to include the effects of trading volume. The TGARCH model with trading volume effect is formally given by:

$$\sigma_t^2 = \gamma + \omega \varepsilon_{t-1}^2 + \eta \varepsilon_{t-1}^2 d_{t-1} + \psi \sigma_{t-1}^2 + \zeta \ln V_{t-1} \dots\dots\dots (4)$$

The coefficient on the trading volume variable, denoted by $\ln V_{t-1}$, captures the effect of the instantaneous rate of information arrival on conditional volatility.

4. Empirical Results and Analysis

Table 1 exhibit the descriptive statistics and diagnostic checks on daily returns. The daily returns of Sensex stocks vary between -0.228% to 0.104% during the study period. The highest mean return is posted by TCS. Tata power, on the other hand, reported the lowest return during the sample period. Majority of the return series have shown evidence of significant negative skewness. Excess kurtosis implies that the return distribution has fat tails, i.e. leptokurtic, relative to the normal distribution. Further, the significant Lilliefors test statistics reject the null hypothesis of normality at 1% significance level. All these findings show the existence of strong ARCH effects. ADF test was employed to test the stationarity of return series. The results strongly support the rejection of the hypothesis of non-stationarity at 1% significance level both on level and at first difference.

Table 2 reports the descriptive statistics of daily squared returns, used as proxy for return volatility. The squared return series are positively skewed and are leptokurtic. The non-normality in the return distribution is confirmed by Lilliefors test statistics. The series were found to be stationary on both levels and at first difference.

Table 3 presents the empirical results of EGARCH (1, 1) model. Of the 27 stocks reporting statistically significant beta estimates, 15 stocks have posted positive and statistically significant beta coefficient suggesting volatility clustering. Positive beta signals that positive stock return changes are associated with further positive changes and vice versa. The impact of news about volatility from the previous period on current period volatility is also found to significant at 1% level for all the stocks except Heromotocorp, ITC and TCS. The results negate the existence of leverage effect and the news impact is asymmetric. The gamma estimates were positive and statistically significant for 14 stocks indicating that bad news has a smaller impact on volatility of these stocks than good news of same magnitude.

Followed by this, TGARCH (1,1) model estimation in the absence of trading volume effect were run. The estimated coefficients for ψ are statistically significant for all the stocks at 1% level of significance except for Cipla, Coal India and SBI. The ψ coefficients are larger than ω suggesting that large market surprises induce small revisions in future volatility. The ω coefficients ranged from -12.364 to 3.227 while the ψ ranged from -0.006 to 1.727. The persistence in volatility is measured by $\omega + \psi$. Since $(\omega + \psi) < 0$, it indicates that the shocks decay with time. Further, the study explores the impact of information flow on volatility with the inclusion of trading activity. The ζ coefficients for 15 stocks were statistically significant (Table 6). The volatility persistence for individual stocks seems to be mixed. The results support that trading volume is an important variable in explaining conditional volatility in stock returns.

5. Conclusion

The study aimed at modeling conditional volatility in stock returns and trading volume. on the 30 stocks of S&P BSE Sensex. The study uses two asymmetric volatility models EGARCH and TGARCH with and without trading volume effects. The return series showed the presence of strong ARCH effects. The results of EGARCH (1, 1) indicated the phenomenon of volatility clustering while the TGARCH (1,1) model results suggested that large market surprises induce small revisions in future volatility. Further, the study explores the impact of information flow on volatility with the inclusion of trading activity. The volatility persistence for individual stocks seems to be mixed.

The results support that trading volume is an important variable in explaining conditional volatility in stock returns.

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Table I Descriptive statistics and diagnostic checks on daily returns

Sl.No.	Stocks	Mean	Std. Dev	Skewness	Kurtosis	N	Lilliefors test		Unit root test (ADF)			
							t- statistic	p-value	Levels		First Difference	
									t- statistic	p-value	t- statistic	p-value
1	AXIS	0.0588	2.2395	0.1897	5.2313	1122	0.0447	0.0000	-29.972	0.000	-19.228	0.000
2	BAJAJAUTO	0.0258	2.6665	-16.4281	436.3464	1122	0.1483	0.0000	-32.098	0.000	-16.841	0.000
3	BHAAIRT	0.0032	2.0306	0.0826	4.5572	1122	0.0478	0.0000	-34.177	0.000	-16.805	0.000
4	BHEL	-0.2024	5.3794	-24.6920	746.5562	1122	0.2336	0.0000	-32.326	0.000	-18.497	0.000
5	CIPLA	0.0234	1.4529	0.0133	5.2942	1122	0.0441	0.0000	-34.571	0.000	-16.727	0.000
6	COAL	0.0130	1.8927	0.2993	8.1212	910	0.0558	0.000	-29.9625	0.000	-16.188	0.000
7	DRREDDY	0.0737	1.4308	-0.1559	4.2523	1122	0.0454	0.0000	-33.336	0.000	-17.391	0.000
8	GAIL	0.0096	1.6078	-0.0052	4.1312	1122	0.0307	0.0146	-33.316	0.000	-17.391	0.000
9	HDFC	-0.0885	4.9982	-28.0564	886.3105	1122	0.2606	0.0000	-34.384	0.000	-18.087	0.000
10	HDFCBANK	-0.0651	5.0319	-28.8571	920.2650	1122	0.2838	0.0000	-31.891	0.000	-16.428	0.000
11	HEROMOT	0.0381	1.8302	0.5646	10.0922	1122	0.0585	0.0000	-33.166	0.000	-15.070	0.000
12	HINDALCO	0.0005	2.4796	0.2065	3.8103	1122	0.0332	0.0055	-33.166	0.000	-17.071	0.000
13	HUL	0.0758	1.5356	1.5056	15.6230	1122	0.0685	0.0000	-31.951	0.000	-17.177	0.000
14	ICICIBK	0.0427	2.0567	0.2985	3.9727	1122	0.0440	0.0000	-31.842	0.000	-16.893	0.000
15	INFOS	0.0193	1.8148	-2.1846	40.2307	1122	0.0997	0.0000	-32.792	0.000	-18.959	0.000
16	ITC	0.0221	2.5718	-18.6431	513.4080	1122	0.1651	0.0000	-34.411	0.000	-16.882	0.000
17	LT	0.0005	2.2470	-4.1969	74.3555	1122	0.0742	0.0000	-31.127	0.000	-18.793	0.000
18	MM	0.0014	2.7162	-13.1627	324.6994	1122	0.1257	0.0000	-33.945	0.000	-16.797	0.000
19	MARUTI	0.0403	1.8575	-0.0041	7.3224	1122	0.0511	0.0000	-33.538	0.000	-16.882	0.000
20	NTPC	-0.0354	1.5880	-0.4700	10.1407	1122	0.0523	0.0000	-33.948	0.000	-14.632	0.000
21	ONGC	-0.0918	4.6740	-26.2107	810.8889	1122	0.2478	0.0000	-32.948	0.000	-18.070	0.000
22	RIL	-0.0052	1.6637	0.0442	3.6461	1122	0.0320	0.0089	-32.785	0.000	-17.013	0.000
23	SBI	0.0142	1.9809	0.0694	4.7771	1122	0.0437	0.0000	-29.197	0.000	-15.721	0.000
24	SESGOA	-0.0310	2.5416	0.5278	6.0715	1122	0.0562	0.0000	-21.646	0.000	-19.443	0.000
25	SUNPHAR	-0.0702	5.4348	-24.6621	699.7792	1122	0.2884	0.0000	-33.379	0.000	-17.910	0.000
26	TATAMOT	-0.0581	5.4717	-24.5027	740.4626	1122	0.2165	0.0000	-31.817	0.000	-15.846	0.000
27	TATAPOW	-0.2279	7.1900	-29.9215	965.3283	1122	0.3033	0.0000	-34.223	0.000	-17.605	0.000
28	TATASTEEL	-0.0163	2.1960	0.1647	3.9686	1122	0.0342	0.0037	-32.172	0.000	-22.166	0.000
29	TCS	0.1042	1.6764	0.3720	6.7453	1122	0.0542	0.0000	-33.576	0.000	-17.432	0.000
30	WIPRO	-0.0215	2.2889	-9.5303	205.3730	1122	0.0454	0.0000	-35.265	0.000	-17.784	0.000

Table 2 Descriptive statistics and diagnostic checks on daily squared returns

Sl.No.	Stocks	Mean	Std. Dev	Skewness	Kurtosis	N	Lilliefors test		Unit root test (ADF)			
							t- statistic	p-value	Levels		First Difference	
									t- statistic	p-value	t- statistic	p-value
1	AXIS	5.0141	10.3393	9.0922	151.9978	1122	0.3139	0.0000	-17.9197	0.0000	-16.7482	0.0000
2	BAJAJAUTO	7.1046	148.1816	33.3985	1117.6350	1122	0.4809	0.0000	-33.5327	0.0000	-17.2871	0.0000
3	BHAAIRT	4.1196	7.7738	5.1001	42.3764	1122	0.2981	0.0000	-29.5865	0.0000	-17.2655	0.0000
4	BHEL	28.9535	791.7741	33.4254	1118.8320	1122	0.4854	0.0000	-33.4751	0.0000	-17.2929	0.0000
5	CIPLA	2.1095	4.3732	6.3823	64.1120	1122	0.3148	0.0000	-33.0640	0.0000	-18.4308	0.0000
6	COAL	3.5787	9.5604	9.0914	114.0331	910	0.3541	0.0000	-27.6395	0.0000	-21.4805	0.0000
7	DRREDDY	2.0507	3.6779	4.3412	32.7193	1122	0.2886	0.0000	-31.5428	0.0000	-18.3361	0.0000
8	GAIL	2.5829	4.5724	5.3045	50.1205	1122	0.2861	0.0000	-30.2789	0.0000	-25.0850	0.0000
9	HDFC	24.9675	743.8185	33.4493	1119.9050	1122	0.4927	0.0000	-33.5003	0.0000	-17.2949	0.0000
10	HDFCBANK	25.3021	767.9824	33.4497	1119.9240	1122	0.4965	0.0000	-33.4781	0.0000	-17.2983	0.0000
11	HEROMOT	3.3479	10.1223	18.0219	458.9142	1122	0.3704	0.0000	-31.7706	0.0000	-18.8398	0.0000
12	HINDALCO	6.1428	10.3028	3.9306	26.6499	1122	0.2755	0.0000	-31.7706	0.0000	-21.0794	0.0000
13	HUL	2.3618	9.1077	20.3506	532.1927	1122	0.3977	0.0000	-28.5913	0.0000	-16.4121	0.0000
14	ICICIBK	4.2281	7.3225	3.7088	22.5949	1122	0.2818	0.0000	-28.8517	0.0000	-17.0093	0.0000
15	INFOS	3.2910	20.5956	21.5341	555.6456	1122	0.4365	0.0000	-32.7802	0.0000	-17.1611	0.0000
16	ITC	6.6090	149.5663	33.4072	1118.0200	1122	0.4824	0.0000	-33.5268	0.0000	-17.3101	0.0000
17	LT	5.0444	43.2222	32.3376	1070.1260	1122	0.4535	0.0000	-33.3967	0.0000	-18.0444	0.0000
18	MM	7.3714	132.6763	33.3590	1115.8700	1122	0.4778	0.0000	-33.5593	0.0000	-17.2664	0.0000
19	MARUTI	3.4489	8.6729	10.1578	158.0670	1122	0.3454	0.0000	-31.3887	0.0000	-16.1931	0.0000
20	NTPC	2.5208	7.6390	13.6840	238.2078	1122	0.3707	0.0000	-32.9763	0.0000	-20.2251	0.0000
21	ONGC	21.8348	622.2149	33.4454	1119.7310	1122	0.4860	0.0000	-33.4865	0.0000	-17.3026	0.0000
22	RIL	2.7654	4.4999	3.3333	18.2249	1122	0.2694	0.0000	-30.1501	0.0000	-15.8053	0.0000
23	SBI	3.9207	7.6250	5.3443	44.1704	1122	0.3036	0.0000	-31.4771	0.0000	-18.6381	0.0000
24	SESGOA	6.4549	14.5046	7.0704	74.5954	1122	0.3282	0.0000	-16.6454	0.0000	-23.7665	0.0000
25	SUNPHAR	29.5156	781.1581	32.1205	1054.3900	1122	0.4957	0.0000	-33.4978	0.0000	-17.2944	0.0000
26	TATAMOT	29.9163	814.3582	33.4427	1119.6080	1122	0.4853	0.0000	-33.4454	0.0000	-17.2912	0.0000
27	TATAPOW	51.7021	1607.7990	33.4496	1119.9180	1122	0.4986	0.0000	-33.4646	0.0000	-17.2976	0.0000
28	TATASTEEL	4.8183	8.2984	4.0677	28.3631	1122	0.2807	0.0000	-8.4341	0.0000	-21.2649	0.0000
29	TCS	2.8187	6.7961	10.5483	188.5193	1122	0.3392	0.0000	-31.1473	0.0000	-19.5718	0.0000
30	WIPRO	5.2347	74.9267	32.9632	1097.7820	1122	0.4722	0.0000	-33.3671	0.0000	-17.2943	0.0000

