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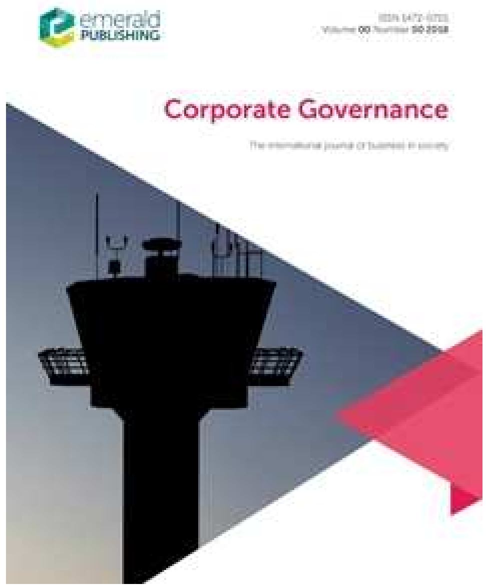

Evolution of corporate governance in India and its impact on the growth of the financial market: An empirical analysis (1995-2014)

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Abstract:

The past few decades have seen a gradual convergence in corporate governance norms the world over, entailing a discernible shift towards shareholder primacy models. It holds particularly true of developing countries, many of which have steadily amended corporate governance norms to enhance the scope of shareholder rights. This is usually justified through the rationale that increasing protection for foreign investors and shareholders would mean greater investment in capital market and overall financial market development. In India, the shift coincides with a series of fundamental economic and financial policy reforms initiated in the 1990s: collectively and loosely referred to as 'liberalisation', this process marks a paradigm-shift from a tightly controlled welfare economy to one considerably more laissez-faire in its orientation. A fallout of which was that the need to attract and sustain foreign investments acquired an unprecedented significance. India's corporate law change initiatives, particularly those pertaining to shareholder rights and allied issues, must be understood in this larger context.

This article empirically tests the hypothesis that enhanced shareholder protection leads to greater levels of investments, and financial developments generally. It then uses regression analysis to detect if the change in corporate governance, making it more friendly, had any effect on growth in financial market. It is divided into two parts. The first tracks the evolution of corporate governance norms in India. A robust qualitative and quantitative analysis is effected to determine the tilt towards a shareholder primacy regime that Indian corporate governance regime now displays. The second chapter deals with the regression analysis where the outcome variable is financial market growth, explanatory variable is change in the governance regime with relevant control variables. We find that change in shareholder primacy corporate governance has little effect on financial market growth in India.

We would suggest that instead of changing the law in books, more emphasis should be given to implement those regulations and increase the overall rule of law.

Keywords: *Comparative corporate governance, corporate governance and financial market growth, leximetrics, law and finance*

I. Introduction

"*It is clear that good corporate governance makes good sense. The name of the game for a company in the 21st Century will be conform while it performs*." - Mervyn King (Chairperson: King

Report)

In the light of the intense competition and dynamism that prevails in the Indian business environment at present, one of the keys to long-term growth and success appears to be the ability to strike a fine balance between sound corporate governance practice on the one hand and a sustainable growth model on the other.[1] Corporate governance has become an integral component of myriad issues ranging from business standards to accounting standards, from corporate social responsibility to supply chain management, from a means for averting potential financial crisis to a tool for ensuring macro/microeconomic stability, to a contributor towards the improvement of the overall political economy[2]. Almost all strands of interdisciplinary studies in law, economics and finance have by now felt the omnipresence and impact of corporate governance. For a long time, the connection between corporate governance and multiple business interests and disciplines was merely ideological and mostly theoretical, whilst on the ground, the impact of scholarly work on corporate governance was at best ignored and at worst ridiculed for its perceived lack of sound business efficacy. However, over the years, with repeated accounting frauds and related crises, there has been a growing clamour for an efficient solution to prevent such issues from arising in the first place and seek to resolve them in an expedited fashion if they do; this, in turn, encouraged theoreticians and practitioners to seek recourse to the traditional notions of corporate governance and 'reinvent' the same, albeit in a modern guise, in the early 1990s.

The emergence, or rather, the revival of this discipline took the world by quite a storm, having captured the attention of many a stakeholder with its potential. This coincided with the period following the grand success of the neo-liberal economic principles of 1980s, which coupled with the fall of the erstwhile Soviet Union, seemed to provide conclusive evidence of the relative superiority of free market principles over interference by the State via a controlled economy. The free flow of ideas across national and notional boundaries soon ensued, which in turn led to quite an intense period that encouraged rapid transplantation of legal ideas –the corporate sector was not outside the sphere of influence of such change and indeed, one may even opine that the two decades

[1] See generally Jacob Hörisch, Roger Leonard Burritt, Katherine L. Christ, Stefan Schaltegger, (2017) "Legal systems, internationalization and corporate sustainability. An empirical analysis of the influence of national and international authorities", Corporate Governance: The International Journal of Business in Society, Vol. 17 Issue: 5, pp.861-875 and Malla Praveen Bhasa, (2004) "Global corporate governance: debates and challenges", Corporate Governance: The international journal of business in society, Vol. 4 Issue: 2, pp.5-17 for discussions on diverse governance models to address the challenges to corporate governance in the context of globalization of best practices.

[2] See generally Louise Gardiner, Catherine Rubbens, Elena Bonfiglioli, (2003) "Research: Big business, big responsibilities", Corporate Governance: The international journal of business in society, Vol. 3 Issue: 3, pp.67-77, for a discussion on 'big business' and its growing influence on the rest of the society and the various challenges posed by globalisation requiring fresh perspectives on global corporate governance.

ranging from 1995 to 2014 witnessed a hitherto unforeseen convergence of global corporate law standards on an almost exponential scale.[3] The only period which even comes close is the period of imperialism and colonialism, and even then the transplantation of law was a relatively slow process, externally imposed in a forceful manner as it used to be for the most part, rather than consensual cooperation. It was not any colonial power this time that ushered in such transplantation, rather international financial organisations, which thought of this way to be the most efficacious one to consolidate their presence in the global business scenario.

Such organisations promised that '[T]he improvement of corporate governance practices is widely seen as one important element in strengthening the foundation for individual countries' long-term economic performance and in contributing to a strengthened international financial system.'[4] This economic rationale was also picked up by the United Nations Conference on Trade and Development, which stated that improvements to corporate governance would 'facilitate investment flows and mobilize financial resources for economic development.'[5] The scope of this paper is limited to exploring the degree of fulfilment, at least within the Indian context, of the promise of adopting shareholder primacy and corporate governance norms being beneficial towards higher financial market growth, thereby justifying convergence and transplantation, specifically in the area of company law and corporate governance in developing countries.

The major corporate governance code available around this time period that could serve as a global benchmark was the OECD Principles of Corporate Governance, which was based primarily on the shareholder value corporate governance model, although it also provided limited space for stakeholder models. So in effect what was being recommended to developing countries was a shareholder value model based on the Anglo-Saxon template. The claim that was being popularly extended at that juncture was that if a country adopted a shareholder primacy corporate governance model, then foreign investors would invest in that country, stimulating the financial market, and local investors would also pitch in, leading to further growth of the financial market. Surplus capital can be used for economically useful, but less well-funded, activities, leading to economic growth and a sustainable future. The present paper empirically investigates[6] these claims in the Indian

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[3] See generally Brian R. Cheffins, 'The History of Corporate Governance', in The Oxford Handbook of Corporate Governance, Douglas Michael Wright et al (eds.), Oxford University Press (March, 2013).

[4] The 1999 Memorandum of Understanding between the World Bank and the OECD, establishing the framework for the Latin American Roundtable among a series of Regional Corporate Governance Roundtables.

[5] UNCTAD, 'Guidance on good practices in corporate governance disclosure' UNCTAD/ITE/TEB/2006/3

[6] See generally G. Clarke, L.W. Murray, (2001) "Frames of Reference in Financial Corporate Governance and Communications", Corporate Governance: The international journal of business in society, Vol. 1 Issue: 4, pp.20-27,

context and tries to find out whether changing the corporate governance in India for the 'better', that is, by implementing a pro-shareholder approach, has any correlation with financial market growth.

Part II of the paper provides a brief outlay of methodology adopted in this research, whereas Part III provides a general overview of the Indian corporate governance scenario, to be followed by a qualitative analysis of evolution of corporate governance and its myriad forms in India in Part IV. Part V of the paper continues with the quantitative counterpart of said analysis, thereby complementing Part IV in the process. Part VI seeks to provide a quantitative contrast and analysis of the changes in governance mechanisms in the Indian corporate sphere and explore the correlation of the same to the financial market growth, with the conclusions of the paper being finally reflected in Part VII.

II. Methodology

The research delineated in this paper consists of multiple steps, the first of which has been the creation of a database on the evolution of corporate governance in India for twenty years (1995-2014), consisting of information on fifty-two separate companies using corporate governance variables based on the OECD Principles of Corporate Governance and previous indices during aforesaid period. The variables have been scaled polynomially, i.e., the value could be zero, or one, or two; this necessitated a survey that would go beyond a simple yes/no response in order to take into account systems using optional rules or 'soft law'. A detailed description of variables is available in Appendix A, while the filled-up coded questionnaire for India is available in Appendix E.

The second step consists of using a graded response model with a Kalman filter, so as to create a dynamic corporate governance index for India, which would in turn allow distribution of the changes identified over a period of time, rather than confining them to just one specific year. It is widely acknowledged that laws and regulations take some time to show their impact in full, hence considering development of corporate governance over a number of years are meant to yield more realistic results. Codes for the model have been made available in Appendix D. A Bayesian factor analysis has been used to build up a separate multiyear index of financial market growth consisting of five variables - foreign direct investment (FDI), market capitalisation of listed companies, S&P

for a discussion on the significance of empirical research being used to identify the strategic power of corporate values in influencing the success of organizations.

global equity index, volume of stocks traded and the number of listed domestic companies to represent the financial growth of countries. These variables are discussed in detail in Appendix B. Three control indices of similar timescales comprised a total of ten variables – annual percentage growth rate of GDP, purchasing power parity conversion factor, current account balance, real interest rate, external debt stocks, commercial bank branches per head of population, mobile cellular telephone subscriptions per head of population, electric power consumption per capita, high-technology (products with high R&D intensity) exports in current USD and the number of patent and trademark applications filed at USPTO; all said control variables are discussed at length in Appendix C. Following this, Bayesian change point analysis has then been used to identify the breakpoints, i.e. the time period or particular year when there was a regime shift (a substantial movement away from the previous distribution or, qualitatively speaking, a 'complete' change from the previous system). Codes for this analysis have been made available in Appendix D. In the corporate governance development index, a breakpoint signifies a complete change from the previous system, usually in the form of a completely new corporate governance code that changes the previous system. In the financial market development index, a breakpoint signifies either a market high or low, compared with recent statistics, and so usually coincides with the peak of a boom or the trough of a bust.

Finally, a country level regression model has been constructed, using the five indices. The financial market index has been used as a dependent variable, the dynamic corporate governance index as predictor variable and the three control indices as control variables. In course of the analysis, both Bayesian and classical regression methods have had to be used. All computer codes used in this context have been provided in Appendix D.

III. Corporate Governance in India: An Overview

According to commentators like Reed, the development of corporate governance in India can be understood as a transition across three distinct models of governance, namely the 'managing agent' model; the 'business house' model; and, lastly, the 'Anglo-American' model[7] (the last two are of especial concern to us). Reed proceeds to explain that the 'business house' model was largely a

[7] Ananya Mukherjee Reed, 'Corporate Governance Reforms in India' (2002) 37 Journal of Business Ethics 249.

creation of the Nehruvian welfare state, where capitalism was tightly regulated.[8] As Chakrabarti, Megginson, and Yadav have said:[9]

> The turn towards socialism in the decades after independence, marked by the 1951 *Industries (Development and Regulation) Act* and the 1956 *Industrial Policy Resolution*, put in place a regime and a culture of licensing, protection, and widespread red-tape that bred corruption and stilted the growth of the corporate sector. The situation worsened in subsequent decades and corruption, nepotism, and inefficiency became the hallmarks of the Indian corporate sector.

This gave rise to the class called promoters, who used their proximity to power centres to obtain licences for new industries. 'The primary function of the *promoter* … was to float new ventures by contributing a minimum of equity capital, and then raising the rest through public offerings or from public financial institutions (PFIs).'[10] Promoters tended to start several unrelated ventures, and thereby gain control of a number of firms. This gave rise to so-called 'business houses', where members of a single family held control interests in an array of unrelated concerns.[11] Such arrangements entailed several consequences. One of these, as Reed notes, was that in corporations (and presumably business houses as well), small shareholders and their interests were often marginalised mostly due to the considerable power wielded by the business families that owned them.[12] Gollakotta and Gupta point to a disconnect between equity ownership and actual control that also prevailed widely, mainly due to the nationalised financial institutions (which owned considerable amounts of equity) not exercising the levels of control that they were entitled to. This was because such institutions were not held 'accountable for the profitability of the investments they made', which gave them little incentive to actively participate in the day-to-day affairs of the companies they invested in.[13]

The stringent regulations mentioned earlier began to be dismantled in the 1990s, through a set of

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8 *Ibid*, 252.
9 Rajesh Chakrabarti, William L Megginson, Pradeep K Yadav, 'Corporate Governance in India' (2007) CFR Working Paper 08-02, available at: <https://www.econstor.eu/bitstream/ 10419/41393/1/582127289.pdf> (accessed 27 February 2017).
10 Reed 2002, 253.
11 ibid.
12 ibid 256.
13 Kamala Gollakota, Vipin Gupta, 'History, Ownership Forms and Corporate Governance in India' (2006) 12 Journal of Management History 185.

reforms collectively referred to as 'liberalisation'.[14] Changes made to the corporate legal regime included augmenting disclosure norms, establishing a National Advisory Committee on Accounting Standards, and so forth.[15] Indeed, much of the corporate governance reforms we talk about owe their origin to this period, such initiatives being the result of the recommendations stemming from several committee reports[16], as stated below.

1. Birla Committee, 1999

A committee was set up by Securities and Exchange Board of India (SEBI) under the chairmanship of one of the members of the SEBI Board, Kumar Mangalam Birla in 1999 to advance and raise the norms of corporate governance. The Committee was framed with the primary objective to view corporate governance from the perspective of the investors and shareholders and thereby prepare a 'Code' that would fit into the Indian corporate regime.

The Report submitted by this Committee is distinctive for characterising corporate governance to also include all other stakeholders apart from shareholders. It thus examines corporate governance from the perspective of the stakeholders and specifically that of the shareholders and investors, since they are the raison d'être for corporate governance and furthermore the foremost group that the SEBI is concerned with.[17] The main focus of the Report lies in the arrangement of proposals which recognizes the duties and commitments of the boards and the administration in organizing the frameworks for good corporate governance and stresses upon the rights of shareholders in requesting effective implementation of such framework and norms. Most of these recommendations are mandatory in nature.[18]

The Report proceeds on the assumption that shareholders ought to be treated as proprietors of the company, and hence in such capacity, they have certain rights and obligations. Be that as it may, in actuality company cannot be overseen by shareholder choice alone, and shareholders are not anticipated to accept accountability for the administration of corporate issues including compliance

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[14] See generally Jayati Sarkar & Subrata Sarkar, Corporate Governance in India, Sage Publications (2012). See also Vasudha Joshi, Corporate Governance: The Indian Scenario, Foundation Books Pvt. Ltd. (2004)

[15] Reed 2002, 257.

[16] See generally Asish K. Bhattacharya, Corporate Governance in India: Change and Continuity, Oxford University Press (2016).

[17] *Report of the Committee Appointed by the SEBI on Corporate Governance under the Chairmanship of Shri Kumar Mangalam Birla (Birla Committee Report)*, available at <http://www.sebi.gov.in/commreport/corpgov.html> (accessed 28 Februrary 2017), para 1.5.

[18] *Ibid*, para 1.6.

and decision-making. A company's administration must have the capacity to make business decisions in an expedited fashion. This necessitates the shareholders to essentially delegate a significant number of their obligations as proprietors of the company to the directors, who then get to be in *de facto* charge of corporate procedure and operations. The implementation of this methodology is usually carried out by a specialist management team. This relationship subsequently gets the responsibility of the Board and the administration to the shareholders of the company. A decent corporate structure is one that gives sufficient opportunity to the shareholders for powerful commitment in the administration of the company, while demanding an exclusive requirement of corporate conduct without getting involved in the everyday working of the company.[19]

Commented [p1]: I am not exactly sure what this sentence intends to convey. Should it be 'This relationship requires the Board and the administration to be ultimately responsible and accountable to the shareholders of the company'?

The bulk of the Report consists of certain mandatory and recommendatory provisions stretched across various paragraphs. Paragraphs 14.5 to 14.16 not only deal with the rights of shareholders in detail, but also mentions about institutional shareholders. Paragraph 14.5 mentions the basic rights of the shareholders that is inclusive of the right to transfer and registration of shares, obtaining relevant information about the company on a timely and regular basis, participating and voting in shareholder meetings, electing members of the Board and sharing in the residual profits of the company. Paragraph 14.6 subsequently provides the shareholders with a right to be supplied with information with respect to decisions relating to material changes such as takeovers, sale of assets or divisions of the company and changes in capital structure that may lead to shift in control or may result in certain shareholders obtaining control disproportionate to the equity ownership.

Among the recommendations that the Report suggested to be made mandatory for the companies to follow, the prominent ones deserving mention include that data like quarterly outcomes, introduction made by organizations to investigators etc. ought to be displayed on the organization's official website or be sent in such a shape to the Stock Exchange on which the shares of the company are listed, so that the Exchange can put it up on its own website.[20] One of the significant non-mandatory suggestions made by the Report involves sending to every family unit of investors a statement of the performance of the company on the financial front including any other significant activity at least once every six months.[21]

The report states that an organization must have suitable frameworks set up which will empower the investors to take an interest in the corporate activities successfully and vote in the investors'

[19] *Ibid*, para 14.1.
[20] *Ibid*, para 14.7.
[21] *Ibid*, para 14.8..

meetings. The organization ought to likewise keep the investors educated of the guidelines and voting techniques, which administer the general investor meetings.[22] As indicated by paragraph 14.10 of the Report, the annual general meeting of the organization ought not ever be purposely held in a manner that would render it difficult for most of the investors to participate in. The organization should likewise guarantee that the voting process is not so arranged as to make it difficult or expensive for the investors to make their choice.[23]

The Report goes on to recommend in paragraph 14.11 providing postal ballots for key decisions to shareholders who are unable to attend the meetings, with a detailed list of the matters which should require postal ballot being laid down in Annexure 3[24] of the Report. Under paragraph 14.12, the Committee put forth a mandatory recommendation that a Board committee under the chairmanship of a non-executive director should be formed to specifically look into the redressing of shareholder complaints like transfer of shares, non-receipt of balance sheet, non-receipt of declared dividends etc. Such a suggestion was given, as it was believed that the formation of such a committee will help focus the attention of the company on shareholders' grievances and sensitise the management to address the same in an expedited manner. Paragraph 14.13 lays down a mandatory recommendation that to expedite the process of share transfers, the Board of the company should delegate the power of share transfer to an officer, or a committee or to the registrar and share transfer agents, with such delegated authority attending to share transfer formalities at least once in a fortnight.

Paragraphs 14.14 to 14.16 of the Report mention about the concept of institutional shareholders. According to paragraph 14.14, for instance, as such shareholders have obtained significant stakes in the equity share capital of listed Indian companies, they have or are going to be majority shareholders in many listed companies and possess shares to a great extent; hence in such capacity, they have a greater duty given the weightage of their votes and have a greater part to play in corporate governance as smaller retail investors rely upon such institutional shareholder for positive utilization of their voting rights for the benefit of the company as a whole. The Report thereafter advances along these lines that given the importance of their votes, the institutional shareholders

[22] Paragraph 14.9 of the Report states that a company must have appropriate systems in place which will enable the shareholders to participate effectively and vote in the shareholders' meetings. The company should also keep the shareholders informed of the rules and voting procedures, which govern the general shareholder meetings

[23] Paragraph 14.10 of the Report provides that the annual general meetings of the company should not be deliberately held at venues or the timing should not be such which makes it difficult for most of the shareholders to attend. The company must also ensure that it is not inconvenient or expensive for shareholders to cast their vote.

[24] It mentions the post ballot system in detail including the rationale, items requiring voting by postal ballot and procedure for the postal ballot.

can and ought to adequately utilize their power to further the causes of corporate governance. Practices elsewhere in the world have shown that the aggregate stake of the institutional shareholders can indeed prove to be a power to reckon with in this context; together they can influence the company to provide the guarantee that it will in turn focus on matters relating to effective implementation of the corporate governance code with a specific end goal to boost shareholder value. What is essential in the perspective of the Committee is that, the institutional shareholders' voting power must be put to great usage.[25]

2. Naresh Chandra Committee, 2002

The Department of Company Affairs set up on 21 August, 2002 the Naresh Chandra Committee to examine various issues related to corporate governance. Given the limited attention paid by the Committee to the aspects of shareholder rights and allied issues, the Report submitted by it is of mere peripheral significance in the context of this paper. The relevance that it does bear stems from paragraph 2.5 of the Report, which the later Narayana Murthy Committee Report referred to and used as a basis for its subsequent recommendations on shareholder rights. The said paragraph specifically addresses the issue of disclosure of contingent liabilities and proposes that the management ought to give a clear description in plain English language of every material contingent liability and its risks; further, this ought to be supplemented by the auditor's clearly worded comments on such views as expressed by the administration. The segment ought to be highlighted in the significant accounting policies and notes on accounts, as well as in the auditor's report, wheresoever deemed essential. This is critical in the light of the fact that investors and shareholders ought to get a clear and accurate picture of an organization's contingent liabilities, as these might be noteworthy risk figures that could unfavourably influence the company's future monetary condition and after-effects of operations.

3. Narayana Murthy Committee, 2003

Under the chairmanship of N. R. Narayana Murthy, the Chairman and Chief Mentor of Infosys Technologies Limited, SEBI subsequently constituted a committee to assess the prevailing corporate governance norms and to enhance and strengthen such practices in keeping with the advancement of the market economy as a whole. The Committee met thrice on December 7, 2002,

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25 *Birla Committee Report* para 14.16.

January 7, 2003 and February 8, 2003, to discuss the issues related to corporate governance and eventually presented its recommendations to SEBI.

The terms of reference of the Committee are set out as under:

- To audit the execution of corporate governance; and
- To decide the part of companies in reacting to talk and other value sensitive data flowing the market, so as to upgrade the integrity and transparency of the market.

The rights of the shareholders have been dealt by the committee under various heads. Under Risk Management, mentioned in part 3.5 of the Committee's report, reference has been made to Board disclosures, with the Committee emphasising the importance for the Board to be completely mindful of the dangers confronting the business, as well for the investors to think about the procedure by which the company chooses to deal with the various obstacles on its path.[26]
In this context, the Committee did look into another useful concept, viz. nominee directors, excluding them in part 3.8 of the Report from the ambit of the definition of independent directors.[27] The Committee felt that the institution of nominee directors presents a situation that sound corporate governance practices ought to maintain a strategic distance from. Such directors regularly assert that they are liable just to the shareholders who have nominated them and assume no liability for the organization's administration or trustee obligation to different investors. It is vital that all executives, in the case of speaking to organizations or something else, ought to have similar duties and liabilities.[28] The Report also states that in the case of appointment of a nominee on the Board, the normal process of election by shareholders must be adopted.[29] As a mandatory recommendation, the Report suggests that there may be no one chosen nominee; rather where a foundation wishes to choose a director on the Board, such arrangement ought to be made by the investors. An institutional executive, so selected, should have similar obligations and might be liable to

[26] Part 3.5.1.1: The Committee believes that it is important for corporate Boards to be fully aware of the risks facing the business and that it is important for shareholders to know about the process by which companies manage their business risks
[27] Part 3.8.1: Exclusion of nominee directors from the definition of independent directors
[28] Part 3.8.1.2: The Committee felt that the institution of nominee directors creates a conflict of interest that should be avoided. Such directors often claim that they are answerable only to the institutions they represent and take no responsibility for the company's management or fiduciary responsibility to other shareholders. It is necessary that all directors, whether representing institutions or otherwise, should have the same responsibilities and liabilities
[29] The Report of Shri N R Narayana Murthy Committee on Corporate Governance 2003, available at: <https://www.sebi.gov.in/reports/reports/mar-2003/the-report-of-shri-n-r-narayana-murthy-committee-on-corporate-governance-for-public-comments-_12986.html>
Part 3.8.1.3: If the institution, whether as a lending institution or as investing institution, wishes to appoint its nominee on the Board, such appointment should be made through the normal process of election by the shareholders

indistinguishable liabilities from some other director. Nominee of the Government on public sector companies ought to be similarly elected and subjected to the same responsibilities and liabilities as other directors.[30] Further, the Report recommends that all the compensation made to the non-executive directors should be approved by the shareholders and may be fixed by the Board of directors.[31]

4. JJ Irani Expert Committee, 2005

Last but not the least comes the turn of a committee that had been constituted under the chairmanship of JJ Irani, Director of Tata Sons, on 2nd December, 2004 with the task of suggesting to the Government the proposed changes to the Companies Act, 1956.

The rights of shareholders have been scattered across various parts in the report submitted by this Committee. While discussing the shifting of registered office of the company, which required such shift taking place from one state to another to be subject to the order of the Company Law Board, the Committee expressed its concern at the delays and costs involved in the process. A view was communicated that this choice ought to be left to the shareholders. In any case, the Committee additionally perceived that interests of stakeholders ought to be made a key consideration for the process, which in turn should be rendered on an urgent basis less complex, speedier and less demanding, without reference to a Tribunal/Court, thus guaranteeing that the new registered office is available to stakeholders for legitimate plan of action, as, when and where required.[32]

With regard to contentious issues such as the manner of appointment, removal and resignation of Directors, it was expressed that the ultimate decision to appoint/remove directors ought to be that of the company (in other words, that of the shareholders). On the off chance that the Directors themselves are legitimately precluded to hold directorships, they ought to have an equivalent duty regarding unveiling the reality and purposes behind their exclusion. Government ought not to mediate during the process of appointment and removal of Directors in non-Government

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[30] Part 3.8.1.5: Mandatory recommendation: There shall be no nominee directors. Where an institution wishes to appoint a director on the Board, such appointment should be made by the shareholders. An institutional director, so appointed, shall have the same responsibilities and shall be subject to the same liabilities as any other director.