Table 3 Estimates of EGARCH (1, 1) restricted model

Sl. No.	Stocks	ω	Prob.	β	Prob.	α	Prob.	γ	Prob.	Diagnostics			
										AIC	SIC	LL	DW
1	AXIS	0.074	0.002	0.143	0.000	0.124	0.000	0.956	0.000	6.815	6.837	-3818.071	1.815
2	BAJAJAUTO	3.351	0.000	5.354	0.000	-5.801	0.000	0.000	0.984	7.099	7.122	-3977.688	2.000
3	BHAAIRT	4.553	0.000	0.068	0.056	0.300	0.000	-0.139	0.001	6.881	6.903	-3855.167	1.755
4	BHEL	8.699	0.000	2.561	0.000	-2.213	0.000	-0.146	0.000	13.388	13.410	-7505.680	2.002
5	CIPLA	5.752	0.000	-0.464	0.000	0.249	0.000	-0.896	0.000	5.762	5.785	-3227.570	1.972
6	COAL	7.272	0.000	-2.656	0.000	2.750	0.000	-0.582	0.000	7.076	7.103	-3214.798	1.785
7	DRREDDY	0.436	0.000	-0.091	0.000	0.252	0.000	0.842	0.000	5.331	5.353	-2985.527	1.867
8	GAIL	2.635	0.000	0.184	0.000	0.489	0.000	0.028	0.244	5.682	5.704	-3182.426	1.785
9	HDFC	12.957	0.000	10.824	0.001	-11.244	0.000	0.004	0.983	16.051	16.074	-8999.754	2.000
10	HDFCBANK	13.114	0.000	-1.879	0.000	1.592	0.000	0.030	0.000	16.110	16.132	-9032.605	2.002
11	HEROMOT	-0.027	0.298	0.431	0.000	0.027	0.264	0.953	0.000	6.792	6.814	-3805.278	1.886
12	HINDALCO	0.221	0.000	0.025	0.044	0.082	0.000	0.947	0.000	7.421	7.443	-4158.124	1.808
13	HUL	3.623	0.000	-4.871	0.000	5.496	0.000	-0.101	0.000	6.106	6.129	-3420.580	1.617
14	ICICIBK	0.577	0.000	-0.127	0.000	0.239	0.000	0.867	0.000	6.687	6.709	-3746.212	1.695
15	INFOS	4.459	0.000	20.792	0.000	-17.773	0.000	-0.090	0.000	7.985	8.007	-4474.404	1.918
16	ITC	9.984	0.000	-1.043	0.481	0.721	0.661	0.007	0.979	12.841	12.863	-7198.654	2.000
17	LT	3.899	0.000	3.373	0.000	-2.891	0.000	-0.121	0.000	8.088	8.110	-4532.148	1.994
18	MM	9.807	0.000	-2.588	0.000	2.379	0.000	0.005	0.000	12.487	12.509	-7000.245	2.002
19	MARUTI	2.889	0.000	2.720	0.000	-1.760	0.000	0.157	0.000	7.108	7.130	-3982.454	1.805
20	NTPC	0.881	0.000	2.991	0.000	-1.846	0.000	0.621	0.000	6.828	6.850	-3825.409	1.882
21	ONGC	7.883	0.000	5.457	0.000	-5.463	0.000	-0.232	0.000	12.136	12.158	-6803.325	2.001
22	RIL	0.299	0.000	-0.011	0.627	0.111	0.000	0.899	0.000	5.765	5.787	-3228.907	1.786
23	SBI	2.739	0.000	-0.862	0.000	0.765	0.000	0.431	0.000	6.844	6.867	-3834.621	1.874
24	SESGOA	1.282	0.000	-0.164	0.000	0.490	0.000	0.751	0.000	7.729	7.752	-4331.034	1.680
25	SUNPHAR	12.256	0.000	22.492	0.000	-22.541	0.000	-0.063	0.117	15.640	15.662	-8768.797	2.002

26	TATAMOT	13.189	0.000	-9.608	0.001	9.340	0.000	0.023	0.921	16.050	16.072	-8998.789	1.999
27	TATAPOW	13.931	0.000	19.390	0.000	-19.399	0.000	-0.057	0.474	17.465	17.487	-9792.854	2.001
28	TATASTEEL	0.950	0.000	-0.243	0.000	0.368	0.000	0.794	0.000	6.823	6.846	-3822.908	1.742
29	TCS	-0.143	0.000	0.694	0.000	0.008	0.770	0.937	0.000	6.283	6.305	-3519.773	1.832
30	WIPRO	8.622	0.000	-3.068	0.000	3.278	0.000	0.009	0.875	10.444	10.467	-5854.239	1.986

Table 4 Estimates of EGARCH (1, 1) unrestricted model

Sl. No.	Stocks	ω	Prob.	β	Prob.	α	Prob.	γ	Prob.	ζ	Prob.	Diagnostics			
												AIC	SIC	LL	DW
1	AXIS	0.124	0.062	0.145	0.000	0.124	0.000	0.958	0.000	-0.005	0.467	6.816	6.843	-3818.021	1.814
2	BAJAJAUTO	3.867	0.000	2.204	0.000	-2.511	0.000	0.098	0.000	-0.135	0.000	7.062	7.089	-3955.669	2.002
3	BHAAIRT	-1.462	0.000	0.204	0.000	0.096	0.001	0.460	0.000	0.274	0.000	6.843	6.870	-3833.129	1.755
4	BHEL	21.152	0.000	10.976	0.000	-11.198	0.000	0.432	0.000	-1.200	0.000	13.807	13.834	-7739.907	1.999
5	CIPLA	-5.251	0.000	-0.043	0.295	-0.296	0.000	0.107	0.000	0.659	0.000	5.671	5.697	-3175.216	1.975
6	COAL	-2.949	0.000	-1.542	0.000	1.560	0.000	-0.396	0.000	0.727	0.000	6.917	6.949	-3141.353	1.806
7	DRREDDY	0.166	0.003	-0.122	0.000	0.262	0.000	0.806	0.000	0.038	0.000	5.329	5.355	-2983.361	1.867
8	GAIL	3.759	0.000	0.076	0.125	0.583	0.000	0.000	0.998	-0.088	0.000	5.679	5.706	-3179.835	1.784
9	HDFC	15.570	0.000	-4.705	0.000	4.205	0.002	0.301	0.003	-0.559	0.000	15.275	15.302	-8563.491	2.001
10	HDFCBANK	14.781	0.000	-3.064	0.153	2.860	0.182	0.728	0.000	-1.012	0.000	13.557	13.583	-7599.262	1.997
11	HEROMOT	-6.573	0.000	0.350	0.000	-0.270	0.000	0.162	0.000	0.900	0.000	6.505	6.532	-3643.458	1.891
12	HINDALCO	0.892	0.000	0.075	0.000	0.052	0.000	0.987	0.000	-0.064	0.000	7.377	7.404	-4132.680	1.800
13	HUL	-1.121	0.000	-2.811	0.000	2.846	0.000	-0.273	0.000	0.455	0.000	6.377	6.404	-3571.600	1.639
14	ICICIBK	0.105	0.181	-0.063	0.012	0.170	0.000	0.892	0.000	0.026	0.000	6.684	6.711	-3743.688	1.696
15	INFOS	1.379	0.000	-1.694	0.000	1.705	0.000	-1.061	0.000	0.899	0.000	7.951	7.977	-4454.274	1.946
16	ITC	9.457	0.000	-3.866	0.000	3.690	0.000	-0.044	0.000	0.100	0.000	12.757	12.784	-7150.677	2.002
17	LT	-12.802	0.000	2.799	0.000	-2.711	0.000	-0.158	0.000	1.352	0.000	7.478	7.505	-4189.151	1.992
18	MM	9.789	0.000	-2.883	0.000	2.629	0.000	0.010	0.949	0.001	0.985	12.489	12.516	-7000.210	2.001

19	MARUTI	-5.810	0.000	-0.249	0.000	0.250	0.000	-0.765	0.000	1.163	0.000	6.766	6.793	-3789.885	1.860
20	NTPC	2.965	0.000	-0.807	0.000	0.733	0.000	0.616	0.000	-0.093	0.000	6.789	6.816	-3802.855	1.945
21	ONGC	9.927	0.000	16.466	0.000	-16.515	0.000	-0.129	0.000	-0.083	0.033	12.432	12.459	-6968.579	2.001
22	RIL	0.792	0.000	-0.041	0.042	0.144	0.000	0.901	0.000	-0.037	0.000	5.747	5.774	-3218.347	1.787
23	SBI	2.568	0.000	-0.740	0.000	0.677	0.000	0.546	0.000	-0.030	0.000	6.850	6.877	-3836.674	1.870
24	SESGOA	-10.524	0.000	0.920	0.000	-0.926	0.000	0.051	0.017	1.114	0.000	7.847	7.874	-4396.345	1.684
25	SUNPHAR	7.288	0.000	6.466	0.000	-6.425	0.000	0.042	0.000	-0.255	0.000	12.590	12.617	-7057.029	2.001
26	TATAMOT	14.199	0.000	-6.653	0.000	6.230	0.000	0.074	0.000	-0.129	0.000	15.944	15.971	-8938.680	2.000
27	TATAPOW	37.917	0.000	-2.213	0.000	2.018	0.000	-0.324	0.000	-1.606	0.000	16.426	16.453	-9208.942	2.001
28	TATASTEEL	-0.488	0.000	-0.344	0.000	0.411	0.000	0.695	0.000	0.132	0.000	6.879	6.906	-3853.356	1.727
29	TCS	-8.195	0.000	0.991	0.000	0.170	0.042	0.185	0.000	0.891	0.000	6.289	6.316	-3522.362	1.826
30	WIPRO	8.598	0.000	-2.425	0.100	2.640	0.074	0.006	0.975	0.004	0.964	11.199	11.226	-6276.856	1.993