[31] Part 3.9 Non-Executive Director Compensation: Part 3.9.1.2 forms a mandatory recommendation of The Report of Shri N R Narayana Murthy Committee on Corporate Governance, 2003.

[32] *Report on Company Law (JJ Irani Committee Report)*, available at: <http://www.primedirectors.com/pdf/JJ%20Irani%20Report-MCA.pdf> (accessed on 28 February 2017), 17.

companies. It was deemed essential that the powers of the Government, under the laws in vogue, to intercede in the appointment of Directors be reviewed and revised, vesting the responsibilities on the shareholders instead.

In the case of Directors' remuneration, the Committee again felt that the issue had to be decided by the shareholders in the light of the prevailing circumstances within the company, including but not limited to its financial health. To enable proper decision-making in this regard, it was important to subject this aspect to a strong corporate governance mechanism on the basis of accurate and transparent disclosures. Therefore, the Committee felt that this decision need not be taken by the Government on behalf of the company, but should be left to its shareholders whose approval should necessarily be taken.[33] Regarding disclosure requirements, as the shareholders in case of a scheme of merger/acquisition need to have complete data, particularly in relation to mergers proposed by the promoters, the Act/Rules ought to mandate providing explicit necessary disclosure requirements in the explanatory statements to be sent to the shareholders with regard to the plan documented under the watchful eye of the Courts/Tribunals.[34]

The Committee also acknowledged the additional need for administration of punishments comparable with the offense under the provisions of the Companies Act. Activities disregarding governance provisions in a way that deny the shareholders of their rights should be dealt with seriously. The Committee was of the view that all fraudulent conduct ought to be subjected to the stringent punishment, as should be deficient, wrong or false disclosures or activities that do not permit shareholder democracy or a focused market for corporate control to work. On the other hand, infringement of a procedural sort that does not irreversibly harm stakeholder's rights should be dealt with in a different way as per the Committee's suggestions.[35]

Finally, while discussing the subject of lifting of the corporate veil, the Committee opined that under certain circumstance, notwithstanding the provisions of the company law firmly putting the associated responsibility and the risk on the Board and the officers in default, it might still be possible for the promoters of controlling interests to act in derogation of the spirit of the law while adhering to its letter. Where fraudulent action has been discovered regardless of statutory prohibitions, the law ought to accommodate lifting the corporate veil to identify such promoters or

33 ibid 27.
34 ibid 79.
35 ibid 85.

shareholders who are the later ego behind the corporate behemoth and determine whether they can be held liable for said action and if so, to what extent. As the Committee suggested, there ought to be a framework of punishments and sanctions laid down for catering to such situations.[36]

While the reports submitted by all the aforementioned committees did play a significant role in the evolution of corporate governance within the Indian legal sector, by no means was such evolution confined only within the recommendations made by such reports and the treatment meted out to them by the government, as will be illustrated in the next part of this paper.

IV. Evolution of the Legal Regime on Corporate Governance

To understand paradigm shifts in Indian corporate governance, one needs to construe the issue in terms of specific questions and how they have transformed across time – the authors have focused on some of the variables from Appendix A, which have been studied in course of this research and taken a more in-depth look at their manner of evolution and contribution to the Indian corporate governance scenario, including the manner in which the leading applicable legislations have sought to incorporate such variables within their ambit.

IV.A Transfer of Shares

Transfer of shares comprises one such example. The Companies Act, 1956 freely allowed such transfer of shares, with Section 111 contemplating the power of the Board of directors to refuse registration of such transfer. A bare reading of the provisions may not reveal much. All cl (1) of said Section says is that in case of refusal, a notice has to be issued within two months to the parties involved in the transaction; cl (2) provides for appeal, and so forth. Several judgments have reiterated that the Board of directors enjoys no discretion to refuse any transfer unless the articles of association sanction such refusal, that is, they confer on the Board the power to refuse transfer.[37] On occasion, courts have even struck down what they considered refusal beyond the Board's competence.[38]

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[36] ibid 91.

[37] See e.g. the Karnataka High Court decision in *Naveen Kumar v. Karnataka Theatres* All India Reporter (AIR) 1999 Karnataka 71.

[38] *Ibid*.

In cases such as *State of Orissa v. Indian Chemical Products*,[39] courts have reiterated that even if the power has been provided for in the articles of association, it must be exercised by the Board in a *bona fide* manner. (The *Indian Chemicals* case is interesting for other reasons as well, since it is on this occasion that the court found that the articles of association did not expressly authorise refusal. Yet after looking at provisions of the Companies Act, 1913 (which applied to the present case),[40] it concluded that the Act, read with the company's articles of association, did in fact confer on the Board the power to refuse. However, the court then concluded that the power had not been exercised in a *bona fide* manner, and was therefore bad in law.) The Madras High Court[41] held in the context of the 1913 Act that even if the Board is authorised to refuse transfer, it cannot exercise its power for reasons that do not pertain to the transferee personally. Similarly, it was held that the Board cannot exercise its powers of refusal merely on the basis of the opinion of a prominent shareholder who is opposed to the transfer.[42] On the other hand, it has been made clear that the Board is not bound to provide reasons for its refusal;[43] and that the possibility that the transferee's character was such as would 'throw the company into confusion' was a valid reason.[44]

In addition, the Supreme Court's ruling in the leading case of *Bajaj Auto v. NK Firodia* [45] must be examined in some detail. It began by stating:[46]

> Discretion implies just and proper consideration of the proposal in the facts and circumstances of the case. In the exercise of that discretion the Directors will act for the paramount interest of the company and for the general interest of the shareholders because the Directors are in a fiduciary position both towards the company and towards every shareholder. The Directors are therefore required to act bona fide and not arbitrarily and not for any collateral motive.

Following the aforementioned pronouncement, the Supreme Court then proceeded to lay down a threefold test to determine when refusal is legitimate, basing on the following considerations: 'First, whether the Directors acted in the *interest of the company*; secondly, whether they acted on a *wrong*

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[39] AIR 1956 Orissa 203.
[40] Section 18 of the 1913 Companies Act read with Table A of Schedule 1.
[41] *The Coimbatore Kamala Mills v. T Sundaram* AIR 1950 Madras 725.
[42] *TH Condon and A Butterworth v. The Muir Mills Company, Limited of Cawnpore* (1900) 22 All 410. The Allahabad High Court even termed such refusal a breach of fibiduciary discretion.
[43] *Thenappa Chettiar v. Indian Overseas Bank* AIR 1943 Madras 743.
[44] *Muthappa Chettiar v. Salem Rajendra Mills* AIR 1955 Mad 665.
[45] AIR 1971 Supreme Court 321.
[46] *Ibid*, para 13.

principle; and, thirdly, whether they acted with an *oblique motive* or for a collateral purpose'[47] (emphasis added). However, it also clarified that this position will not authorise courts to what effectively amounts to micro-managing each instance of refusal: if a court finds that a Board has provided valid reasons for refusing transfer, it cannot intervene merely on grounds that the court itself might have come to different conclusions.[48]

Section 111A was added to the Companies Act courtesy the Depositories Act, 1996. It expressly provides (cl (2)) that subject to the provisions of the section, "the shares or debentures and any interest therein of a company shall be freely transferable." It also empowers tribunals to make enquiries and then, if necessary, direct depositories and companies to rectify records of transfer. It treats transfer as a right of the shareholder, which can be inferred from its injunction in cl (5) that the provisions of this section shall not affect shareholders' rights to transfer shares. Once again, this must be understood in the light of judicial rulings. The Calcutta High Court chose to interpret this as not permitting public companies to refuse registration on grounds of limitation, since that was never the intention of the Legislature.[49] A Division Bench of the Bombay High Court also ruled that Section 111A is not in the nature of a self-contained code, and that there is nothing in the provision that takes away a member's common law right to seek rectification.[50]

In Companies Act, 2013, issues relating to free transfer of shares are addressed in Section 58.[51] Clause (1) specifies that if a private company, 'whether in pursuance of any power of the company under its articles *or otherwise*' (emphasis added) refuses to either transfer shares or transmit them by operation of law, it shall accordingly notify the persons concerned. Clause (2) states that securities and other interests in a company are 'freely transferable' and also, as the proviso to the clause states, 'enforceable *as a contract*' (emphasis added). However, these are to apply without prejudice to cl (1). This suggests an interesting legal situation, where the liberty to transfer shares functions parallel with (and for all practical purposes stands effectively subject to) any discretion that the Board may derive from its articles *or otherwise*. One may recall that decisions like *Naveen Kumar* had noted in respect of the 1956 Act that the power to refuse transfer needs to flow from the company's articles of association. Section 58(1) of the new 2013 Act opens the possibility of such

47 *Ibid*, para 15.
48 *Ibid*, para 22.
49 *Peerless General Finance v. Poddar Projects Ltd* 2005 Calcutta Weekly Notes 1005.
50 2002 (35) SEBI & Corporate Laws 27.
51 The 57th Report of the Parliamentary Standing Committee describes this provision as corresponding to Ss. 111(1) and 111(2) of the old Act. *See* 57th Report of the Parliamentary Standing Committee on the Companies Bill 2011, 761.

power being derived from other sources too.

Section 58 owes much to the 57th Report of the Parliamentary Standing Committee on the Companies Bill, 2011.[52] The Report states *inter alia* that the provision 'simply seeks to codify the pronouncements made by various Courts' in regard to transferability of shares, and making enforceable contracts pertaining to share transfer. Judicial pronouncements also appears to endorse this view. The Bombay High Court in *Bajaj Auto v. Western Maharashtra Development Corporation*[53] held that it merely restates in systematic terms the existing law on pre-emption agreements: 'In other words, what was implicit in the provisions of section 111A of the Companies Act, 1956 has now been made explicit in section 58 of the Companies Act, 2013.'

Section 59 of the 2013 Act is similar in its language to Section 111A of the old Act.[54] The Mumbai Bench of the Company Law Board had occasion in *Neptune Overseas v. National Multi Commodity Exchange*[55] to examine the relation between the two. It acknowledged that the provision is 'akin to' Section 155/111 [*sic* 111A?] of the 1956 Act and Section 38 of the 1913 Act.[56] And for this reason, Section 59 can well sustain an appeal in respect of a cause of action that arose when the 1956 Act was in force.[57] This would appear to treat the two provisions as in substance *in pari materia* in respect of one another.

IV.B Annual Reports

Another issue pertains to whether annual reports are to be regularly sent to shareholders and a central registry. The law remains largely unchanged on this point from 1913 onwards. Section 219(1) of the 1956 Act mandated that copies of annual reports be sent to each member at least twenty-one days prior to any general meeting where the report is to be presented. Clause (2) extended to members, debenture-holders, and depositors the right to obtain balance sheets, profit and loss accounts, and so forth. In *Re Murarka Paint and Varnish Works*,[58] decided in the context of the 1913 Act, the Court held that copies of documents to which only members are entitled to, cannot be given to non-members, nor even to individuals whose names have been struck off the

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52 *Ibid*, 104. (Incidentally, *Bajaj Auto* (in paragraph 39) attributes the statement to page 86 of the Report.)
53 2015 (4) Arbitration Law Reporter 470 (Bom), para 40.
54 The 57th Report of the Parliamentary Standing Committee (p 761) describes this provision as 'correspond(ing) to section 111A of the Companies Act, 1956'.
55 Manupatra citation MANU/CL/0080/2014.
56 *Ibid*, para 24.
57 *Ibid*, para 18.
58 (1948) 52 Calcutta Weekly Notes 590.

register of members and who are in the process of challenging such removal. Section 136 of the 2013 Act expands the scope of the provision to span a range of documents including financial statements, consolidated financial statements, auditors' reports, and 'every other document required by law to be annexed or attached to the financial statements'; and also a range of recipients extending to members, trustees for debenture holders, and other entitled persons.

IV.C Interested Directors

The issue of interested directors is one that is surely fundamental to corporate governance. Section 297 of the 1956 Act specified that only with the Board's sanction could a company enter into certain specified transactions with a director of the company or her relative; or firms or companies where a director or her relative was a partner or member or director. Cl (3) made an exception for urgent circumstances; cl (4) specified the procedure for obtaining the board's consent; and cl (5) made unauthorised transactions voidable at the option of the board. Section 299(1) of the 1956 Act also required directors directly or indirectly 'concerned or interested' in any transaction to disclose the nature of this concern or interest. Section 300(1) of the 1956 Act forbade directors from voting, or even participating in discussions related to, contracts or transactions in which he was directly or indirectly interested. It also specified that the presence of such a director shall not be included for determining if a quorum exists, and if a director did vote in violation of the foregoing, the vote stood voided. Section 301 of the 1956 Act required a register to be maintained where particulars of all interested party transactions were to be recorded. That the legislation intended the provisions to cover a wide ambit is clear from the wording employed, and yet certain vital issues were left unresolved. For instance, terms like concern and interest were not defined either in the above provisions or in the definitions clause.