Table 5 Estimates of TGARCH (1, 1) restricted model

Sl. No.	Stocks	ω	Prob.	β	Prob.	α	Prob.	γ	Prob.	Diagnostics			
										AIC	SIC	LL	DW
1	AXIS	6.624	0.000	0.105	0.000	-0.744	0.000	0.872	0.000	6.812	6.835	-3816.652	1.817
2	BAJAJAUTO	14259.630	0.311	-0.001	0.000	-1.363	0.982	0.599	0.124	12.931	12.953	-7249.251	2.002
3	BHAAIRT	77.436	0.000	0.124	0.000	-0.547	0.000	-0.081	0.008	6.917	6.940	-3875.595	1.754
4	BHEL	407125.900	0.308	-0.001	0.000	-1.077	0.995	0.598	0.125	16.284	16.306	-9130.263	2.002
5	CIPLA	9.302	0.000	-0.004	0.098	0.741	0.000	0.439	0.000	5.788	5.811	-3242.271	1.975
6	COAL	146.916	0.000	0.005	0.341	-12.364	0.000	-0.163	0.000	7.082	7.109	-3217.485	1.823
7	DRREDDY	2.670	0.000	0.061	0.000	-1.159	0.000	0.847	0.000	5.333	5.356	-2987.089	1.855
8	GAIL	2.423	0.000	0.213	0.000	0.025	0.757	0.710	0.000	5.665	5.688	-3173.213	1.782
9	HDFC	359302.400	0.307	-0.001	0.000	-0.713	0.998	0.598	0.151	16.158	16.181	-9059.778	2.001
10	HDFCBANK	383026.300	0.311	-0.001	0.000	-1.074	0.997	0.598	0.133	16.223	16.245	-9096.050	2.002
11	HEROMOT	19.153	0.000	1.721	0.000	-1.494	0.000	0.292	0.000	6.719	6.742	-3764.633	1.887

12	HINDALCO	7.939	0.000	0.036	0.000	-0.289	0.000	0.924	0.000	7.432	7.454	-4164.312	1.808
13	HUL	41.227	0.000	0.280	0.000	-8.472	0.000	-0.002	0.000	5.998	6.021	-3360.082	1.686
14	ICICIBK	8.327	0.000	0.032	0.000	-0.882	0.000	0.903	0.000	6.683	6.706	-3744.253	1.695
15	INFOS	278.386	0.011	-0.002	0.403	-3.664	0.066	0.605	0.001	8.783	8.806	-4922.440	1.928
16	ITC	14527.340	0.310	-0.001	0.000	-0.483	0.995	0.598	0.129	12.952	12.974	-7261.030	2.002
17	LT	1212.768	0.315	-0.001	0.000	-0.005	1.000	0.599	0.136	10.470	10.492	-5868.562	1.994
18	MM	11431.520	0.305	-0.001	0.000	-1.188	0.979	0.599	0.127	12.711	12.733	-7125.884	2.002
19	MARUTI	3.982	0.000	0.011	0.000	3.227	0.000	0.749	0.000	7.094	7.117	-3974.853	1.868
20	NTPC	150.469	0.000	-0.004	0.000	-5.379	0.000	-0.657	0.000	6.801	6.824	-3810.594	1.930
21	ONGC	251424.100	0.307	-0.001	0.000	-0.404	0.998	0.598	0.143	15.802	15.825	-8860.052	2.002
22	RIL	2.870	0.000	0.035	0.000	-0.480	0.000	0.882	0.000	5.767	5.789	-3230.253	1.786
23	SBI	36.784	0.000	-0.006	0.113	-2.368	0.000	0.631	0.000	6.869	6.892	-3848.747	1.876
24	SESGOA	49.329	0.000	0.530	0.000	-1.863	0.000	0.560	0.000	7.711	7.733	-4320.722	1.671
25	SUNPHAR	396281.700	0.307	-0.001	0.000	-0.695	0.998	0.598	0.138	16.257	16.279	-9115.170	2.002
26	TATAMOT	430682.400	0.307	-0.001	0.000	-1.966	0.995	0.599	0.131	16.338	16.360	-9160.551	2.000
27	TATAPOW	1678764.000	0.308	-0.001	0.000	-1.003	0.998	0.599	0.145	17.700	17.723	-9924.968	2.001
28	TATASTEEL	17.791	0.000	0.027	0.000	-1.136	0.000	0.843	0.000	6.876	6.899	-3852.659	1.761
29	TCS	6.905	0.000	0.446	0.000	-1.503	0.000	0.727	0.000	6.331	6.353	-3546.502	1.849
30	WIPRO	3645.771	0.303	-0.001	0.000	-1.734	0.923	0.600	0.126	11.562	11.584	-6481.188	1.990

Table 6 Estimates of TGARCH (1, 1) unrestricted model

Sl. No.	Stocks	ω	Prob.	β	Prob.	α	Prob.	γ	Prob.	ζ	Prob.	Diagnostics			
												AIC	SIC	LL	DW
1	AXIS	67.718	0.000	0.142	0.000	-2.124	0.000	0.707	0.000	-2.699	0.000	6.963	6.990	-3900.145	1.847
2	BAJAJAUTO	21937.790	0.447	-0.002	0.000	-4.016	0.967	0.597	0.142	-1.966	0.999	13.126	13.153	-7357.713	1.996
3	BHAAIRT	-107.218	0.000	0.249	0.000	0.007	0.941	0.292	0.000	10.966	0.000	6.857	6.884	-3840.748	1.754
4	BHEL	626347.500	0.419	-0.002	0.000	-4.763	0.994	0.594	0.136	-0.298	1.000	16.492	16.518	-9245.730	2.002

5	CIPLA	-59.786	0.000	-0.006	0.277	1.356	0.000	0.121	0.000	6.182	0.000	5.706	5.733	-3194.968	1.975
6	COAL	-42.137	0.062	0.073	0.052	-8.558	0.000	0.400	0.000	11.311	0.000	7.219	7.251	-3278.546	1.823
7	DRREDDY	-8.350	0.000	0.047	0.000	-1.432	0.000	0.704	0.000	1.448	0.000	5.340	5.367	-2989.861	1.868
8	GAIL	11.286	0.000	0.217	0.000	-0.315	0.000	0.710	0.000	-0.724	0.000	5.663	5.690	-3170.927	1.782
9	HDFC	552772.900	0.455	-0.002	0.284	-3.878	0.994	0.594	0.001	-0.327	1.000	16.366	16.393	-9175.467	2.001
10	HDFCBANK	589271.200	0.534	-0.002	0.000	-4.791	0.995	0.594	0.146	-0.295	1.000	16.430	16.457	-9211.121	2.002
11	HEROMOT	-51.536	0.000	1.474	0.000	-1.476	0.000	0.300	0.000	6.867	0.000	6.652	6.679	-3725.607	1.888
12	HINDALCO	92.574	0.000	0.041	0.000	-0.404	0.000	0.940	0.000	-6.258	0.000	7.395	7.422	-4142.616	1.795
13	HUL	26.490	0.000	0.572	0.000	-10.430	0.000	-0.001	0.717	1.202	0.005	5.957	5.984	-3335.940	1.683
14	ICICIBK	24.254	0.160	0.133	0.000	-1.816	0.000	0.210	0.001	1.784	0.218	6.729	6.756	-3769.195	1.703
15	INFOS	422.577	0.222	-0.003	0.070	-8.673	0.339	0.599	0.002	-0.080	0.997	8.931	8.958	-5004.543	1.948
16	ITC	22349.610	0.530	-0.002	0.000	-2.089	0.985	0.595	0.155	-4.007	0.999	13.159	13.185	-7375.928	2.000
17	LT	1863.209	0.658	-0.002	0.000	-0.382	0.980	0.596	0.143	-1.173	0.997	10.673	10.700	-5981.433	1.992
18	MM	17586.800	0.563	-0.002	0.000	-3.332	0.967	0.596	0.142	-3.337	0.999	12.913	12.940	-7238.202	1.999
19	MARUTI	-217.535	0.000	1.125	0.000	2.068	0.000	-0.003	0.129	23.569	0.000	6.996	7.023	-3918.925	1.851
20	NTPC	65.617	0.000	-0.004	0.116	-4.624	0.001	0.738	0.000	-1.448	0.193	6.878	6.904	-3852.333	1.927
21	ONGC	386806.200	0.526	-0.002	0.000	-3.011	0.989	0.594	0.154	-0.440	1.000	16.010	16.037	-8975.828	2.002
22	RIL	18.538	0.000	0.050	0.000	-0.775	0.000	0.842	0.000	-1.094	0.000	5.761	5.787	-3225.671	1.784
23	SBI	90.886	0.000	-0.002	0.538	-2.496	0.000	0.758	0.000	-4.719	0.000	6.870	6.897	-3847.884	1.876
24	SESGOA	-79.926	0.000	0.297	0.000	-1.726	0.000	0.642	0.000	9.800	0.000	7.674	7.701	-4299.140	1.672
25	SUNPHAR	609664.100	0.356	-0.002	0.002	-2.846	0.994	0.596	0.161	-0.158	1.000	16.468	16.495	-9232.530	2.002
26	TATAMOT	662588.200	0.487	-0.002	0.000	-6.933	0.994	0.594	0.159	-0.281	1.000	16.544	16.571	-9275.387	2.000
27	TATAPOW	2582714.000	0.407	-0.002	0.000	-4.666	0.995	0.594	0.154	-0.070	1.000	17.908	17.935	-10040.310	2.001
28	TATASTEEL	32.298	0.000	0.041	0.000	-1.926	0.000	0.746	0.000	0.231	0.000	6.949	6.976	-3892.397	1.764
29	TCS	-9.877	0.000	0.485	0.000	-1.303	0.000	0.709	0.000	1.398	0.000	6.326	6.353	-3542.939	1.847
30	WIPRO	5608.316	0.544	-0.002	0.000	-5.881	0.903	0.599	0.130	-0.939	0.999	11.733	11.760	-6576.175	1.985



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Abstract: As a result of recent, highly publicized financial scandals; reported increases in occupational fraud; and heightened concerns over money laundering to support terrorism and racketeering, legislative mandates and public expectations have heightened the necessity to further define the auditor's and accountant's responsibility for detecting fraud within organizations. Successful fraud or forensic accounting analyses and findings reported by practicing professionals may be the difference between whether perpetrators avoid detection of their illegal activities or they are brought to justice. In most cases, success is directly and primarily dependent upon the knowledge, skills, and abilities of the professionals performing the work. Consequently, the demand for professionals with formal education in fraud and forensic accounting has grown. This paper addresses the nature, features and extent relating to academic and career development in forensic accounting.

Key Words: Career Development, Financial Scandals, Forensic Accounting

1. Introduction

During the years following the financial scandals surrounding Enron, WorldCom, Global Crossing, Qwest, Parmalat), the accounting profession had undergone radical changes. With the spotlight on the accounting profession, a new market with a new breed of accountants known as forensic accountants has emerged. Forensic accounting arises from the cause and effect of fraud (Modugu and Anyaduba, 2013; Enofe et al., 2013) and human technical error (Enofe et al., 2013). At present, forensic accounting also covers cases that involve money laundering, corruption, gangsterism, and terrorism crimes (Lee, 2013).

The Association of Certified Fraud Examiners (ACFE), defines forensic accounting as the use of professional accounting skills in matters involving potential or actual civil or criminal litigation (ACFE, 2011). Wadhwa and Pal (2012) defined the forensic accounting as investigation of financial fraud which involve the analysis of accounting records in order to prove or disprove the occurrence of fraud and to act as an expert witness in court. To identify fraud indicators, forensic accountants must be trained in many areas such as investigation, detection and others specialized auditing techniques (Bressler, 2011). Akyel (2012) relates the job as a forensic accountant as Sherlock Holmes in which the scope of the job is similar with a detective's job. Commonalities between the various definitions reside in the areas of litigation services, accounting investigation and preparing court-ready evidence, all of which require a certain level of education and expertise.

Currently, there appears to be a gap between forensic accounting practices and education in the sense that forensic accounting is viewed as one of the most secure career tracks, yet there

are only a limited number of accounting programs offering forensic accounting courses. Forensic accounting education has been limited primarily to continuing professional education sessions for practicing accountants and currently only a few universities teach forensic accounting (Rezaee and Burton, 1997). Practically, accountants who entered this part of the profession developed their forensic accounting skills working through the proverbial “on-the-job training” process. The increasing demands in the current regulatory, legal, and business environments should serve as a stimulus for professional and postgraduate accounting program to emphasize and embrace further attention to forensic accounting.

2. Necessity for Forensic Accounting

Recent corporate accounting scandals have led to increased legal and regulatory requirements for improved corporate governance. These requirements address internal controls for detecting and deterring fraud and encourage financial statement auditors to be more aggressive in investigating possible fraud. This, in turn, has resulted in increased demand for practitioners and professionals to have greater fraud awareness, as well as knowledge and skills related to fraud and forensic accounting. Furthermore, there is growing demand for accountants in forensic and litigation advisory services in the public sector too, for example, the Inland Revenue Department and other government agencies have placed greater emphasis on white collar crime, money laundering and tax evasion (Lee, 2013). Another unfortunate reality is the increasing victimization of individuals targeted in fraud (e.g., identity theft). Raising awareness of fraud prevention measures and assisting in remediation procedures are crucial to effectively addressing this growing problem in society. Subsequently, the public has also started to show interest on services provided by the forensic accounting in order to search for the wrongdoings (Modugu and Anyaduba, 2013). Salleh and Aziz (2014) agrees that both private and public sectors need the forensic accounting services to detect financial fraud activities. There have been many indications that the demand for forensic accounting services will continue to increase and that demand requires proper training to meet the ever-changing market challenges.

The 21st century has become the era of the forensic accounting, an effective tool for fraud detection and fraud prevention (Okoye and Gbegi, 2013; Islam, Rahman and Hossan, 2011). Similarly, Akyel (2012) states that, forensic accountants focus more on detection and prevention of fraud. As forensic accountants look beyond numbers compared to the accountants who only look over the numbers, their knowledge and skills in the accounting field can be very useful in identifying and solving legal issues. By applying the accounting and auditing knowledge, skills (Krstic, 2009) and techniques (Houck et al., 2006) forensic accountants can perform their task and activities efficiently and effectively (Krstic, 2009; Houck et al., 2006).

Until recent times, the common (including the public, management officials, directors and regulators) perception was that detecting fraud is part of the accounting and auditing functions. The misconception of fraud is that it was something internal and external auditors were supposed to provide safeguards against. Forensic accountants and auditors share some goals similar to conventional accountants and auditors, but with different roles, knowledge and skills. Forensic accountant investigations include identification of fraud and other illegal acts. Forensic and investigative accounting involves the application of financial skills and investigative mentality to unresolved issues, conducted within the context of the rules of evidence. A forensic accounting service requires an independent, innovative and flexible professional to investigate any types of fraud. As a discipline, it encompasses fraud knowledge, financial expertise, and a sound knowledge and understanding of business reality and the

working of the legal system (KPMG Malaysia Fraud Survey Report, 2009; Bologna and Lindquist, 1987).

3. The Profession of Forensic Accountant

Forensic accounting apply the combination of accounting, auditing and investigative skills in order to discover fraud cases and assists in legal matters (Modugu and Anyaduba, 2013; Okoye and Gbegi, 2013; Enofe et al., 2013; Rezhou, 2011; Houck et al., 2006). The integration of the three skills can help the forensic accountant to draw conclusion and identify suspicious transactions or irregular patterns when analyzing the data Koh et al., (2009). Prabowo (2013) claims that ordinary auditing skills are usually used in detecting material misstatements, however, these skills are insufficient when dealing with fraud. Ozkul and Pamukcu (2012) emphasized that forensic accountant should have three main skills which are accounting, auditing and investigating.

Crumbly and Aspostolou (2002), described these three main skills as a three-layered wedding cake with the bottom layer with the largest size is like a solid accounting background; the middle layer is more likely to be knowledgeable in detecting fraud, auditing and risk assessment; and the smallest layer of the cake is the legal knowledge. Although legal knowledge is being described as the least part of forensic investigation, it is the glue that holds the overall investigation to be successful.

According to Moncliff (2005), a forensic accountant support the litigation process while conducting a fraud investigation. Especially when involved in legal matters, they have to present the evidence collected in a way that is acceptable by the legal fraternity (Stimpson, 2007). Furthermore, a forensic accountant must be able to gather relevant facts when involved in litigation and advisory disputes and be familiar with applicable laws and standards, multiple languages or client locations as most of the cases are complicated (KPMG Forensic, 2013).

Living in the hyperconnected world offers new opportunities for both perpetrators and investigators of fraud. In many ways, it changes the work of forensic investigations. As computer-facilitated fraud takes advantage of the ubiquitous nature of technology, Akkeren et al., (2013) stresses the importance of forensic accountant to be familiar with computer forensics. Computer forensic skills are required to perform the investigations using computer and other electronic data. The evidence collected will then be presented in court. Thus, having IT qualifications would be an added bonus for professionals accountants. Both investigative accounting and computer forensics may or may not have accounted qualifications as their background, but, it is compulsory for a forensic accountant to have accounting qualifications and knowledge.

According to Krstic (2009), the need for a forensic accountant is not towards the financial statements as it is the responsibility of the external auditor. In contrast, the forensic accountant has more responsibility in assessing the transactions of the people who were involved in fraud. A forensic accountant may also provide services to calculate the loss suffered by the parties involved in business disputes and offer their professional opinions and help to resolve disputes (Okoye and Akamobi, 2009). The interrelationship among auditing, fraud, and forensic accounting is dynamic, changing over time due to political, social, and cultural events. With the increase in white-collar crime and the consequent increase in demand for forensic accountants in Malaysia, the level of overlap between forensic accounting and fraud may be larger. Thus, it is crucial to have a strong research in the area of auditing approach in order to identify potential fraud happening in the organization (Kaminski, Wetzel and Guan, 2004). Therefore, having formal qualifications and experience in this field may be an important consideration for forensic accountants.

As the core role of forensic investigation concentrates on the identification, explanation and communication of the clues hiding behind economic and reporting events, forensic accountant are expected to have, at a minimum, adequate knowledge and skills in the area of auditing, accounting and investigating skills (Koh et al., 2009). It is also imperative that forensic accountants possess the ability to interview and effectively elicit information from people who may not be willing to give truthful answers. Therefore, it is important for forensic accountants to be skeptical of those people that they deal with. Knowledge and experience in financial planning and management techniques, as well as advanced computer skills, including an ability to understand and apply various information technology and accounting systems, are also key characteristics of forensic accountants (Crumbley, 2003). In addition, forensic accounting professionals should have skill sets in multiple areas throughout their working experience. These skills when combined and leverage in an efficient manner would form an excellent foundation of forensic expertise. Figure 1 shows the core skills required by forensic accountant in general.

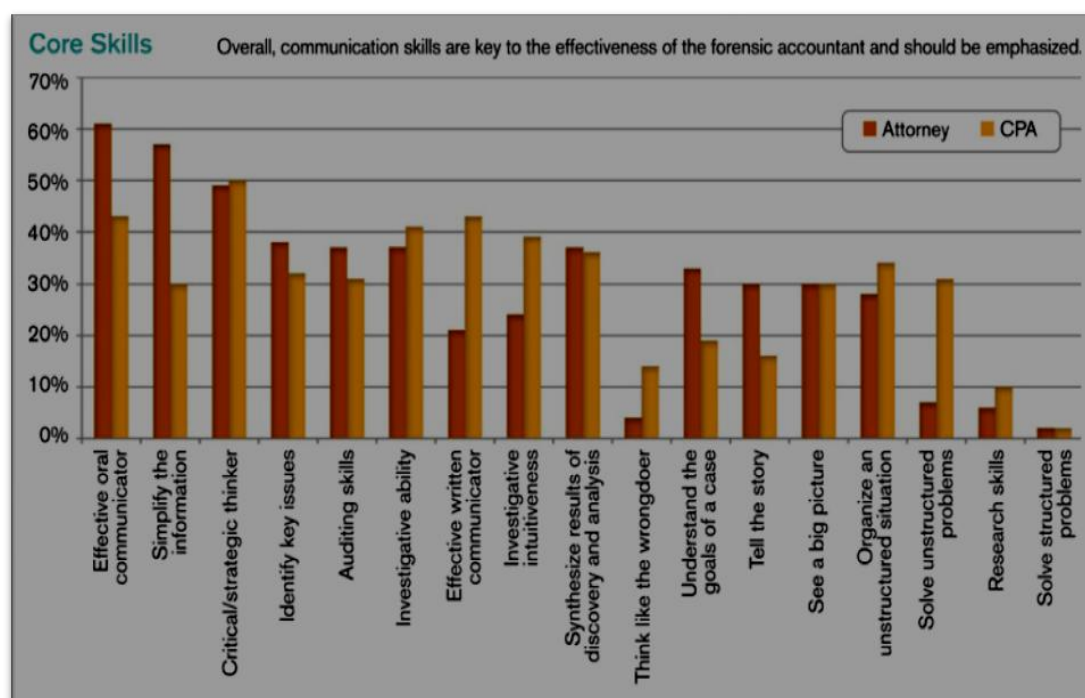


Fig 1: Overall Skills Expected of Forensic Accountants (Excerpt from aicpa.org)

4. Academic Development of Forensic Accounting

Due to high demand for forensic accounting skills globally, higher education institutions have responded to form forensic accounting programs or courses. Remarkably, forensic accounting profession has been listed as one of the top twenty profession jobs demanded in the future (Krstic, 2009). Forensic knowledge and skills are needed to recognize these crimes (Okoye and Gbegi, 2013). However, recent empirical evidence has shown that there is an increasing gap between what skills new accountants possess and skills they need in the workplace (Kavanagh, 2007). Howieson (2003) suggested that universities will have to rethink their role and approach as they are now expected to offer generic, lifelong learning skills to students essential for success in the current corporate environment. Moreover Buckhoff and Schrader (2000,) posit the addition of forensic accounting course to the accounting curriculum can greatly benefit the three major stakeholders in accounting education academic institutions, students, and employers of accounting graduates.

The forensic skill covers not only the auditing skill, but also included investigation skills, critical thinking skills, deductive analysis skill, legal knowledge and beyond conventional accounting knowledge (Van Akkeren, Buckby and MacKenzie, 2013). In particular, this subject area interfaces with several related disciplines which may include law, computer science, criminal justice, economics, business administration, and information systems. Recently, universities have begun adding forensic accounting and fraud investigation related content to their accounting curriculum. In some cases, this content comes in the form of sections of existing courses dedicated to the study of forensic accounting issues. Fundamental forensic knowledge includes:

- Professional responsibilities and practice management
- Laws, courts and dispute resolution
- Planning and preparation
- Information gathering and preservation (documents, interviews/interrogations, electronic data)
- Discovery
- Reporting, experts and testimony (Durkin and Ueltzen, 2009).