The 2013 Act, however, approaches the matter more systematically. It introduces a new concept termed 'related party transactions'. Section 2(76) defines 'related party' in terms of directors; key managerial personnel; their relatives; firms and companies in which they or their relatives are involved as partners, directors, members and so forth; and even persons on whose advice 'a director or manager is accustomed to act'. Section 184 requires directors to reveal at the beginning of each year all the firms and companies in which they are interested, and also their interest in any company with which the board intends to enter into transactions. It is broadly analogous to Section 299 of the old Act, but is much more precise in its wording. For example, cl 2(a) requires directors to reveal in certain circumstances their interest in companies in which they hold more than 2% of the shares, or of which they are promoters, managers, or CEOs. Interestingly, cl (1) uses the phrase ‘concern or interest’, which suggests that the two notions, namely ‘concern or interest’ and ‘related party’ are to operate in parallel spheres, and that the second is not intended to replace the first.

Section 188(1) specifies transactions that a company may enter into with a related party except through the Board’s consent. Cl (2) requires related party transactions and their justifications to be mentioned in the board’s report to shareholders. Clause (3), in the same manner as Section 297(5) of the 1956 Act, makes unauthorised transactions voidable at the option of the board, and adds that if circumstances so require, the concerned directors shall indemnify the company against any loss. According to cl (4), the company may, without prejudice to anything contained in cl (3), seek damages from the person responsible for the transaction in question. Cl (5) prescribes penal liabilities in respect of unauthorised related party transactions.

IV.D Whistleblowers

One area where the 2013 Act instantiates a radical departure from the 1956 legal position is in respect of whistleblowers. The older legislation carries no mention of any such notion. The 57th Report of the Parliamentary Standing Committee records a suggestion to incorporate provisions relating to whistleblowing, and specifically to the legal protection of whistleblowers.[59] The Ministry of Corporate Affairs responded by stating that provisions relating to ‘vigil mechanisms’, as they termed it, had already been incorporated in cls 177(9) and (10) of the 2011 Bill.[60] Gurudas Dasgupta’s dissenting note, however, contends that the Bill ‘fails to address squarely’ issues of corporate delinquency, and that ‘Whistle-blowers, who expose such acts, should be protected by law.’ From this, one may infer Dasgupta found extant provisions inadequate.[61] Be that as it may, the Statement of Objects and Reasons presented in the Report does assert that the Committee’s revisions to the 2009 Bill includes moves towards enhanced accountability on the part of companies, specifically ‘provisions in respect of vigil mechanism (whistle blowing) proposed to *enable a company to evolve* a process to encourage ethical corporate behaviour, while rewarding employees for their integrity and for providing valuable information to the management on deviant practices.’ (emphasis added)[62] The word ‘enable’ suggests an intention to make the matter only optional at desire of the company, which appears to lend credence to Dasgupta’s apprehensions.

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[59] 57th Report of the Parliamentary Standing Committee on the Companies Bill 2011, 78.
[60] *Ibid*.
[61] *Ibid* 121.
[62] *Ibid* 746.

The 2013 Act partially substantiates these apprehensions. Section 177(9) mandates compulsorily the establishment of a vigil mechanism 'for directors and employees to report genuine concerns'. This is followed by the phrase 'in such manner as may be prescribed'. But does this phrase qualify the establishment of mechanisms or the reporting of concerns? Some ambiguity exists on this count, though the latter does appear more likely. Cl (10) does not prescribe the manner in which the mechanism is to be establishes. It merely specifies that such mechanism must be 'adequate', and provide for 'direct access to the chairperson of the Audit Committee in appropriate or exceptional cases. It also requires companies to specify on their respective websites and in the board's report details of the mechanism chosen.

IV.E Corporate Social Responsibility

The 2013 Act is notable also for its handling of CSR, or corporate social responsibility. Section 135 not only accords statutory recognition to the concept, but also makes it obligatory for companies above a certain size to devote at least 2% of its net profits for this purpose. Cl (1) lays down several criteria for determining inclusion into this category: they include a net worth of five billion Rupees; a turnover of ten billion Rupees; or a net profit of fifty million Rupees within a financial year. Commentators have pointed out that these threshold values create a sharp discontinuity, since 'a minor change in net income leads to a discrete change (i.e., a discontinuity) in the application of CSR rule.'[63]

The reason for referring to Section 135 is that this provision carries some bearing on the issue of corporate governance. It requires companies to constitute a Corporate Social Responsibility Committee comprising of three or more directors, at least one of whom is to be an independent one. This committee is required to formulate and implement a CSR policy for the company, specifying the activities the latter is to undertake. (Sch VII enumerates activities that a company may legitimately pursue in this regard: instances include eradicating hunger and poverty; promoting education; gender equality and women's empowerment, and so forth.) Clause (5) confers the committee the responsibility to ensure the company spends on CSR at least 2% of its net profits; it also specifies that if the company fails to do so, the Board shall in its report under S 134 (3)(o) specify reasons for this failure.

[63] See Hariom Manchiraju, Shivaram Rajgopal, 'Does Corporate Social Responsibility (CSR) Create Shareholder Value? Evidence from the Indian Companies Act 2013' (2017) 55 Journal of Accounting Research 1257, 1259.

It is too early to say if this kind of legislative mandate will prove to be effective in the long run. Case-law on the area is rather scant till date. In *Tata Power Company v. Maharashtra Electricity Regulatory State Commission*,[64] the Appellate Tribunal for Electricity (New Delhi) held that the appellant company could not pass CSR expenses onto consumers, since that would amount to the consumers effectively sustaining the company's own social obligations. (Incidentally, though the appellants explicitly invoked S. 135 of the 2013 Act, the issue here related to expenses incurred in the years 2009-10 and 2010-11.)

Secondary literature on the issue yields a diverse range of conclusions. Manchiraju and Rajgopal referred to earlier conclude that mandatory CSR does not enhance shareholder value, but instead has the effect of burdening the company at the expense of shareholders.[65] Kansal, Joshi and Batra observed that on the whole, CSR declarations by Indian companies tended towards the 'low'.[66] Khan, Muttakin and Siddiqui's study of corporate governance and CSR disclosures (although originally carried out in the context of the neighbouring Bangladesh) yields interesting conclusions: High ownership concentration by managers (such as in family-owned companies, extremely common in India as in Bangladesh) leads to a diminished involvement in social activities, and hence a diminution in CSR disclosures as well. However, this does not hold true for export-oriented concerns, even family-owned ones, which tend to make 'significantly more' CSR disclosures. Further, measures such as independent directors have a beneficial effect on CSR disclosures: 'It appears that despite the traditional settings, corporate governance mechanisms involving presence of outsiders have significant impact on the extent of disclosures made by Bangladeshi companies, possibly due to the legitimisation effects of such mechanisms.'[67] Mishra and Suar conclude emphatically: 'A favuorable CSR towards customers enhances firm profitability and NFP (*i.e.* non-financial performance).'[68]

While the legislative focus on this part of the paper does reveal the degree and extent of evolution of corporate governance norms in India, one still needs to look at the quantitative aspect in order to gauge the extent to which such norms have had any measurable impact in the Indian corporate

[64] Manupatra citation MANU/ET/0150/2013.
[65] Manchiraju, Rajgopal (n 57), 1296.
[66] Monika Kansal, Mahesh Joshi, Gurdip Singh Batra, 'Determinants of Corporate Social Responsibility Disclosures: Evidence from India' (2014) 30 Advances in Accounting 217.
[67] Arifur Khan, Mohammad Badrul Muttakin, Javed Siddiqui, 'Corporate Governance and Corporate Social Responsibility Disclosures: Evidence from an Emerging Economy' (2013) 114 Journal of Business Ethics 207, 220.
[68] Supriti Mishra, Damodar Suar, 'Does Corporate Social Responsibility Influence Firm Performance of Indian Companies?' (2010) 95 Journal of Business Ethics 571, 588.

sector, something which will be discussed in the following part of this paper.

V: QUANTITATIVE ANALYSIS OF CHANGES IN CORPORATE GOVERNANCE IN INDIA

The authors now present the quantitative aspects of the evolution of the corporate governance regulation in India to complement the qualitative discussion above.

The authors have found that the probability of regime shift in Indian corporate governance development is very low throughout the period studied, this is due to the steady change in the updating of the corporate governance process in India. There are two very minor crests of probability 0.32, in year 5 and year 15. This corresponds to the years 1999/2000 around when the Report of the Kumar Mangalam Birla Committee on Corporate Governance (2000)[69] was accepted along with the publication of the Draft Report of the Kumar Mangalam Committee on Corporate Governance (1999)[70] and the Desirable Corporate Governance in India - A Code (1998) [71] and the years 2008/09 which came in the implementation phase of Clause 49 (adopted in 2005)[72] and the publication of the Corporate Governance Voluntary Guidelines (2009).[73]

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[69] SEBI, Report of the Kumar Mangalam Birla Committee on Corporate Governance (2000) <http://www.ecgi.org/codes/documents/corpgov.pdf>

[70] SEBI, Draft Report of the Kumar Mangalam Committee on Corporate Governance (1999) <http://www.ecgi.org/codes/documents/draft_report.pdf>

[71] Desirable Corporate Governance in India - A Code (1998) <http://www.ecgi.org/codes/documents/desirable_corporate_governance240902.pdf>

[72] Clause 49, SEBI Listing Regulation <http://www.sebi.gov.in/commreport/clause49.html> <http://indianboards.com/files/clause_49.pdf>

[73] Ministry of Corporate Affairs, Government of India, ‘Corporate Governance Voluntary Guidelines’ (2009) <http://www.ecgi.org/codes/documents/cg_voluntary_guidelines_2009_india_24dec2009_en.pdf>

Similarly for the financial market index, the authors have found the following change-points.

The probability of a change point in the financial market development in India is highest for year 10 (probability of 0.61). This corresponds to the year 2005, which in turn corresponds with the time period of rapid financial growth, especially between 2005 to 2008 when the rate of growth averaged over 9%.[74]

VI: Impact of change in corporate governance on financial market growth in India

[74] Malayendu Saha, 'Indian Economy and Growth of Financial Market in the Contemporary Phase of Globalization Era' (2012) 1 International Journal of Developing Societies 1-10.

From the graph above, it can be summarised that corporate governance in India has shifted steadily towards a shareholder value model over the period of time studied under this research. The shift in corporate governance has coincided with growth in the financial market. However, the growth in the financial market also corresponds to economic (control 1) growth and an increase in R&D expenditure and high technology export (control 3). Prima facie control 1 and control 3 are more correlated to financial market development than change in corporate governance.

This is experimentally proven by the regression planes and scatter plot in the graphs above. However, the corporate governance regression coefficient for the Bayesian analysis differs significantly in comparison to frequentist analysis. The high density interval for the Bayesian analysis lies between 0.003676 and 0.120785, the frequentist coefficient of 0.140102 lies just beyond this area.

	CG	Control 1	Control 2	Control 3	Intercept
Mean Bayesian	0.062502	0.398711	0.057521	0.472082	-0.01918

Frequentist	0.140102	0.342849	0.021449	0.541839	-0.16607

However, both the regression analyses show that the corporate governance regression coefficient is low in comparison to the mean control 1 and control 3 coefficient. Its impact is similar to control 2 for Bayesian analysis and seven times larger in frequentist analysis. The frequentist analysis also predicts that the corporate governance change in India has the second highest impact on financial market growth among the countries studied under this research, while Bayesian analysis puts India at eighth among the nineteen developing countries studied in this research. Thus there is a need for further qualitative study to explore the reason behind this apparent dissociation between the results predicted by Bayesian and frequentist methods.

A ratio analysis shows the impact as following.

Mean Bayesian		Frequentist	
CG:Ctrl1	CG:Ctrl3	CG:Ctrl1	CG:Ctrl3
1 : 6.3792	1 : 7.5531	1 : 2.447	1 : 3.868

It can thus be concluded that although changes in the corporate governance model in India may have some impact (based on frequentist analysis) on the growth of the Indian financial market, it is still several times lower than control 1 and control 3.

VII: Conclusion

In conclusion, the authors would like to posit that the present study in the course of this paper, both via qualitative as well as quantitative methodology, has presented the fact that India shows a significant correlation between the changes in its corporate governance regulations and its financial market growth. Even controlling for the macroeconomic growth and technological growth, at least in Frequentist or classical method, laws have had an undeniably major role to play. In Bayesian analysis, the role of law is, however, more muted. The authors would thus tend to agree with the 'law matters' group of legal scholars, at least in the view of this empirical research done in the context of Indian financial market growth.

The authors would hasten to add that there can of course be other hidden factors, which were not studied by this research, like enforcement, human development factors etc. The authors aim to add them to a multilevel model later. It is interesting to note that the G20/OECD Principles of Corporate Governance 2015 have also emphasised the regulatory and implementation aspects of corporate governance. Further studies are needed to find out if India which had eagerly adopted the shareholder primacy model espoused in the 2004 Principles, shows similar propensity towards strengthening the regulatory systems as encouraged in the 2015 Principles.

While it is difficult to exercise a radical influence on economic growth in a short space of time, it is much easier to have a significant impact on R&D investment and encourage technology based industries. The authors thus propose that in order to achieve sustainable growth in financial markets, developing countries should adopt policies encouraging R&D and focussing on high technology-led export industries. These policies could take the form of: favourable tax regulations for R&D investments; incentives for high technology industries through conducive regulatory mechanisms such as easier access to credit, simpler rules for doing business, fewer opportunities for regulatory arbitrage, single window clearance whereby businesses are allowed to submit regulatory documents to a single entity, tax credits etc.; and discouraging financial transactions which legitimise unproductive rent-seeking behaviour, for example by imposing higher tax rates on buy backs of shares, and rationalising capital gains tax rules, especially when they are being used as the primary avenue to seek returns on investment etc.[75]

[75] See generally William Lazonick, 'Stock Buybacks: From retain and reinvest to downsize and distribute' (2015) Working paper Centre for Effective public management at Brookings

Appendix A

Corporate governance variables

Shareholder rights index

- *Secure methods of ownership registration* - 2 if a central depository is available and shares are mandatorily held in an electronic dematerialised format in the central depositories, 1 if there is a central depository but it is optional to have shares in dematerialised format, 0 if there is no central depository.

The first step for a shareholder to claim these rights would be to prove himself a shareholder, with increasing cross-border holdings, registration often becomes the first hurdle. Thus a pro-shareholder corporate governance regime would insist on an easy process with dematerialised shares which allow for electronic transfer especially through a central clearing house to reduce frauds, transaction time etc.

- *Transfer of shares* – 2 if shares of listed/public companies which can be traded in the open market are fully transferable, 1 if there are restrictions at the discretion of companies and if a non-binding regulations call for full transferability of shares, 0 otherwise; 2 if foreign nationals are allowed to own and transfer shares and are treated on a par with the citizens of the host country, 1 if foreign nationals are allowed to own and transfer shares but with certain restrictions not placed on the citizens of the host country 0 if foreign nationals are not allowed to own or transfer shares.

The founding pillar of pro-shareholder corporate governance allows the shareholders a free choice to exit a company. Hence there is a need for an equity market, the shares need to be fully transferable and there should not be an onerous burden on the shareholder to transfer the shares. Some jurisdictions may have some restrictions on transfer such as a lock in period for promoters, restriction on preference shares, partially paid up equity shares etc. In the majority of such cases these non-transferable shares are not allowed to be traded on the open market (though sometimes trade is allowed in private markets). Therefore, to allow uniformity, only those shares which can be traded on the open market (like common equity shares) need to be fully transferable. Some jurisdictions place extra burden on foreign nationals and thus increase the cost of access to capital, a pro-shareholder policy would allow foreign funds entry to the financial market as it would give shareholders more choice and would lead to a more vibrant equity market.

- *Regular and timely information* – 2 if half yearly and annual reports are mandatorily sent to shareholders and a central registry, 1 if annual reports are sent to the central registry only and not to shareholders, 0 if no reports are sent or otherwise; 2 if it is statutorily mandated that an annual report includes at least five of the following: a. balance sheet, b. profit and loss statement, c. cash flow statement, d. statement of changes in ownership equity, e. notes on the financial statements and f. an audit report, 1 if it is recommended under a non-binding code 0 if otherwise; 2 if financial reporting mandatorily is based on International Financial Reporting Standards (IFRS) and International Standards on Auditing (ISA) 1 if it is recommended under a non-binding code 0 if otherwise.

Timely and regular information is key in order to make an informed choice. Shareholders always suffer from an information gap, thus pro-shareholder corporate governance policies would always insist on higher burdens on companies to share the maximum possible financial reports on more than an annual basis. IFRS and ISA or comparable standards ensure that companies' financial records comply with the globally accepted standards. This would allow easy comparisons across companies and help in shareholder choice.

- *Participate in shareholders meetings* – 2 if the law explicitly mandates that any class of shareholders are allowed to attend the meeting and take part in discussion, 1 if it is a common practice backed by a non-binding code 0 otherwise; 2 if a law mandates that a proxy form to vote on the items on the agenda accompanies notice of the meeting or if shareholders may vote by mail on the items on the agenda, 1 if it is recommended by a non-binding code or is a general practice, 0 if under law/non-binding regulation/practice absent shareholders vote (or shareholders who have not returned the proxy form/postal ballot) is given to mangers by default; 2 if cross-border proxy voting is allowed without any restriction, 1 if it is allowed with some restriction or a non-binding governance code recommends cross-border proxy voting without restriction, 0 otherwise.

Although some classes of shareholders like those holding preference shares are barred from voting, a policy which allows them to participate in the meeting (without voting) is more shareholder-friendly than regulations which completely bar the participation of nonvoting shareholders from general meetings. Further, in many highly dispersed companies it is not possible for the shareholder to attend the meetings and personally cast votes and proxies are generally used. A system which recognises shareholders as owners of the company would try to make it easier for more shareholder participation rather than using regulatory loopholes. A further mark of a liberalised regime would be to allow foreign nationals to use proxies to cast their votes as it otherwise might be financially onerous on the foreign shareholder.

- *Dividend* – 2 if shareholders can approve the amount of dividend to be paid with a simple majority, 1 if it is recommended under a non-binding regulation or code, 0 otherwise; Shareholder primacy corporate governance ensures shareholder wealth maximisation, timely and appropriate dividends is one way. In many common law jurisdictions the board of directors decides the amount of dividend to be paid. Thus, shareholder approval by simple majority on the amount of dividend paid would ensure that shareholders have an indirect say on the amount of dividend rather than a situation where the board can itself decide and approve the dividend amount.

- *Supermajority for extraordinary transaction* – 2 each if it is mandated by rule or statute that 75% or more shareholders need to agree for the following authorizing a) capital increases; b) waiving pre-emptive rights; c) buying back shares; d) amending articles of association; e) delisting; f) acquisitions, disposals, mergers and takeovers; g) changes to company business or objectives; h) making loans and investments beyond limits prescribed under prospectus; i) authorizing the board to: (i) sell or lease major assets; (ii) borrow money in excess of paid-up capital and free reserves, and (iii) appoint sole selling agents and apply to the court for the winding up of the company, 1 each if it is under a non-binding regulation with a comply or explain architecture or if it is a common practice, 0 otherwise.

Shareholders should retain control over the board in the case of an extraordinary transaction which may affect the long term and short term viability and profitability of the company. Buy back of shares, issuance of new shares and corporate restructuring generally lead to changes in the total paid up share capital and directly impacts on share prices. Capital restructuring can also lead to the consolidation of incumbent management in a widely held company. This provision can be misused by majority shareholders who can issue new shares to themselves, waiving the pre-emptive rights of first refusal of the minority, this leads to further dilution of minority held shares. Moreover, with an increased number of shares the price of shares would generally fall thereby expropriating the share value of the minority. Similarly, significant changes to the asset base of the company would also impact on the prices of shares. Rights issues can also be used as a takeover defence. Some jurisdictions allow for some of these powers to be exercised directly by the board, some require a simple majority while others demand a supermajority. If a supermajority is required for these transactions, shareholders are able to get full ex-ante information about aspects limiting their rights that would normally be factored into the price of the security. This limitation on absolute board power would also enable minority shareholders to protect themselves from self-dealing corporate insider expropriation by dilution, to an extent.

<u>Anti-Managerial rights index</u>

- *Performance related pay* - 2 if under law a minimum fixed portion of executive remuneration is performance linked, 1 if it is a common practice or recommended under a non-binding corporate governance code, 0 otherwise; 2 if executive remuneration requires shareholder approval, 1 if shareholder approval is only advisory, 0 otherwise; 2 if there are statutory rules relating to stock option plans and stock linked pension funds exist, 1 if there is a non-binding code or regulation, 0 otherwise.

One of the cornerstones of agency-based shareholder value maximisation of corporate governance is to align the interests of the managers and the employees to the interest of the shareholders i.e. to increase the price of shares on equity markets. This can be achieved if emphasis is placed on encouraging executives to take a major portion of their remuneration in stock options. Like the OECD principles of corporate governance which states that performance related pay should be allowed to develop, most jurisdictions do not put in a fixed line as to how much executive compensation should be linked to the performance of share prices. However, a jurisdiction which wants to implement a performance-linked pay for executives will fix a minimum amount of compensation which must be linked to share performance. Similarly for employees there can be stock-linked pension funds or employees stock ownership plans (ESOPs). In many jurisdictions these exist as general practice, however as it becomes more prevalent legislators tend to regulate it by bringing rules. Thus the presence of guiding rules relating to ESOPs etc. acts as a proxy for the fact that performance related pay for employees has been generally accepted. Executive compensation is usually fixed by the remuneration committee, however, if shareholders need to approve the quantum of compensation, it adds another layer of shareholder control over the directors.

- *Proportionality of ownership of share and control* – 2 if ordinary equity shares that do not carry a preference of any kind, neither for dividends nor for liquidation carry one vote per share,[76] 1 when a non-binding code discourages the existence of methods of disproportional control like multiple-voting and nonvoting ordinary shares, pyramid schemes or does not allow firms to set a maximum number of votes per shareholder irrespective of the number of shares owned, 0 otherwise

Each shareholder should be given proportional equity control to the amount invested. However over the years, due to financial requirements, various forms of shares have evolved – preference shares which have higher or fixed cash flow rights but sacrifice voting rights, golden shares which may contribute little to equity but have disproportionate voting rights etc.[77] which are separate from

[76] Even with a strict imposition of one share one vote rule, which should in theory nullify golden shares, there would be other ways like stock pyramids, cross-ownership structures and dual class equity structures which gives disproportional control delinked from cash flow rights by careful manipulation of common equity shares.

[77] See generally Milton Harris and Artur Raviv, 'Corporate governance: Voting rights and majority rules' (1988) 20 Journal of Financial Economics 203-235

ordinary equity shares. The survey will limit itself to one vote per one ordinary share to ensure proportionality of control across the ordinary equity class. Thus, for example, a jurisdiction which does not have any regulation on disproportionate voting rights like golden shares, pyramid schemes etc. would be scored 0.

- *Markets for corporate control* - 2 if pre-offer takeover defences are statutorily banned, 1 if there is a non-binding code which specifically discourages directors from using pre-offer defences, 0 if there is no regulation; 2 if post-offer takeover defences are statutorily banned, 1 if there is a non-binding code which discourages directors from using post-offer defences, 0 if there is no regulation; 2 if at least 25% or more shares are to be with the public for listed companies, 1 if there is a non-binding code for the same, 0 otherwise; 2 if a declaration to the market by a shareholder holding 5% of share capital is necessary whenever their shareholding changes by more than 1-5% of the total subscribed share capital within a given period of time, 1 if the disclosure is recommended by a non-binding code, 0 otherwise;

To ensure that the market for corporate control can function effectively, any pro-shareholder corporate governance would try to restrict the powers of the incumbent managers to scupper takeover attempts. Takeover defences can be divided into two categories based on the time when they can be effected. Defences like the poison pill, automatic rights issue, golden parachute for executives, staggered board etc. are arranged before a bid is made for the control of the company. On the other hand, defences like targeted repurchase bids (coupled with white knight etc.), asset restructuring (crown jewel defence, scorched earth policy etc.), capital restructuring (issue of new shares to existing shareholders), greenmailing are usually set in motion once the takeover bid has already been made. 'Poison pills provide their holders with special rights in the case of a triggering event such as a hostile takeover bid. If a deal is approved by the board of directors, the poison pill can be revoked, but if the deal is not approved and the bidder proceeds, the pill is triggered. Similarly, golden parachutes are severance agreements that provide cash and non-cash compensation to senior executives upon an event such as termination, demotion, or resignation following a change in control.'[78] Rights issue (either contingent on takeover bid or post bid effected

[78] Paul Gompers, Joy Ishii and Andrew Metrick, 'Corporate governance and equity price' (2003) 118 (1) Quarterly Journal of Economics 107 working paper available at < http://www.boardoptions.com/governancearticle.pdf>. In their seminal paper they studied 24 firm level corporate governance factors for 1500 large corporations for the period 1990-1999. The corporate governance provisions were divided into five thematic groups: tactics for delaying hostile bidders, director/officer protection, voting rights, other takeover defences, and State/laws. Paul A. Gompers et al. focussed on anti-shareholder provisions in the company's prospectus and other documents creating a 'G index' where higher scores meant lower shareholder rights. They then concentrated on two extreme ends of the index creating a 'Dictatorship Portfolio' of the firms with the weakest shareholder rights (G≥14), and a 'Democracy Portfolio' of the firms with the strongest shareholder rights (G ≤ 5).'

by incumbent management) allows for the issue of new shares to existing shareholders, this would lead to an increase in the number of shares and make it expensive for the raider to get majority control. As detailed in several pieces of research, takeover defences affect share prices and earnings.[79] Thus, an ideal shareholder primacy corporate governance system would discourage takeover defences. It is also necessary to differentiate between pre-bid and post-bid defences as many jurisdictions allow some form of defence such as counter offers etc. which usually raises the share prices and thus offers a better exit to shareholders. Therefore, if a jurisdiction bans the incumbent management from executing pre-offer defences such as staggered board, poison pill, golden parachute, supermajority (over 80%) to approve merger, dual class recapitalisation then the jurisdiction would be coded 2, if some of them are banned and others are specifically discouraged by a non-binding code then the country is coded 1, if there is no code or rule then it is coded 0. Similarly, for post-bid defences the survey will look for laws and rules banning or discouraging asset restructuring, liability restructuring, capital restructuring and targeted repurchase (not open competitive bidding).