In developed countries such as in the United States (US) and in the United Kingdom (UK), the forensic accounting curriculum has been integrated in universities' undergraduate and postgraduate programs. A recent study conducted by Smith and Crumbley (2009) reported that 65% of college programs surveyed offered one course in fraud or forensic accounting, and 22.5% offered two. Five percent or fewer had three to six courses. Approximately 58% of the courses were undergraduate level. These results indicate a steady increase in the number of college programs that offer fraud or forensic accounting programs over the last decade. Recently, universities have begun adding forensic accounting and fraud investigation related content to their accounting curriculum for undergraduate program too. In some cases, this content comes in the form of sections of existing courses dedicated to the study of forensic accounting issues.

Although the progress to implement new courses in the universities has been slow, courses have been put in place. In Malaysia only Asia Pacific University offer Bachelor in Accounting and Finance with a specialism in Forensic Accounting. Universiti Teknologi MARA (UiTM) pioneered in providing postgraduate programs for forensic accounting among Malaysian universities. To date, other universities that offer postgraduate programs for forensic accounting are Asia Pacific University and HELP University. Similarly, Hong Kong and Singapore are also striving to provide sufficient education and training for the discipline of forensic accounting, offering taught postgraduate courses such as MSc in Forensic Audit and Accounting and Postgraduate Diploma in IT Forensics.

AICPA's survey report entitled Characteristics and Skills of the Forensic Accountant, found that academics prefer forensic accounting to be emphasized in postgraduate program and professional accountants had a slight preference for having the forensic accounting curriculum as part of an undergraduate program. Separating the forensic accounting program, either at the graduate level or as a component of an existing accounting undergraduate level, appears to be the preferred approach. This result is contrary to an earlier Rezaee et al. (2004) study that reported 50% of academicians preferred integration of forensic accounting material into existing accounting and auditing courses. For example, Peterson and Reider (2001) found, from an examination of course syllabi, that almost all forensic accounting courses in the sample were graduate courses.

Despite several devastating financial scandals that surface from time to time, fraud and forensic accounting in academia are still unfamiliar in some parts of the world. For instance, in Nigeria, the awareness of forensic accounting among undergraduates is awfully low as both the academic institutions and professional bodies fail to include the subject in the academic curriculum and syllabus (Efiong, 2012). Furthermore, the Nigerian Companies and Allied Matters Act 2004, has not made it necessary for traditional statutory auditors to incorporate some measures of forensic inquiries into their audit services for effective fraud detection. China on the other hand has taken several measures to promote forensic accounting among their professional accountants (Yin Zhang, 2006). International FCPA Professional Certification Center took up the initiative to develop training, examination and certification of business and relevant qualification certificate in China (Sui, 2013).

In addition, having added professional credentials can help increase the credibility of the forensic accountant professions as well as to be recognized as an independent agency (Huber, 2013). There are several professional bodies that provide professional qualifications and train their members with the skills needed to be forensic accountant. In the US particularly, there are ample of professional bodies providing support for forensic accountant such as the American Institute of Certified Public Accountants (AICPA), The National Association of Certified Valuation Analysts (NACVA), The Association of Certified Fraud Examiners (ACFE), Association of Certified Fraud Specialists (ACFS) and The Forensic CPA Society, Inc. (FCPAS). In Malaysia, the main professional bodies that are relevant to forensic accountant are The Association of Certified Fraud Examiners (ACFE) and The Certified Anti-Money Laundering Specialist (ACAMS).

5. Conclusion

Forensic accounting is a niche within the field of accountancy that employs accounting and financial skills during investigations of fraud, disputes, and suspected transgressions. It is the responsibility of a forensic accountant to identify and uncover illegitimate financial practices in order to identify suspects and recover illicit funds. This investigation increases the complexity of the profession. Possessing a finance-related degree and/or additional training in criminal justice or law enforcement will be added bonuses, however, professional qualification are a must. Aside from specialised qualifications and good numerical skills, inquisitive and analytical minds are of utmost importance.

As forensic skill is identified to be a crucial need expected by potential employer therefore this it is important to ensure the skill is fully utilized. However, there is a contradiction between theory and application. In addition, accounting academics play an important role in educating students with the forensic accounting skills as it will add more value to their auditing practices (DiGabriele, 2009). Moreover, the students can keep aligned with the real challenges faced by the practitioners (Carnes and Glerlasinski, 2001). Relevant experience accumulated, meaningful skills achieved and ongoing training received could help strengthen the profession as forensic accountants would be required to update their expertise.

Additional research is needed to provide guidance on the appropriate approach given the resource constraints faced by most institutions. The dominant model currently is to provide a course or two in forensic accounting, or integrate forensic accounting into the existing curriculum, and let on-the-job experience do the rest. Both academic and professional practitioner should collaborate to develop consistent and congruent educational opportunities for undergraduate, postgraduate and professional credentials.

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Determinants of Capital Structure: Evidence from Selected Indian Companies

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Abstract: Capital structure decision is one of the important financial decisions that a firm has to take in order to align the interest of shareholders and the business. An optimum capital structure should always be planned by a business in order to meet the objective of maximizing the economic interest of its shareholders. A number of factors influence capital structure decisions of a firm and they drive the profitability position. This study examines the determinants of capital structure of selected twenty companies in India using the emerging data set.

Key Words: Asset Tangibility, Capital Structure, Financing Decisions, Profitability

1. Introduction

The requirement for funds is continuous for a business concern. It is required for all types of activities. Economists speak of 'Capital' as wealth which is used in the production of additional wealth. It is one of the most important elements of factors of production. Businessmen frequently use the word capital in the sense of the total assets employed in a business. The accountant uses the word in the sense of net assets, or stockholders' interest as shown by the balance sheet or the net worth of shareholders' equity in law capital means 'Capital Stock'. The capital structure is made of debt and equity securities which comprise a firm's financing of its assets. It is the debt, plus preferred stock, plus net worth. The scientific analysis of these instruments and its mobilization has a considerable significance in the real life situation. An unplanned capital structure may yield good results in the short run it is dangerous in the long run. Hence, the study of capital structure becomes relevant.

Optimal Capital Structure is that amount of combination of capitalization which results in the least amount of cost and yields maximum profits. A financial manager defines the proper capital structure for his firm. He determines the mix of debt and equity which would maximize the value of equity stock.

Theoretically, the financial manager should plan an 'Optimal Capital Structure' for his company. The optimal capital structure is obtained when the marginal real cost of each source of fund is the same. In practical situation, determining an optimal capital structure is the same. In practical situation, determining an optimal capital structure is a difficult task, one has to consider number of factors other than theory. There are significant variations among industries and many individual companies within an industry with regard to capital structure. The judgment of a person taking the capital structure decision plays the most crucial part. The two similar companies may have different capital structure. Hence a uniform model or formula

cannot be adopted. It is influenced by a number of other factors which are highly psychological, complex and qualitative and do not always follow accepted theory, since capital markets are not perfect.

2. Review of Literature

The debate on determining the ideal capital structure and value of firms can be traced back to Modigliani and Miller (1958) who in their research concluded that the value of the firm is self-determining of capital structure and that the value of an unlevered firm is equal to that of a levered firm. The research was based on the assumption of absence of taxes. This assumption was considered unrealistic and in their subsequent research Modigliani and Miller (1963) took tax into consideration and concluded that because of tax shield on debt as a factor, the value of a levered firm was more than the value of an unlevered firm and that this value was equal to the value of the tax shield. Modigliani and Miller (1977) later modified their earlier research of 1963 and incorporated the effect of personal taxes. Personal taxes were classified into two categories, tax on income from holdings shares and tax on income from debt securities. In this research (1977), Modigliani and Miller identified certain special cases where gain from leverage became zero, giving the original (1958) result. Thus their results signify the existence of an optimal capital structure at the macro level but not at the micro level.

According to Jensen and Meckling (1976), the optimal capital structure is obtained by trading off the agency cost of debt against the benefit of debt. Here, Jensen and Meckling first identified disputes between shareholders and managers because of management's ownership being less than 100% of the equity. Jensen (1986) proposed that this problem could be reduced by increasing the percentage of shares owned by the manager or by increasing debt in the capital structure. This would result in the reduction of the amount of unused cash available to managers (Jensen, 1986 and Stulz, 1990). This would eventually benefit debt financing.

Agency models have shown a positive relation between leverage and firm value, regulatory abidance, probability of defaults, value at the time of liquidation, freely available cash flows and the significance of managerial reputation. Leverage is expected to be negatively correlated with interest coverage, growth opportunities, and possibility of reorganization following default. It has been said that firm value and leverage are positively associated because these two variables move together in response to some exogenous factors (Hirschleifer and Thakor, 1989). Agency theory has shed light on the theory of capital structure but does not elaborate on all the differences in capital structures observed in practice.

Apart from agency theory, previous research identifies a difference in information about projects or investment opportunities of firms as another theory to explain capital structure. Capital structure can be viewed as an indication given by managers to investors (Leland and Pyle, 1977) or as a way of reducing inefficiencies caused by information asymmetry. The mitigation literature starts with Myers and Majluf (1984).

Harris and Raviv (1990) in their research state that the optimal structure is obtained through a trade-off between liquidation decisions and higher investigation costs. They concluded that high leverage can be an outcome with large firm value, lower probability of reorganization following default, and higher debt level. Stulz (1990) stated that the optimal capital structure can be designed by a trade-off between benefit of debt and cost of debt. His arguments were based on the fact that managers issue debt only if they fear a takeover.

Diamond (1989), and Hirschleifer and Thakor (1989) in their research argued that the asset substitution problem (such as using debt to finance high risk projects instead of equity) could be reduced because of the management's reputation being at stake. While shareholders

preferred to maximize an expected return, managers maximized the possibility of being successful. Diamond (1989) argued that as a firm gets older, it chooses less risky projects, thereby reducing its defaults which would lead to a lower cost of debt. This theory suggests that younger firms will have less debt than older ones.

Myers and Majluf (1984) emphasized that if investors were less well informed than company insiders while equity was being issued, it would result in mis-pricing. Mis-pricing can be avoided if firms use external funds followed by low risk debt, and finally, equity to finance new investment. This is called the “pecking order theory” of financing. Krasker (1986) showed in his research that on announcement of equity issues, the price of equity will fall and new projects will be financed by internal funds or low risk debt. Korajczyk, Lucas, and McDonald (1990) argued that the underinvestment problem was less severe after information releases. It could be concluded that firms with less tangible assets in relation to the total firm value would tend to have more information asymmetries.

Copeland and Weston (1983) in their research emphasized that bankruptcy costs was one of the causes for differences in capital structure amongst firms. According to them if bankruptcy costs were not assumed away, an optimal capital structure could possibly exist, and lead to a substitution between leverage and likelihood of bankruptcy.

Anshu Hondoo and Kapil Sharma(2014);identified the important determinants of capital structure of 870 listed Indian firms comprising both private sector companies and government companies for the period 2001-2010. It concluded that factors such as profitability, growth, asset tangibility, size, cost of debt, tax rate, and debt serving capacity have significant impact on the leverage structure chosen by firms in the Indian context.

3. Statement of the Problem

The right capital structure planning increases the power of company to face the losses and changes in financial markets, helps in idea generation of new source of fund, helps in doing adjustment according to business environment, etc.

Successful corporate leaders must constantly consider factors such as the company and its management, the economy, government regulation and social trends, the state of capital markets, and industry dynamics. Thus, the study explores the determinants of capital structure in the Indian context using the emerging data set.

4. Objectives of the Study

The primary objective of this study is to identify factors that influence capital structure decisions (financing decisions) of selected companies. This objective is split into three specific objectives. They are:

- 1) To understand the impact of each independent variable while raising short term debt for selected companies.
- 2) To understand the impact of each independent variable while raising long term debt for selected companies
- 3) To understand the impact of each independent variable while raising total debt for selected companies.

5. Hypotheses

- H011 There is no significant impact of profitability of selected companies on short term debt.
H012 There is no significant impact of growth of selected companies on short term debt.
H013 There is no significant impact of asset tangibility of selected companies on short term debt.

- H014 There is no significant impact of size of selected companies on short term debt.
H015 There is no significant impact of liquidity of selected companies on short term debt.
H016 There is no significant impact of tax rate of selected companies on short term debt.
H017 There is no significant impact of debt serving capacity of selected companies on short term debt.
H018 There is no significant impact of age of selected companies on short term debt.
H019 There is no significant impact of financial charges coverage ratio of selected companies on short term debt.
H021 There is no significant impact of profitability of selected companies on long term debt.
H022 There is no significant impact of growth of selected companies on long term debt.
H023 There is no significant impact of asset tangibility of selected companies on long term debt.
H024 There is no significant impact of size of selected companies on long term debt.
H025 There is no significant impact of liquidity of selected companies on long term debt.
H026 There is no significant impact of tax rate of selected companies on long term debt.
H027 There is no significant impact of debt serving capacity of selected companies on long term debt.
H028 There is no significant impact of age of selected companies on long term debt.
H029 There is no significant impact of financial charges coverage ratio of selected companies on long term debt.
H031 There is no significant impact of profitability of selected companies on total debt.
H032 There is no significant impact of growth of selected companies on total debt.
H033 There is no significant impact of asset tangibility of selected companies on total debt.
H034 There is no significant impact of size of selected companies on total debt.
H035 There is no significant impact of liquidity of selected companies on total debt.
H036 There is no significant impact of tax rate of selected companies on total debt.
H037 There is no significant impact of debt serving capacity of selected companies on total debt.
H038 There is no significant impact of age of selected companies on total debt.
H039 There is no significant impact of financial charges coverage ratio of selected companies on total debt.

6. Scope of the Study

The scope of the study is limited to analyse the determinants of capital structure of selected 20 companies for four year period from 2012-13 to 2015-16. The analysis is done using only 12 variables.

Table- I Sample for the Study

Sl. No.	Company	Sl. No.	Company
1.	Adani Enterprises Ltd.	11.	NTPC Ltd.
2.	Aditya Birla Nuvo Ltd.	12.	Power Grid Corporation of India Ltd.
3.	Bharat Heavy Electricals Ltd.	13.	Reliance Communications Ltd.
4.	Container Corporation of India Ltd.	14.	Reliance Industries Ltd.
5.	GAIL (India) Ltd.	15.	Steel Authority of India Ltd.
6.	Godrej Consumer Products Ltd.	16.	Tata Chemicals Ltd.
7.	Hindalco Industries Ltd.	17.	Tata Consultancy Services Ltd.
8.	Jindal Steel and Power Ltd.	18.	Tata Motors Ltd.
9.	JSW Steel Ltd.	19.	Tata Power Co. Ltd.
10.	Larsen and Toubro Ltd.	20.	Tata Steel Ltd.

7. Operational Definition of the Concepts

(a) Short term debt ratio: Short term debt is an account shown in the current liabilities of a company's balance sheet. This account is comprised of any debt or repayments incurred by a company that is due within one year. The debt in this account is usually made up of short-term bank loans taken by a company. The ratio is the calculation of debt payable within one year to total assets. The ratio indicates whether a firm will be able to satisfy its immediate financial obligations. It is computed as short-term debt to total assets.

(b) Long term debt ratio: The long term debt to total asset ratio, at the simplest, indicates the portion of a company's total assets that is financed from long term debt. The value varies from industry to industry and company to company. Comparing the ratio with industry peers is a better benchmark. Long term debt ratio is computed as long term debt/total assets.

(c) Total debt ratio: Total debt ratio is a financial ratio that indicates the percentage of a company's assets that are provided in comparison to debt. It is the ratio of total debt and total assets calculated by dividing total debt to total assets.

(d) Profitability: Profitability is the financial benefit that is realized when the amount of revenue gained from a business activity exceeds the expenditure, costs, and taxes needed to sustain the activity. Any profit that is gained goes to the owners of the business, who may or may not decide to spend it on the business. Operating profit rate of return (earnings before interest and taxes (EBIT)/total assets) is used as a measure of profitability. Other measures include return on assets and return on sales (profit margin).

(e) Growth: Firms with growth options are those that have relatively more capacity expansion projects, new product lines, acquisitions of other firms and maintenance, and replacement of existing assets. Firms with high growth options and high cash flow volatility have incentives to decrease debt in their capital structure over a period of time. Growth is measured by the growth rate in total gross assets. The growth factor is measured by the percentage change of assets.

(f) Assets tangibility: Asset tangibility refers to all types of tangible assets (e.g. land, building, machines and equipment) that possess some degree of debt capacity. The formula used in this study to measure the value of tangible assets of the firm is the ratio of net fixed assets to total assets.

(g) Size: Large firms are often more diversified and have more stable cash flows; the probability of defaults for large firms is smaller compared to smaller ones. Thus the financial distress risk can be considered lower for larger firms. The measure of a firm's size used in this study is the natural logarithm of its total assets.

(h) Liquidity: Liquidity is the ability to convert an asset to cash immediately. It is also known as "marketability". Liquidity was calculated by dividing the total current assets by the total current liabilities.

(i) Tax rate: Tax rate is a rate placed depending on the profit of a firm; different rates are used for different levels of profits. Corporate taxes are usually levied by all levels of government (i.e. state and country). Tax rate can be measured for each company by dividing its tax provision by profit before tax.

(j) Debt serving capacity: A high debt service capacity means that the firm can meet its interest obligation even if EBIT suffers a considerable decline. In other words, the higher the debt coverage, the greater is the likelihood of a firm having a higher debt component in its financial structure. So, the capacity of a firm to borrow will be directly proportional to its ability to honour its fixed payment obligation. Hence, higher the capacity of the company to service debt, the greater is the likelihood of the debt ratio being higher. The study proxies for debt with the ratio between profit before depreciation, interest and taxes to total interest.

(k) Age: Age is the number of years since the establishment of a company. The dummy variable takes the value one if the firm is below the age of 20 years and zero otherwise.

(l) Financial charges coverage ratio: The financial charges coverage ratio is used to examine the extent to which fixed costs consume the cash flow of a business. The ratio is most commonly applied when a company has incurred a large amount of debt, and must make ongoing interest payments. If the resulting ratio is low, it is a strong indicator that any subsequent drop in the profits of a business may bring about its failure. The ratio is typically used by lenders evaluating an existing or prospective borrower. To calculate the fixed charge coverage ratio, combine earnings before interest and taxes with any lease expense, and then divide by the combined total of interest expense and lease expense. This ratio is intended to show estimated future results, so it is acceptable to drop from the calculation any expenses that are about to expire. The formula is:

$$\frac{(\text{Earnings before interest and taxes}) + \text{Lease expense}}{\text{Interest expense} + \text{Lease expense}}$$

8. Methodology

To understand the determinants of capital structure of selected companies, three dependent variables and nine independent variables have been chosen for the study.

The dependent variables are:

- a. Short term debt ratio (STDR)
- b. Long term debt ratio (LTDR)
- c. Total debt ratio (TDR)

The independent variables are:

- a. Profitability (PROF)
- b. Growth (GROWTH)
- c. Assets tangibility (TANG)
- d. Size (SIZE)
- e. Liquidity (LIQUIDITY)
- f. Tax rate (TAXRATE)
- g. Debt serving capacity (DSC)
- h. Age (AGE)
- i. Financial charges coverage ratio (FCCR)

Firstly, cross-section analysis has been done to find the significance of these variables. Secondly, correlation analysis is done to understand the relationship between the variables. Finally, three regression models were run regressing one dependent variable at a time on the nine independent variables to understand the effect of independent variables listed above on short term debt, long term debt and total debt.

The three regression models are:

Model 1:

$$\text{Log STDR} = \alpha + \beta_1\text{PROF} + \beta_2\text{GROWTH} + \beta_3\text{TANG} + \beta_4\text{SIZE} + \beta_5\text{LIQUIDITY} + \beta_6\text{TAXRATE} + \beta_7\text{DSC} + \beta_8\text{AGE} + \beta_9\text{FCCR} + \varepsilon$$

Model 2:

$$\text{Log LTDR} = \alpha + \beta_1\text{PROF} + \beta_2\text{GROWTH} + \beta_3\text{TANG} + \beta_4\text{SIZE} + \beta_5\text{LIQUIDITY} + \beta_6\text{TAXRATE} + \beta_7\text{DSC} + \beta_8\text{AGE} + \beta_9\text{FCCR} + \varepsilon$$

Model 3:

$$\text{Log TDR} = \alpha + \beta_1\text{PROF} + \beta_2\text{GROWTH} + \beta_3\text{TANG} + \beta_4\text{SIZE} + \beta_5\text{LIQUIDITY} + \beta_6\text{TAXRATE} + \beta_7\text{DSC} + \beta_8\text{AGE} + \beta_9\text{FCCR} + \varepsilon$$

9. Data Collection

Secondary data is used for the purpose of this study. The data has been collected from the annual reports of selected companies from their respective websites. Besides, books, journals and websites were used to get the required data.

10. Sampling

This study focuses on the companies that are included in CNX100. To start with, there were 100 companies in the index; as common practice banking and financial companies are excluded. Of the remaining 78 companies, seven companies followed calendar year for preparing their financial statements. Of the remaining 71 companies, data for 16 companies were not completely available and hence were excluded. The final number stood at 55 companies. Out of these 55 companies, 20 companies are selected for the purpose of the study.

11. Plan of Analysis

The analysis of the study is carried out by collecting the annual reports of the sample companies. The data relating to dependent and independent variables selected for the studies are obtained from the annual reports for the four financial years ending March 2016. The data so obtained are tabulated and used for analysis. Microsoft Excel and SPSS 20.0 package were used for analyzing the data.

12. Limitations of the Study

The limitations of the study are:

- a) The sample selected is restricted to 20 companies included in CNX100.
- b) The time frame of analysis is limited to recent four financial years ending March 2016.

13. Results and Analysis

Table 2 Impact of independent variables on short term debt.: Regression Results

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Null hypothesis results
	B	Std. Error	Beta			
(Constant)	.315	1.363		.231	.822	
PROF	-6.641	2.526	-.754	-2.629	.025	Rejected
GROWTH	-.005	.003	-.344	-2.001	.073	Not Rejected
TANG	-1.341	.718	-.422	-1.867	.091	Not Rejected
SIZE	.041	.107	.067	.386	.708	Not Rejected
LIQUIDITY	-.436	.292	-.680	-1.494	.166	Not Rejected
TAXRATE	.093	.203	.079	.460	.656	Not Rejected
DSC	-.004	.004	-1.192	-1.146	.278	Not Rejected
AGE	-.274	.404	-.137	-.678	.513	Not Rejected
FCCR	.005	.004	1.485	1.140	.281	Not Rejected
PROF: Profitability; GROWTH: Growth; TANG: Assets tangibility; SIZE: Size; LIQUIDITY: Liquidity; TAXRATE: Tax rate; DSC: Debt serving capacity; AGE: Age, FCCR: Financial charges coverage ratio Dependent variable: log STDR						

Interpretation:

Objective 1 was “To understand the impact of each independent variable while raising short term debt for selected companies”.

1. Profitability: From table 2, it can be observed that t value for profitability is -2.629 which is significant at .05 level. Therefore, the null hypothesis H_{011} namely, “There is no significant impact of profitability of selected companies on short term debt” is rejected and hence it can be concluded that profitability produced significant impact on short term debt.