In developing countries the share markets are generally illiquid and there is a high prevalence of block-holder directors. This situation can be remedied by having a minimum amount of shares with the public which may lead to more dispersed holding.[80] In India, which as per S&P is a leading emerging market, only recently was it made mandatory that for listing at least 25% of the shares should be with public. Therefore, to ensure that markets in developing countries move towards a more open market it is imperative that shares become more dispersed, the first step towards this would be a minimum of 25% free float.

The disclosure rule for shareholders with 5% shareholding would nullify any attempts to effect a creeping acquisition and allow for proper share valuation due to an expected increase in demand.

- *Impediments to cross border voting* – 2 if American Depositary Receipt (ADR) and Global depository receipt (GDR) with voting rights at par equity is allowed, 1 if ADR and GDR have voting rights with some restriction, 0 otherwise.

An investment bank can buy shares of companies listed at a share market in a developing country and later issue a negotiable security linked to these issues at a stock exchange in a developed country. These negotiable securities are referred to as depository receipts and their value varies

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79 See Richard S. Ruback, 'An Overview of Takeover Defenses' in Alan J. Auerbach, (ed.) *Mergers and Acquisitions* (University of Chicago Press 1987) table 3.1 and 3.2; Pornsit Jiraporn, 'An empirical analysis of corporate takeover defences and earnings management: evidence from the US' (2005) 15 (5) Applied Financial Economics 293-303.

80 Though Cheffins et al. 'Ownership Dispersion and the London Stock Exchange's 'Two-Thirds Rule': An Empirical Test' (2012). University of Cambridge Faculty of Law Research Paper No. 17/2012. Available at <http://ssrn.com/abstract=2094538> concludes that two-thirds rule of London stock exchange was not the catalyst for dispersion of ownership and control that might have been expected.

according to the price of the underlying share in the original host country. If depository receipts for foreign companies are issued in the US market they are referred as ADR and if these depository receipts are issued in the non US market[81] it is commonly referred to as GDR. ADR and GDR allows foreign capital to flow into the host country and at the same time ensures that the companies adhere to the deposit agreements. Deposit agreements follow a strict set of disclosures, thus jurisdictions which allow ADR and GDR automatically ensures that companies which choose to issue ADR or GDR has to comply with strict standards. Whether the ADR/GDR purchaser would be able to vote depends on the depository agreements, however from a pro-shareholder view any equity investment should be able to exert proportionate control. Thus, shareholder primacy corporate governance would allow default voting rights for depository receipts to be on a par with domestic equity shares.

- 2 if by law external auditors need to be changed after 1-5 years and some cooling off period, 1 if it is recommended under a non-binding code, 0 otherwise.

A regular change in the external auditor would ensure that management always remains at arms-length from the auditors. A quick glance at major corporate fraud like the Enron scandal, Satyam scandal[82] would suggest that in many cases it was the willing oversight of the auditors which led to the delayed discovery of fraud. Thus a pro-shareholder corporate governance policy would favour a change of auditors at regular intervals so that the integrity of the financial information/disclosure is maintained.

- 2 each if it is mandatory for presence of audit committee, remuneration committee, nomination committee with a majority of independent directors, 1 if it recommended by a code, 0 otherwise.

NEDs are supposed to act as an internal control mechanism looking at a long term view. Through these committees they are supposed to keep watch on executive directors and managers, appoint auditors, fix remuneration of the executives and maintain continuity with nominating executives for the top positions. The majority rule has to be enforced by statutory binding regulation. Independent directors are those directors who do not have any financial interest in the company and whose remuneration is not linked with performance.

- 2 if the country has legal protection for whistle-blowers, 1 if it is recommended in a non-binding corporate governance code etc., 0 otherwise.

<u>Minority shareholders rights index</u>

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81 For example in European stock exchanges like Frankfurt Stock Exchange, London Stock Exchange etc.
82 Criminal prosecution of auditors is still on-going

- *Ability to influence an electing member of board* – 2 if cumulative voting is allowed, 1 if it is recommended but discretionary, 0 otherwise.

Shareholders should be allowed to have effective control over the board by electing its members. Most jurisdictions offer shareholders the opportunity to elect members but in a shareholder primacy system cumulative voting would be allowed as minority shareholders would then be able to pool their votes for certain board candidates.

- *Prohibit abusive self-dealing* - A score of 0 if the board of directors, the supervisory board or shareholders must vote and the self-dealing majority shareholder is permitted to vote, 1 if it is recommended under a non-binding code that the board of directors or the supervisory board must vote and the self-dealing majority shareholder is not permitted to vote, 2 if it is mandatory that the self-dealing majority shareholder is not permitted to vote; 2 if shareholders must vote and the self-dealing majority shareholder is not permitted to vote, 1 if it is recommended, 0 otherwise. A score of 0 is assigned if no disclosure is required 1 if disclosure on the terms of the transaction is recommended, 2 if it is required; 2 if an external auditor is required to review the transaction before it takes place, 1 if it is recommended, 0 otherwise.

A majority shareholder who is also a member of the board is at a distinct advantage over minority shareholders in terms of insider information and control. This may also lead to the diversion of company's assets for personal gain and eventual expropriation. Therefore a shareholder wealth maximisation of corporate governance would call for strict regulations to limit any self-dealing, putting in place checks and balances like NEDs, external auditors and even approval in shareholder meetings.

- *Ability to take judicial recourse* - 2 if direct or derivative suits are available for 100 shareholders or shareholders holding a minimum of 5-10% of the share capital, 1 if more than 10% or more than 100 shareholders are required for a suit, 0 in other cases.

Business judgment rule prevents courts from interfering in the internal decision making process of a company, unless a sizeable number of shareholders approach the court. A pro-shareholder corporate governance policy would try to keep this threshold low so that even minority shareholders can approach the court to seek redressal in cases of oppression and mismanagement. Yet at the same time it should not be so low that the company has to always defend frivolous law suits.

<u>Anti-Stakeholder rights index</u>

- 0 if under a regulation stakeholder representation is found/encouraged in board, 1 if it is discouraged by a non-binding code or if there is no mention, 2 if it is prohibited by a binding regulation; 0 if under a regulation stakeholders or their representatives can be present/are encouraged to be present in shareholders meeting, 1 if it is discouraged by a non-binding code 2 if it is prohibited by a binding regulation and only shareholders can be present; 2 in the case of a unitary managing board where a majority of its members are directly elected by shareholders or are selected with the concurrence of the elected members of the board, 1 where under a non-binding code it is encouraged, 0 otherwise; 0 if stakeholders find remedy inside company law, 1 where there is a non-binding code under which stakeholders other than shareholders are offered remedy outside of company law, 2 if the company code or the listing agreements do not have any provision for stakeholder remedies except for shareholders; 0 if the country has a code of ethics for directors which explicitly states that stakeholder rights come before any other shareholder rights, 1 if it is recommended that directors give due consideration to the rights of different stakeholders but does not state if one group has a higher claim than another, 2 if there is a mandatory code which mentions that shareholders have precedence over other stakeholders. Shareholder primacy corporate governance demands that stakeholders like creditors, employees, suppliers and customers are not represented at any stage of the decision making process. They should find remedies outside the corporate law and corporate governance mechanism. Therefore a jurisdiction which mandates dual board structure with stakeholder representation would score lower in the overall assessment.

Appendix D

Code snippet 1 for graded response model

Code snippet 2 for add on Kalman filter

Code snippet 3 for Bayesian factor analysis

Appendix B

Financial market development index

Foreign Direct Investment (FDI) – International Monetary Fund defines net FDI as 'the net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments.' There is a wide array of literature which empirically connects improvement in corporate governance with an increase in FDI. The rationale is that a country which adopts a stronger corporate governance regime (which provides higher investor protections) gives a competitive advantage to that country as 'Investors "cherry pick" the countries to which they allocate capital, based on the strength of investor protections. After countries undertake corporate governance reforms, they are more likely to draw in foreign investments.' Fazio and Talamo investigated this transmission channel using a 'two-stage version of the gravity model and investigate[d] the determinants of FDI flows with special reference to the institutional factors, after controlling for a number of traditional variables and potential incentives, such as wages and taxes.' They found that robust corporate governance is an important factor in attracting FDI.

Market capitalisation of listed companies – Standard & Poor defines market capitalisation or market value as 'the share price times the number of shares outstanding. Listed domestic companies are the domestically incorporated companies listed on the country's stock exchanges at the end of the year.' The rationale behind linking shareholder primacy corporate governance with market capitalisation is the empirical evidence that 'firms with stronger shareholder rights had higher firm value, higher profits, higher sales growth, lower capital expenditures, and made fewer corporate acquisitions' this 'enhances the investors' optimism in the firm's future cash-flow and growth prospects' leading to higher share prices and therefore higher market capitalisation.

Number of IPOs – Initial public offering generally allows the shares of a company to be listed at a stock exchange and be bought and sold by the public. Given the long history of stock exchange scams where unsuspecting investors were lured into buying worthless shares, it is quite natural that strict corporate governance guidelines have been innovated to ensure continuing confidence amongst investors. Microeconomic firm-level evidence shows that 'firms with stronger [corporate] governance structures have higher IPO valuations and better long term operating performance than their peers.' Thus, as Prof. Coffee posits, Anglo-American style shareholder primacy corporate governance may be instrumental in assuring greater protections for minority shareholders and increased financial transparency and thereby lead to an upsurge in the number of IPOs.

Number of listed domestic companies - Listed domestic companies are the domestically incorporated companies listed on the country's stock exchanges at the end of the year. It is widely used as a proxy for financial market development as a vibrant financial market governed by adequate corporate governance regulation would induce private companies to seek equity funds and relinquish control.
As there is high correlation between the number of firms and the number of IPOs, this survey uses the total number of listed domestic companies as part of the dependent index.

S&P global equity index - S&P Global Equity Indices measure the U.S. dollar price change in the stock markets covered by the S&P/IFCI and S&P/Frontier BMI country indices. The theoretical basis for linking the equity index with corporate governance lies in the doctrine of market for corporate control, where it is hypothesised that if managers of a company are unable to produce the desired results in the form of higher share prices then the shareholders would divest those shares, resulting in the fall of share prices and thereby opening the entrenched management to the perils of takeover and consequent loss of position. Thus, a shareholder oriented corporate governance is theorised to positively impact stock market performance.

Traded volume of stocks traded – Stocks traded refers to the total value of shares traded during the period. It is controlled for foreign exchange price fluctuation. This variable provides a measure of financial market depth, liquidity (consequently the fall in the cost of access to capital) and acts as an indicator of market development and growing financialisation. All these factors are affected by changes in corporate governance.

Appendix C

<u>Macroeconomic control</u>

Log GDP – this variable adjusts for the generally observed exponential growth of GDP and gives a clearer picture about the actual growth rate of GDP. This also, to an extent, nullifies the autocorrelation in real GDP values.[83] Log GDP acts as a proxy for economic growth. It is an accepted theory that there is a two way linkage between GDP and FDI, scholars like Hansen,[84] Basu et al.,[85] Hsiao[86] etc. have clearly enumerated the long term relationship between FDI and GDP. There is also an accepted relationship between GDP and the stock index,[87] as higher log GDP usually translates into an increase in industrial output, which *pari passu* in turn should increase share prices. The data will be sourced from WB WDI dataset.

Log GNP – log GNP adjusts for the actual growth of GNP, it thus provides for the growth in market value of all the goods and services produced in one year by labour and property supplied by the citizens of a country. Therefore it can account for an increase in the industrial productions, based on the investment made in a different country and consequently can supplement GDP values which focus solely on the geographical location of production. Scholars like Cutler et al.,[88] Dhakal et al.,[89] Mahdavi[90] etc. have shown that there is a causality between market variations and GNP. The data will be sourced from WB WDI dataset. However owing to the high correlation between log GDP and log GNP, we will not use log GNP.

Log PPP – Purchasing power parity determines the relative value of different currencies, thus an increase in PPP would allow researchers to estimate the economic growth especially when the real GDP (which is pegged to a historic USD value) can fluctuate based on varying exchange rates. Thus log PPP complements both log GDP and log GNP in proxying for macroeconomic growth by

[83] For advantages of using log GDP and its impact on health please refer to Aghion et al., 'The relationship between health and growth: when Lucas meets Nelson-Phelps', (2010) National Bureau of Economic Research No. w15813 available at <http://scholar.harvard.edu/files/aghion/files/relationship_between_health.pdf>

[84] Henrik Hansen and John Rand, 'On the causal links between FDI and growth in developing countries' (2006) 29 (1) The World Economy 21-41

[85] Basu et al., 'Liberalization, FDI, and growth in developing countries: a panel cointegration approach' (2003) 41 (3) Economic Inquiry 510-516.

[86] Frank S.T. Hsiao and Mei-Chu W. Hsiao, 'FDI, exports, and GDP in East and Southeast Asia—Panel data versus time-series causality analyses' (2006) 17 (6) Journal of Asian Economics 1082

[87] See generally Holger Sandte, 'Stock Markets vs GDP Growth: A Complicated Mixture' (2012) WestLB Mellon Asset Management Viewpoint 1 – 8 available at http://us.bnymellonam.com/core/library/documents /knowledge/AlphaTrends/Stock_Markets_vs_GDP.pdf; Lena Saeed Shiblee IV, 'The Impact of Inflation, GDP, Unemployment, and Money Supply On Stock Prices' (2009) available at http://dx.doi.org/10.2139/ssrn.1529254; N Groenewold Fraser, 'Share Prices and Macroeconomic Factors' (1997) 24 (9-10) Journal of Business Finance & Accounting 1367-1383

[88] Cutler et al., 'What moves stock prices?' in Peter L. Bernstein and Frank L. Fabozzi (eds.), *Streetwise: The Best of the Journal of Portfolio Management* (Princeton University Press 1998) 56-63.