2. Growth: it can be observed that t value for growth is -2.001 which is not significant. Therefore, the null hypothesis H_{012} namely, “There is no significant impact of growth of selected companies on short term debt” is not rejected and hence it can be concluded that growth did not produce significant impact on short term debt.

3. Assets tangibility: It is inferred that t value for assets tangibility is -1.867 which is not significant. Therefore, the null hypothesis H_{013} namely, “There is no significant impact of assets tangibility of selected companies on short term debt” is not rejected and hence it can be concluded that assets tangibility did not produce significant impact on short term debt.

4. Size : From table 2, it can be observed that t value for size is .386 which is not significant. Therefore, the null hypothesis H_{014} namely, “There is no significant impact of size of selected companies on short term debt” is not rejected and hence it can be concluded that size did not produce significant impact on short term debt.

5. Liquidity: From table 2, it can be observed that t value for liquidity is -1.494 which is not significant. Therefore, the null hypothesis H_{015} namely, “There is no significant impact of liquidity of selected companies on short term debt” is not rejected and hence it can be concluded that liquidity did not produce significant impact on short term debt.

6. Tax rate: From table 2, it can be observed that t value for tax rate is .460 which is not significant. Therefore, the null hypothesis H_{016} namely, "There is no significant impact of tax rate of selected companies on short term debt" is not rejected and hence it can be concluded that tax rate did not produce significant impact on short term debt.

7. Debt serving capacity: From table 2, it can be observed that t value for debt serving capacity is -1.146 which is not significant. Therefore, the null hypothesis H_{017} namely, "There is no significant impact of debt serving capacity of selected companies on short term debt" is not rejected and hence it can be concluded that debt serving capacity did not produce significant impact on short term debt.

8.Age: From table 2, it can be observed that t value for age is -.678 which is not significant. Therefore, the null hypothesis H_{018} namely, "There is no significant impact of age of selected companies on short term debt" is not rejected and hence it can be concluded that age did not produce significant impact on short term debt.

9.Financial charges coverage ratio: From table 2, it can be observed that t value for financial charges coverage ratio is 1.140 which is not significant. Therefore, the null hypothesis H_{019} namely, "There is no significant impact of financial charges coverage ratio of selected companies on short term debt" is not rejected and hence it can be concluded that financial charges coverage ratio did not produce significant impact on short term debt.

Table 3 Impact of independent variables on long- term debt.: Regression Results

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Null hypothesis results
	B	Std. Error	Beta			
(Constant)	-.939	.638		-1.471	.172	
PROF	-1.073	1.183	-.104	-.907	.386	Not Rejected
GROWTH	.002	.001	.091	1.319	.216	Not Rejected
TANG	.529	.336	.142	1.574	.147	Not Rejected
SIZE	.015	.050	.021	.305	.766	Not Rejected
LIQUIDITY	-.087	.137	-.116	-.638	.538	Not Rejected
TAXRATE	-.061	.095	-.044	-.637	.539	Not Rejected
DSC	-.005	.002	-1.272	-3.058	.012	Rejected
AGE	.192	.189	.082	1.015	.334	Not Rejected
FCCR	.002	.002	.587	1.127	.286	Not Rejected
PROF: Profitability; GROWTH: Growth; TANG: Assets tangibility; SIZE: Size; LIQUIDITY: Liquidity; TAXRATE: Tax rate; DSC: Debt serving capacity; AGE: Age; FCCR: Financial charges coverage ratio Dependent variable: log LTDR						

Interpretation:

Objective 2 was "To understand the impact of each independent variable while raising long term debt for selected companies".

1.Profitability:From table 2, it can be observed that t value for profitability is -.907 which is not significant. Therefore, the null hypothesis H_{021} namely, "There is no significant impact of

profitability of selected companies on long term debt” is not rejected and hence it can be concluded that profitability did not produce significant impact on long term debt.

2. Growth: From table 3, it can be observed that t value for growth is 1.319 which is not significant. Therefore, the null hypothesis H_{022} namely, “There is no significant impact of growth of selected companies on long term debt” is not rejected and hence it can be concluded that growth did not produce significant impact on long term debt.

3. Assets tangibility: From table 3, it can be observed that t value for assets tangibility is 1.574 which is not significant. Therefore, the null hypothesis H_{023} namely, “There is no significant impact of assets tangibility of selected companies on long term debt” is not rejected and hence it can be concluded that assets tangibility did not produce significant impact on long term debt.

4. Size: From table 3, it can be observed that t value for size is .305 which is not significant. Therefore, the null hypothesis H_{024} namely, “There is no significant impact of size of selected companies on long term debt” is not rejected and hence it can be concluded that size did not produce significant impact on long term debt.

5. Liquidity: From table 3, it can be observed that t value for liquidity is -.638 which is not significant. Therefore, the null hypothesis H_{025} namely, “There is no significant impact of liquidity of selected companies on long term debt” is not rejected and hence it can be concluded that liquidity did not produce significant impact on long term debt.

6. Tax rate: From table 3, it can be observed that t value for tax rate is -.637 which is not significant. Therefore, the null hypothesis H_{026} namely, “There is no significant impact of tax rate of selected companies on long term debt” is not rejected and hence it can be concluded that tax rate did not produce significant impact on long term debt.

7. Debt serving capacity: From table 3, it can be observed that t value for profitability is -3.058 which is significant at .05 level. Therefore, the null hypothesis H_{027} namely, “There is no significant impact of debt serving capacity of selected companies on long term debt” is rejected and hence it can be concluded that debt serving capacity produced significant impact on long term debt.

8. Age: From table 3, it can be observed that t value for age is 1.015 which is not significant. Therefore, the null hypothesis H_{028} namely, “There is no significant impact of age of selected companies on long term debt” is not rejected and hence it can be concluded that age did not produce significant impact on long term debt.

9. Financial charges coverage ratio: From table 3, it can be observed that t value for financial charges coverage ratio is 1.127 which is not significant. Therefore, the null hypothesis H_{029} namely, “There is no significant impact of financial charges coverage ratio of selected companies on long term debt” is not rejected and hence it can be concluded that financial charges coverage ratio did not produce significant impact on long term debt.

Table 4 Impact of independent variables on total debt.: Regression Results

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Null hypothesis results
	B	Std. Error	Beta			

(Constant)	-.594	.428		-1.387	.196	
PROF	-1.703	.793	-.185	-2.146	.057	Not Rejected
GROWTH	.001	.001	.063	1.224	.249	Not Rejected
TANG	.411	.226	.123	1.821	.099	Not Rejected
SIZE	.002	.034	.004	.070	.945	Not Rejected
LIQUIDITY	-.052	.092	-.077	-.564	.585	Not Rejected
TAXRATE	-.011	.064	-.009	-.179	.861	Not Rejected
DSC	-.005	.001	-1.092	-3.499	.006	Rejected
AGE	.077	.127	.037	.604	.559	Not Rejected
FCCR	.001	.001	.406	1.039	.322	Not Rejected
PROF: Profitability; GROWTH: Growth; TANG: Assets tangibility; SIZE: Size; LIQUIDITY: Liquidity; TAXRATE: Tax rate; DSC: Debt serving capacity; AGE: Age; FCCR: Financial charges coverage ratio Dependent variable: log TDR						

Interpretation:

Objective 3 was “To understand the impact of each independent variable while raising total debt for selected companies”.

1. Profitability: From table 4, it can be observed that t value for profitability is -2.146 which is not significant. Therefore, the null hypothesis H_{031} namely, “There is no significant impact of profitability of selected companies on total debt” is not rejected and hence it can be concluded that profitability did not produce significant impact on total debt.

2. Growth: From table 4, it can be observed that t value for growth is 1.224 which is not significant. Therefore, the null hypothesis H_{032} namely, “There is no significant impact of growth of selected companies on total debt” is not rejected and hence it can be concluded that growth did not produce significant impact on total debt.

3. Assets tangibility: From table 4, it can be observed that t value for assets tangibility is 1.821 which is not significant. Therefore, the null hypothesis H_{033} namely, “There is no significant impact of assets tangibility of selected companies on total debt” is not rejected and hence it can be concluded that assets tangibility did not produce significant impact on total debt.

4. Size: From table 4, it can be observed that t value for size is .070 which is not significant. Therefore, the null hypothesis H_{034} namely, “There is no significant impact of size of selected companies on total debt” is not rejected and hence it can be concluded that size did not produce significant impact on total debt.

5. Liquidity: From table 4, it can be observed that t value for liquidity is -.564 which is not significant. Therefore, the null hypothesis H_{035} namely, “There is no significant impact of liquidity of selected companies on total debt” is not rejected and hence it can be concluded that liquidity did not produce significant impact on total debt.

6. Tax rate: From table 4, it can be observed that t value for tax rate is -.179 which is not significant. Therefore, the null hypothesis H_{036} namely, “There is no significant impact of tax rate of selected companies on total debt” is not rejected and hence it can be concluded that tax rate did not produce significant impact on total debt.

7. Debt serving capacity: From table 4, it can be observed that t value for profitability is -3.499 which is significant at .05 level. Therefore, the null hypothesis H_{037} namely, "There is no significant impact of debt serving capacity of selected companies on total debt" is rejected and hence it can be concluded that debt serving capacity produced significant impact on total debt.

8. Age: From table 4, it can be observed that t value for age is .604 which is not significant. Therefore, the null hypothesis H_{038} namely, "There is no significant impact of age of selected companies on total debt" is not rejected and hence it can be concluded that age did not produce significant impact on total debt.

9. Financial charges coverage ratio: From table 4, it can be observed that t value for financial charges coverage ratio is 1.039 which is not significant. Therefore, the null hypothesis H_{039} namely, "There is no significant impact of financial charges coverage ratio of selected companies on total debt" is not rejected and hence it can be concluded that financial charges coverage ratio did not produce significant impact on total debt.

14. Findings

- It was found that the average total debt ratio of Tata Consultancy Services Ltd. was least whereas, Adani Enterprises Ltd. posted highest total debt ratio on an average basis over the recent 4 financial years ended March 2014.
- It was observed that Tata Consultancy Services Ltd. reported the least average long term debt ratio. On the other hand, Power Grid Corporation of India Ltd. recorded the highest long term debt ratio (average basis).
- It is inferred that the average short term debt ratio of Tata Consultancy Services Ltd. was least whereas, Jindal Steel and Power Ltd. posted highest short term debt ratio on an average basis over the recent 4 financial years ended March 2014.
- It was noticed that Adani Enterprises Ltd. reported the least average profitability. On the other hand, Tata Consultancy Services Ltd. recorded the highest profitability (average basis).
- It was noted that average growth of Godrej Consumer Products Ltd. was least whereas, NTPC Ltd. posted highest short term debt ratio on an average basis over the recent 4 financial years ended March 2014.
- It was detected that Bharat Heavy Electricals Ltd. reported the least average assets tangibility. On the other hand, Power Grid Corporation of India Ltd. recorded the highest assets tangibility (average basis).
- It was spotted that average size of Godrej Consumer Products Ltd. was least whereas, Reliance Industries Ltd. posted highest size on an average basis over the recent 4 financial years ended March 2014.
- It was located that Tata Power Co. Ltd. reported the least average liquidity. On the other hand, Container Corporation of India Ltd. recorded the highest liquidity (average basis).
- It was obtained that average tax rate of Tata Power Co. Ltd. was least whereas, Reliance Communications Ltd. posted highest tax rate on an average basis over the recent 4 financial years ended March 2014.
- It was acquired that Tata Power Co. Ltd. reported the least average debt serving capacity. On the other hand, Container Corporation of India Ltd. recorded the highest debt serving capacity (average basis).
- It was found that average financial charges coverage ratio of Reliance Communications Ltd. was least whereas, Container Corporation of India Ltd. posted highest financial charges coverage ratio on an average basis over the recent 4 financial years ended March 2014.

- From the analysis of regression of selected companies it was reported that:
- Only profitability produced significant impact on short term debt whereas, other independent variables like growth, assets tangibility, size, liquidity, tax rate, debt serving capacity, age and financial charges coverage ratio did not produce significant impact on short term debt.
- Only debt serving capacity **produced** significant impact on long term debt whereas, other independent variables like profitability, growth, assets tangibility, size, liquidity, tax rate, age and financial charges coverage ratio did not produce significant impact on short term debt.
- Only debt serving capacity produced significant impact on total debt whereas, other independent variables like profitability, growth, assets tangibility, size, liquidity, tax rate, age and financial charges coverage ratio did not produce significant impact on total debt.

15. Conclusion and Policy Implications

This study examined the determinants of capital structure of selected companies in India. The analysis is done from three perspectives viz. Short term debt, long term debt and total debt. The study revealed that profitability is a major determinant of Short term debt; debt serving capacity influences long term debt and total debt.

The correlation results revealed that total debt ratio was having high degree of positive correlation with long term debt ratio, short term debt ratio and assets tangibility, high degree of negative correlation with profitability, liquidity, debt serving capacity and financial charges coverage ratio and low degree of positive correlation with growth, size, tax rate and age. Long term debt ratio was having high degree of positive correlation with short term debt ratio and assets tangibility, high degree of negative correlation with profitability, liquidity, debt serving capacity and financial charges coverage ratio and low degree of positive correlation with growth, size, tax rate and age. Short term debt ratio was having high degree of negative correlation with profitability, liquidity, debt serving capacity and financial charges coverage ratio, low degree of positive correlation with assets tangibility, size and tax rate and low degree of negative correlation with growth and age.

This study has two policy implications. Firstly, it provided empirical analysis of the capital structure decisions focusing on the major drivers affected the choice of debt and equity. Secondly, it helps in formulation of appropriate financing mix for the companies.

Further studies can focus on asset size effect on capital structure decisions of a firm. Besides, it can use more robust techniques to evaluate the efficiency of the models.

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Strategic Managers of 21st Century: Emerging Challenges

ARTICLE
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Abstract: HRM is a strategic issue in the current corporate scenario. The present research paper tries to identify challenges for the HR professionals of 21st century and thereby suggest measures and strategies to face these challenges. The researcher uses secondary sources of information and concludes that to face the challenges faced by HR professionals in this present time, they must first be trained for strategies adopted so that they could get ready to implement those strategies and policies related to HR should also be linked to the business strategies.

Key Words: Alignment, Challenges, HRM, Strategies

1. Introduction

Human Resource Management (HRM) is the management of people, the single active resource of production having powers to manage other Ms of production. This living resource of production consist powers to manage and control all other factors so demand changes according to the circumstances. This is the reason behind continuous changes in the form of HRM from Personnel Management to Strategic HRM (SHRM) and still it is evolving several changes due to the challenges and problems faced by the HR professionals. SHRM is basically concerned with the attention of top management towards HR activities as a strategic dimension. It is the alignment of traditional HRM with the overall strategies of a corporate having the targets of increasing the quality of workforce and maximizing the mutual benefits of both employer and employees.

2. Statement of the Problem

The notable characteristic of today's business is diversification of its operations in different parts of the globe besides huge size of business operations. The employees are the main resources in multinational corporations. They are drawn in from different parts of the world. Their cultural background is a big challenge for the growth of the MNCs. The strategic manager plays a typical role in handling diversified workforce. Thus, this paper attempts to outline the emerging challenges of a strategic manager in the present context.

3. Objectives of the Study

The objectives of the study are:

- (i) To examine the role of strategic manager in MNCs
- (ii) To identify challenges for the HR professionals of 21st century
- (iii) To suggest measures and strategies to face these challenges

4. Research Methodology

This study is descriptive in nature. It is based on secondary data and reviews from previous literature. Books, research papers and articles from various journals are used for the purpose of this study.

5. Strategies for the HR Professionals of 21st Century

(a) Talent Management: It consists of talent acquisition and talent development. Attracting suitable talent for the job to customize perfect match between calibre required and present really needs the good talent management. If some mismatch persists that must be removed and appropriate training may be provided.

(b) Cross- cultural trainings: The presence of MNCs with this globalised scenario creates the challenge to manage the diversified workforce belonging not even from different caste, culture but even from different countries which generate geographical issues also. So the only path available with the managers to solve this issue is cross- cultural training including language training at the time of orientation program so that new employees can familiarise get aware with culture of the organization as well as the present employees.

(c) Leverage technology: To cope with the problem of technological advances it is the single option with the experts to get updated with the latest trends and technologies and implement in order to attain sustainable competitive advantage over their competitors.

(d) Flexible working arrangements: Changing business needs adaptability towards green workplace, employees' difficulties to balance professional and personal life responsibilities and moreover updated techniques necessitates for the organizations to make arrangements for flexible working like work from home, schedule their timings as per the requirement of given targets instead of nine to five fixed working hours. This will help to attract and retain efficient employees in the organization because this gives them an added motivation and responsible feeling for the business.

(e) Flexible pay packages: to satisfy monetary dissatisfaction and unrealistic expectations, it is the best option available to include flexible payments based on the performance in their annual packages which inspires them to give their best as well as gives them monetary satisfaction because with the monthly salary employee can receive some additional payments quarterly or half yearly in the form of incentives.

(f) Least hierarchies, Non-dominating team leaders: knowledge workers generally cannot work in bounded hierarchies or in strict superior-subordinate structures, they want and deserve freedom to accomplish their targets as per the given schedule instead of strict supervision for lower class employees. So the technique to handle the structural barriers is to maintain least hierarchies in the organization and even with the presence of non-dominating and supportive team leaders.

6. Achieving Competitive Advantage: Possible Routes

- Cost leadership strategy: New technology, efficient work methods, cutting overhead costs and decreasing production costs
- Product differentiation strategy: Innovative product or services, choosing a superior plant location, perception of higher quality

- Resources must be of value: Total quality management initiatives and continuous improvement in all business processes
- Resources must be committed to deliver: Building commitment and loyalty
- Resource must be responsive to the market: Resources must meet customer requirement of quality, innovation, variety and responsiveness

7. Changing Contours of HR Paradigms

The changing contours of HR paradigms are presented in exhibit 1 reflecting the functions of HR before globalisation and the new realities in the present context.

Exhibit 1: HR Paradigms- Before Globalisation Vis-à-vis New Routes

	<i>Before Globalisation</i>	<i>New Realities</i>
Managerial functions	Planning, organizing, managing, direction, functional	Strategizing, leading, empowerment, cross – functional
Operative functions(Procurement)	Formal and rigid procurement, employee as servant, rigidity in skill, function, time and pay, single task	Flexibility and strategic procurement, employees as partner/internal customers, flexibility in skill, function, time and pay, multiple tasks
Training and development	Not an accountable and responsive training initiative, use of rigid and cumbersome design methods, vaguely described training outcomes	Need for continuous learning, use of benchmarking and other innovative design strategies to develop products' quality, Guarantees training will improve performance
Motivation and compensation	Fear and favour, fixed pay, job-based pay, seniority based pay, functional rigidity, employer ownership	Fairness, variable/flexible pay, individual based pay, performance based pay, functional flexibility, employee ownership
Performance appraisal	Information confidential and appraised by boss, uniform appraisal procedure, control-oriented appraisals	Open and participative appraisal, customized appraisals, developmental appraisals
Maintenance and integration functions	Autocratic and paternalistic management style, employer-employee relationship, control was based on direction and inducement, manual filing, employee compliance, job simplification	Collegial management style, employment context- partners, control is based on consensus and commitment, e-databases, employee empowerment, job enrichment

8. Conclusion

Sustainability of competitive advantage is must for today's strategic era. Corporate needs to get updated with the environmental changes to be competitive. For this, it is must that the human capital of the organization is strategically fit for the requirements of the organization. To achieve these strategic fit, HR professionals involved in the activities related to human resource must act as a strategic partner in the organization. To counter the challenges faced by HR professionals in this present time, they must first be trained for strategies adopted so that they could get ready to implement those strategies and policies related to HR should also be linked to the business strategies.

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Improving Effectiveness - In Conversation with Ramesh Shankar S, Executive Vice President & Head - HR, Siemens, South Asia, Mumbai

INTERVIEW
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Mr. Ramesh Shankar S has been a HR Practitioner for the last 36 years in the Corporate World and has experience working in Steel, Automobile, FMCG and Engineering Sectors. He is of the opinion that experience need to be valued and he has enormous experience: *"there can be two perspectives to improve effectiveness, one performance basis and another learning and development"*.

He says "Life is a journey. Every day is like the page of a book. We need to read every page of the book and move on to the next page. Most of us tend to turn back and not move forward. While, it may be useful to learn from the mistakes of the past, it is more important to focus on shaping our future. If we keep turning to the back pages, we may never move forward and read the whole book in our lifetime"

We thought of taking the best from him through the process of extracting answers to specific questions from diverse domains. The Budding Managers in B-Schools today need to be trained by various ways and one such way is listening to experienced Corporate Icons and Mr. Ramesh Shankar is one among them.

Questions are not confined to any specific domain but are interwoven to help the Budding Managers to take cue for themselves.

K C Mishra (KCM): What are your three biggest strengths and three biggest areas of growth?

Ramesh Shankar S (RSS): My strengths are values, honesty and hard work. My weaknesses are that I am apolitical, not good at networking and have strong likes and dislikes

KCM: When did you ask last time someone for feedback on you and what did you do with it?

RSS: I did it a year back through a 360 degree tool; working on my development through it

KCM: What are you truly passionate about?

RSS: I am passionate about nature, writing, reading, and travelling

KCM: Recall a challenge that was significant, but one that you consider a true challenge and outcome was exhilarating?

RSS: The challenge of opening a green field plant and then closing it down within three years without retrenching a single employee

KCM: Did you have challenges that helped organizational growth immensely

RSS: Yes many, including developing people- managers in the organizations

KCM: How you became an achiever and transformed your life?

RSS: Hard work, commitment and value driven

KCM: Can you elaborate your feelings when you were at the peak of your career and even vice versa.

RSS: Exhilarating at peak and reflective at through

KCM: What is the next right step?

RSS: How can I give back to society?

KCM: Please highlight how to learn to live better in real life.

RSS: Hard work, have role models and be willing to learn from mistakes

KCM: All talk of self transformation but what exactly is that please spell out in simple terms; how does it lead to organizational transformation?

RSS: Organizations are a summation of individuals; if individuals change, organizations transform

KCM: Do you accept the Managers of today to manage the whole gamut of affairs have to self transform themselves and they really do that?

RSS: Everyone tries his or her best; we have to support them in this journey

KCM: Like Genuine Non-Alignment what is Genuine Management and who practice such Genuine Management; please answer with examples.

RSS: Everyone tries; there are many Indian and multinational organizations which make a serious attempt

KCM: All have conscience but why not we heed to it on various occasions and do wrong?

RSS: Because greed exceeds needs of ours

KCM: In silence only we can hear the sound of the movement of the earth and that will be the real message for us; why is the technique unaware to most of us or many of us?

RSS: Because we refuse to listen to our conscience

KCM: We are individualistic; can a nation/an organization grow if its citizens/members behave like this?

RSS: We have to always believe that larger good is more important than individual good

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