[89] Dharmendra Dhakal et al., 'Causality between the money supply and share prices: a VAR investigation' (1993) Quarterly Journal of Business and Economics 52-74.

[90] Saeid Mahdavi and Ahmad Sohrabian, 'The link between the rate of growth of stock prices and the rate of growth of GNP in the United States: a Granger causality test' (1991) The American Economist 41-48.

stabilising inflationary forces.[91] This connection between PPP, capital flow, exchange rates and market growth has been explored by other researchers like Hung,[92] Ammer,[93] Sarno,[94] etc. The data will be sourced from the WB WDI dataset.

Balance of payment or **Current a/c balance** – this records all the financial transactions between the economy of the country and rest of the world, it can be crudely defined as the difference between the cost of import and export of all goods and services. Balance of payment has a direct effect on exchange rates,[95] exchange rate has direct impact on FDI.[96] Also if a country had suffered a balance of payment crisis its financial market would have reacted adversely during that period,[97] controlling for balance of payment would allow for the negation of such variations. The data will be sourced from the WB WDI dataset.

Deposit and lending interest rates – The World Bank defines interest rate spread as the interest rate charged by banks on loans to private sector customers minus the interest rate paid by commercial or similar banks for demand, time, or savings deposits. The Central banks of countries vary the interest rates and so stimulate or slow down economies by increasing or restricting the flow of money and easy credit. Therefore the interest rates have a direct impact on the financial market.[98] Thus, interest rates can be used to control for monetary policy and structural shocks, inflationary

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91 B Chowdhry et al., 'Extracting inflation from stock returns to test purchasing power parity' (2005) 95 (1) American Economic Review 255-276

92 Mao-Wei Hung and Yin-Ching Jan, 'Use of deviations of purchasing power parity and interest rate parity to clarify the 1997 Asian financial crisis' (2002) 5 (2) Review of Pacific Basin financial markets and policies 195

93 J Ammer and JP Mei, 'Measuring international economic linkages with stock market data' (1996) 51 (5) Journal Of Finance 1743-1763

94 Lucio Sarno and Giorgio Valente, 'Deviations from purchasing power parity under different exchange rate regimes: Do they revert and, if so, how?' (2006) 30 (11) Journal of Banking & Finance 3147–3169; See also Akram et al., 'Does the law of one price hold in international financial markets? Evidence from tick data'(2009) 33 (10) Journal of Banking & Finance 1741-1754.

95 Magda Kandil, 'Exchange Rate Fluctuations and the Balance of Payments: Channels of Interaction in Developing and Developed Countries' (2009) 24 (1) Journal of Economic Integration 191-174

96 See generally Michael W. Klein and Eric Rosengren, 'The real exchange rate and foreign direct investment in the United States: relative wealth vs. relative wage effects' (1994) 36 (3) Journal of international Economics 373-389; Kenneth A. Froot and Jeremy C. Stein, 'Exchange rates and foreign direct investment: an imperfect capital markets approach' (1992) NBER Working Paper No. 2914; Bruce A. Blonigen, 'Firm-specific assets and the link between exchange rates and foreign direct investment' (1997) The American Economic Review 447-465; Linda S. Goldberg and Charles D. Kolstad, 'Foreign direct investment, exchange rate variability and demand uncertainty.' (1994) NBER Research Working paper No. 4815 published at (1995) 36 (4) International Economic Review 855.

97 See generally Matthieu Bussière, 'Balance of payment crises in emerging markets: how early were the 'early' warning signals?' (2013) 45 (12) Applied Economics 1601-1620

98 Md Mahmudul Alam and Md Gazi Salah Uddin, 'Relationship between interest rate and stock price: empirical evidence from developed and developing countries.' (2009) 4 (3) International Journal of Business and Management 43; Clive Coetzee, 'Monetary conditions and stock returns: a South African case study' (2002) EconWPA working paper no. 0205002; Zivanemoyo Chinzara, 'Macroeconomic uncertainty and emerging market stock market volatility: The case for South Africa' (2010) Economic Research Southern Africa Working paper 187.

pressure etc. and its effect on financial market.[99] The data will be sourced from the WB WDI dataset.

External debt – this is the public debt that is owed to foreign financial institutions.[100] International lenders keep an eye on the ratio of GDP to external rate to secure themselves against the risk of default.[101] Thus when the foreign investment dries up smaller economies can fall into a growth trap where because of lower investment there is slower economic growth.[102] Research has now clearly shown that higher external debts lead to ever increasing debt servicing burden, which has a negative effect on the productivity of labour and capital, leading to adverse effects on long term economic growth.[103] Hence, it is important to control for the negative impact of debt pressure and systemic shocks on financial growth especially in smaller emerging economies.[104]

Financial and technological inclusion

Banks per capita – the number of banks per capita can be considered as a rough approximation of financial inclusion and the development of the banking sector. Financial inclusion plays a vital role in allowing marginal populations to directly or indirectly access capital and influence economic growth.[105] A robust banking sector is also an indicator of a vibrant stock market and long-term

[99] See generally Ronald Mangani, 'Monetary policy, structural breaks and JSE returns.' (2011) 73 Investment Analysts Journal 27-35; K. S Mallick and M. R. Sousa, 'Inflationary pressures and monetary policy: evidence from BRICS economies.' (2011) Quantitative and Qualitative Analysis in Social Sciences Conference available at www. qass. org. uk/2011-May_Brunel-conference/Mallick.pdf; Michael Hewson and Lumengo Bonga-Bonga, 'The effects of monetary policy shocks on stock returns in South Africa: a structural vector error correction model' (2005) Economic Society of South Africa Conference, Durban.

[100] World Development Index defines external debt stock as 'Total external debt is debt owed to nonresidents repayable in currency, goods, or services. Total external debt is the sum of public, publicly guaranteed, and private nonguaranteed long-term debt, use of IMF credit, and short-term debt. Short-term debt includes all debt having an original maturity of one year or less and interest in arrears on long-term debt.' <http://data.worldbank.org/indicator/DT.DOD.DECT.CD?cid=GPD_31>

[101] See generally Daniel Cohen and Jeffrey Sachs, 'Growth and external debt under risk of debt repudiation.' (1986) 30 (3) European Economic Review 529-560.

[102] Pierre Villa, 'Financial constraint and growth in the developing countries' (1998) 49 (1) Revue Economique 103-117

[103] Hameed et al., 'External debt and its impact on economic and business growth in Pakistan.' (2008) 20 International Research Journal of Finance and Economics 132-140; See also Cristina Checherita-Westphal and Philipp Rother, 'The impact of high government debt on economic growth and its channels: An empirical investigation for the euro area.' (2012) 56 (7) European Economic Review 1392-1405; For a neoclassical economic perspective see Peter A. Diamond, 'National debt in a neoclassical growth model.' (1965) The American Economic Review 1126-1150.

[104] See generally Catherine A. Pattillo et al., 'External debt and growth' (2002) International Monetary Fund working paper No. 02/69; see also Benedict J. Clements et al., 'External debt, public investment, and growth in low-income countries.' (2003) International Monetary Fund Working paper no. 2249; Augustin Kwasi Fosu, 'The external debt burden and economic growth in the 1980s: evidence from sub-Saharan Africa.' (1999) 20 (2) Canadian Journal of Development Studies 307-318.

[105] See Levine and Zervos (n 83); See also Thorsten Beck and Ross Levine, 'Stock markets, banks, and growth: Panel evidence.' (2004) 28 (3) Journal of Banking & Finance 423-442.

economic growth.[106] This phenomenon is however largely confined to economies with lower financial inclusion (such as the majority of developing countries) where a large part of the population does not have access to formal capital structures and have to depend on usurious loans and thus have rippled negative economic effects.[107] Hence, to isolate the effects of corporate governance on the overall financial market it is important from the context of developing countries that we control for varying financial inclusion.

Access to ICT - information and communication technology has led to the structural reorganisation of the financial market through extending trade, reorganising capital and enhancing the availability of information.[108] Easier access to ICT encourages SMEs and populations from weaker economic areas to interact with the economic mainstream and can lead to economic growth, there have been studies with panel data which have shown links between ICT use and the growth rate of GDP per capita.[109] Therefore, information on inclusion measured by the number of internet users and the number of mobile subscriptions per 1000 inhabitants provides a general control metric for its effect on financial and economic growth.[110]

Access to electricity and **power consumption per capita** – access to electricity and electricity consumption per capita is a proxy for the level of industrialisation and therefore has a direct effect on foreign direct investment and other financial market indicators.[111] It is thus believed that access

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106 Ross Levine, 'The legal environment, banks, and long-run economic growth.' (1998) Journal of Money, Credit and Banking 596-613.

107 See Vighneswara Swamy, 'Financial Inclusion, Gender Dimension, and Economic Impact on Poor Households' (2014) 56 World Development 1-15; Jake Kendall, 'Local financial development and growth' (2012) 36 (5) Journal of Banking and Finance 1548-1562; Mohammad Shafi and Ali Hawi Medabesh, 'Financial Inclusion in Developing Countries: Evidences from an Indian State' (2012) 5 (8) International Business Research 116; Panicos O. Demetriades and Kul B. Luintel, 'Financial development, economic growth and banking sector controls: evidence from India.' (1996) The Economic Journal 359-374; Mandira Sarma and Jesim Pais, 'Financial inclusion and development.' (2011) 23 (5) Journal of International Development 613-628. For a developed country perspective see Klaus Neusser and Maurice Kugler, 'Manufacturing growth and financial development: Evidence from OECD countries.' (1998) 80 (4) Review of Economics and Statistics 638-646.

108 Maryam Farhadi et al., 'Information and Communication Technology Use and Economic Growth' (2012) 7 (11) PLoS ONE available at http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0048903

109 ibid

110 See generally Sanjeev Dewan and Kenneth L. Kraemer, 'Information Technology and Productivity: Evidence from Country-Level Data' (2000) 46 (4) Management Science 548-562; Sang-Yong Tom Lee et al., 'Time series analysis in the assessment of ICT impact at the aggregate level – lessons and implications for the new economy' (2005) 42 (7) Information & Management 1009; Hwan-Joo Seo and Young Soo Lee, 'Contribution of information and communication technology to total factor productivity and externalities effects' (2006) 12 (2) Information Technology for Development 159-173; for a review of the literature see Erik Brynjolfsson and Shinkyu Yang, 'Information Technology and Productivity: A Review of the Literature' (1996) 43 Advances in computer 179–214; for a developed country perspective see K Motohashi, 'ICT diffusion And Its Economic Impact In OECD Countries.' (1997) 20 STI Reviews 13-45; J Jalava and M Pohjola, 'Economic growth in the new economy: Evidence from advanced economies.' (2002) 14 (2) Information Economics and Policy 189–210.

111 Alice Shiu and Pun-Lee Lam, 'Electricity consumption and economic growth in China.' (2004) 32 (1) Energy

to electricity would become a part of access to resources and augment the classical growth theory.[112] Several researchers have shown bi-directional causality between economic growth and power consumption,[113] therefore, it is imperative that access to electricity and power consumption per capita be used as a control variable to insulate the effects of corporate governance policies on the growth of the financial market.

Human development index – this 'is a summary measure of average achievement in key dimensions of human development: a long and healthy life, being knowledgeable and have a decent standard of living. The HDI is the geometric mean of normalized indices for each of the three dimensions.'[114] HDI can therefore act as a proxy for level of education, health and general standard of living.[115] It is theorised that the improvement of HDI is concurrent and co-dependent on economic growth as a more educated long living population should foster more economic growth which in turn would increase spending on health and education leading to a virtuous cycle.[116] Due to the relative stability of the variable over time, this variable is used as a country level control indicator.

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policy 47-54; Jiahai Yuan et al., 'Electricity consumption and economic growth in China: cointegration and co-feature analysis.' (2007) 29 (6) Energy Economics 1179-1191; Sajal Ghosh, 'Electricity consumption and economic growth in India.' (2002) 30 (2) Energy policy 125-129; Nicholas Apergis and James E. Payne, 'Energy consumption and economic growth in Central America: evidence from a panel cointegration and error correction model.' (2009) 31 (2) Energy Economics 211-216; Yemane Wolde-Rufael, 'Electricity consumption and economic growth: a time series experience for 17 African countries' (2006) 34 (10) Energy Policy 1106-1114; Galip Altinay and Erdal Karagol, 'Electricity consumption and economic growth: evidence from Turkey.' (2005) 27 (6) Energy Economics 849-856; for a developed country perspective see S Smiech and M Papiez, 'Energy consumption and economic growth in the light of meeting the targets of energy policy in the EU: The bootstrap panel Granger causality approach' (2014) 71 Energy Policy118-129; Jaruwan Chontanawat et al., 'Does energy consumption cause economic growth?: Evidence from a systematic study of over 100 countries' (2008) 30 (2) Journal of Policy Modeling 209-220.

[112] Anis Omri and Bassem Kahouli, 'Causal relationships between energy consumption, foreign direct investment and economic growth: Fresh evidence from dynamic simultaneous-equations models' (2014) 67 Energy Policy 913-922

[113] John Asafu-Adjaye, 'The relationship between energy consumption, energy prices and economic growth: time series evidence from Asian developing countries' (2000) 22 (6) Energy economics 615-625; Ugur Soytas and Ramazan Sari, 'Energy consumption and GDP: causality relationship in G-7 countries and emerging markets' (2003) 25 (1) Energy economics 33-37; for a counter opinion see Shyamal Paul and Rabindra N. Bhattacharya, 'Causality between energy consumption and economic growth in India: a note on conflicting results' (2004) 26 (6) Energy Economics 977-983.

[114] United Nations Development Programme, *Human Development Report 2014*; for a more critical view see Mark McGillivray, 'The human development index: yet another redundant composite development indicator?' (1991) 19 (10) World Development 1461-1468; Ambuj D.Sagar and Adil Najam, 'The human development index: a critical review' (1998) 25 (3) Ecological economics 249-264; Jack Hou, 'The dynamics of Human Development Index' (2014) The Social Science Journal doi:10.1016/j.soscij.2014.07.003; Martin Ravallion, 'Troubling tradeoffs in the Human Development Index' (2012) 99 (2) Journal of Development Economics 201-209

[115] See Technical notes in United Nations Development Programme, *Human Development Report 2014* available at http://hdr.undp.org/sites/default/files/hdr14_technical_notes.pdf

Gini coefficient –is an ad hoc measure for income inequality.[117] It is theorised that a higher Gini coefficient denoting a higher income inequality would result in more conflicts, skewed political decisions favouring further accumulation of capital and lower spending on developing human capital[118] leading to less sustainable economic growth.[119] However this view has been challenged by numerous scholars who argue that in the short and medium term income inequality actually fosters higher economic growth.[120] However a different strand of scholarship finds a direct correlative link between 'increases in wealth inequality and stock market participation, smaller increases in consumption inequality and the fraction of indebted households, and a decline in interest rates'[121] especially in booming economies. Therefore, in spite of several shortcomings, Gini coefficient gives a proxy for poverty and inequality which is not adequately measured by HDI. Due to the relative stability of the variable over time, this variable is used as a country level control indicator.

<u>Enforcement quality</u>

Global Peace Index – this index attempts to calculate the relative peace in a country. It compiles around 22 individual qualitative and quantitative indicators under 'three broad themes: the level of safety and security in society; the extent of domestic or international conflict; and the degree of militarisation.'[122] Civil strife and conflicts have significant negative economic effects as they raise

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116 Alejandro Ramirez et al., 'Economic Growth and Human Development' (1997) Yale University working paper no. 18; Gustav Ranis et al., 'Economic growth and human development' (2000) 28 (2) World development 197-219; Gustav Ranis and Frances Stewart, 'Dynamic Links between the Economy and Human Development' (2005) Department of Economics and Social Affairs (UN) Working Paper available at http://economics.ouls.ox.ac.uk/12091/1/Ranis%2520%26%2520Stewart.pdf; Sudhir Anand and Amartya Sen, 'The income component of the human development index' (2000) 1 (1) Journal of human development 83-106; Ghulam Akhmat et al., 'Impact of financial development on SAARC'S human development' (2013) Quality and Quantity 1-16.

117 Robert Dorfman, 'A formula for the Gini coefficient' (1979) The Review of Economics and Statistics 146.

118 See generally Amparo Castelló and Rafael Doménech, 'Human capital inequality and economic growth: some new evidence' (2002) 112 (478) The economic journal C187-C200.

119 Torsten Persson and Guido Tabellini, 'Is Inequality Harmful for Growth? Theory and Evidence' (1991) University of California at Berkley working paper no. 91-155; Alberto Alesina and Dani Rodrik, 'Distributive politics and economic growth' (1991) National Bureau of Economic Research working paper no. 3668 available at <http://www.nber.org/papers/w3668> published at (1994) 109 (2) The Quarterly Journal of Economics 465.

120 See Kristin J. Forbes, 'A Reassessment of the Relationship between Inequality and Growth' (2000) American economic review 869-887; Hongyi Li and Heng-fu Zou, 'Income Inequality is not Harmful for Growth: Theory and Evidence' (1998) 2 (3) Review of Development Economics 318-334; Robert J. Barro, 'Inequality and Growth in a Panel of Countries' (2000) 5 (1) Journal of economic growth 5-32; see also Simon Kuznets, 'Economic growth and income inequality' (1955) The American Economic Review 1-28.

121 Jack Favilukis, 'Inequality, stock market participation, and the equity premium' (2013) 107 (3) Journal of Financial Economics 740-759; for the knock on effect of income inequality especially on asset pricing see Daniel Barczyk and Matthias Kredler, 'Inequality and asset prices' (2015) Working Paper available at < http://danielbarczyk-research.mcgill.ca/research_files/Asset_Dec15.pdf >; Yilin Zhang, 'Income Inequality and Asset Prices: A Cross-Country Study' (2013) working paper available at http://dx.doi.org/10.2139/ssrn.2021287

122 Institute of Economics & Peace, *Global Peace Index: Measuring peace and assessing country risk* (2014) available online at http://www.visionofhumanity.org/sites/default/files/2014%20Global%20Peace%20Index%20REPORT.pdf

expenditure on violence containment thereby increasing the cost of business etc. Most developing countries score lower on the peace index and are theorised to lose between 5%-10% of their GDP on violence containment.[123] The link between conflicts and economic growth seems quite clear, conflicts lead to diversion of resources from economically useful ventures to more security oriented sectors with less economic return.[124] The peace index can also stand as a proxy for political stability.[125] In recent years terrorism has led to short lived but major distortions in financial markets.[126] The peace index is available only from 2007 onwards. The unavailability of data for the major part of the time period studied in this research, along with the probable relative stability of the variable over time, this variable is best used as a country level indicator.

Rule of law – the index is sourced from the World Justice Project, it comprises of '47 indicators organized around 8 themes: constraints on government powers, absence of corruption, open government, fundamental rights, order and security, regulatory enforcement, civil justice, and criminal justice.'[127] Rule of law is important for economic and financial growth at several levels - it repudiates crony capitalism leading to fair allocation of resources, reduces incidences of corruption like bribery etc.; a vibrant judicial system can control excesses of executive and legislature and provide a safety net for foreign investors, a perception of higher rule of law along with confidence

[123] Institute of Economics & Peace, *The economic cost of violence containment: a comprehensive assessment of the global cost of violence* (2014) available at http://www.visionofhumanity.org/sites/default/files/The%20 Economic%20Cost%20of%20Violence%20Containment.pdf

[124] John Bates Clark, 'For a historical treatment of the issue see The Economic Costs of War' (1916) 6 (1) The American Economic Review 85-93; William S. Rossiter, 'The Statistical Side of the Economic Costs of War' (1916) 6 (1) The American Economic Review 94-117; for a more recent treatment of the issue see Ron P. Smith, 'The economic costs of military conflict' (2014) 51 (2) Journal of Peace Research 245-256; Frances Stewart and Valpy Fitzgerald, *The Economic and Social Consequences of Conflict* (Oxford University Press 2000); Vincenzo Bove and Leandro Elia, 'The impact of American and British involvement in Afghanistan and Iraq on health spending, military spending and economic growth' (2014) 14 (1) The BE Journal of Macroeconomics 325–339; Gregory D. Hess, 'The economic welfare cost of conflict: an empirical assessment' (2003) CESifo Working Paper No. 852; Edward Miguel et al., 'Economic shocks and civil conflict: An instrumental variables approach' (2004) 112 (4) Journal of political Economy 725-753; Paul Collier, 'On the economic consequences of civil war' (1999) 51 (1) Oxford economic papers 168-183; Richard Dorsett, 'The effect of the Troubles on GDP in Northern Ireland' (2013) 29 European Journal of Political Economy 119-133; Alberto Abadie and Javier Gardeazabal, 'Terrorism and the world economy' (2008) 52 (1) European Economic Review 1-27

[125] See generally Cristina Bodea and Ibrahim A. Elbadawi, 'Political Violence and Economic Growth, (2008) World Bank, Washington available at https://openknowledge.worldbank.org/handle/10986/6805; Alberto Alesina et al., 'Political instability and economic growth' (1996) 1 (2) Journal of Economic growth 189-211.

[126] Christos Kollias et al., 'European Markets' Reactions to Exogenous Shocks: A High Frequency Data Analysis of the 2005 London Bombings' (2013) 1 (4) International Journal of Financial Studies 154; for ripple effects of interconnected stock exchanges in a globalised world see also M Pericoli and M Sbracia, 'A primer on financial contagion' (2003) 17 Journal of Economic Surveys 571-608; I. Meric and G Meric, 'Co-movements of European equity markets before and after the 1987 crash' (1997) Multinational Finance Journal 137-152; W N Goetzmann et al., 'Long-term global market correlations' (2005) 78 (1) The Journal of Business 1-38; Lorenzo Cappiello et al., 'Asymmetric Dynamics in the Correlations of Global Equity and Bond Returns' (2006) 4 (4) Journal of Financial Econometrics 537-572; F Longin and B Solnik, 'Is the correlation in international equity returns constant: 1960–1990?' (1995) Journal of International Money and Finance 3-26.

[127] World Justice Project, WJP Rule of Law Index 2014 at http://worldjusticeproject.org/rule-of-law-index

in judicial integrity and impartial market regulators would thus allow for a growth in inflow of capital and more robust capital market.[128] Therefore a country with better rule of law would have higher economic development and market growth.[129] Rule of law can also act as a proxy for political stability along with judicial and administrative independence.[130] The WJP rule of law index is available only from 2007 onwards. The unavailability of data for the major part of the time period studied in this research, along with the probable relative stability of the variable over time, this variable is best used as a country level indicator.

Industrial value addition through R&D

High technology export – WB defines high-technology exports as products with high R&D intensity, such as in aerospace, computers, pharmaceuticals, scientific instruments, and electrical machinery.[131] It can act as a proxy for the level of industrialisation in a society, as per the theories of comparative and competitive advantages of international trade, it is the ultimate goal of societies to move from low value addition to high technology exports through lowering the costs of manufacture.[132] Thus we would expect to find mature developing countries to have higher technological exports and be recipients of higher technology transfer.[133] These exports also

[128] Randall Peerenboom (eds.) *Asian Discourses of Rule of Law* (Routledge 2003); see also Timothy A. Canova, 'Financial Market Failure as a Crisis in the Rule of Law: From Market Fundamentalism to a New Keynesian Regulatory Model' (2009) Chapman University Law Research Paper No. 09-39 <http://ssrn.com/abstract=1489492> published as (2009) 3 Harvard Law & Policy Review 369; Kenneth W. Dam, *The law-growth nexus: The rule of law and economic development* (Brookings Institution Press 2007); Jan-Erik Lane, 'Law and economics in the ASEAN +3 region: The rule of law deficit' (2011) 38 (10) International Journal of Social Economics 847-857; Banjo Roxas et al., 'Effects of rule of law on firm performance in South Africa' (2012) 24 (5) European Business Review 478-492; Stephan Haggard and Lydia Tiede, 'The Rule of Law and Economic Growth: Where are We?' (2011) 39 (5) World Development 673-685; Witold J. Henisz, 'The institutional environment for economic growth' (2000) 12 (1) Economics & Politics 1-31; T Krever, 'The Legal Turn in Late Development Theory: The Rule of Law and the World Bank's Development Model' (2011) 52 (1) Harvard International Law Journal 287-319

[129] The only exception seems to be China, see JiangYu Wang, 'Rule of Law and Rule of Officials: Shareholder Litigation and Anti-Dumping Practice in China' (2008) Rule of Law in China Series Policy Brief No. 4 http://dx.doi.org/10.2139/ssrn.1126202; Kenneth W. Dam, 'China as a Test Case: Is the Rule of Law Essential for Economic Growth?' (2006) U Chicago Law & Economics, Olin Working Paper No. 275 http://ssrn.com/abstract=880125; Yingyi Qian, 'How Reform Worked in China' (2002) William Davidson Institute Working Paper Number 473 http://dx.doi.org/10.2139/ssrn.317460; for a similar perspective but from competition law see Bruce M. Owen et al., 'Antitrust in China: The Problem of Incentive Compatibility' (2006) Stanford Law and Economics Olin Working Paper No. 295 <http://dx.doi.org/10.2139/ssrn.595801> also published at (2005) 1 (1) Journal of Competition Law and Economics 123; Franklin Allen et al., 'Law, finance, and economic growth in China' (2005) 77 (1) Journal of financial economics 57-116.

[130] See Lars P. Feld and Stefan Voigt, 'Economic Growth and Judicial Independence: Cross Country Evidence Using a New Set of Indicators' (2003) CESifo Working Paper Series No. 906 <http://ssrn.com/abstract=395403> published at (2003) 19 (3) European Journal of Political Economy 497; Kenneth W. Dam, 'The Judiciary and Economic Development' (2006) U Chicago Law & Economics, Olin Working Paper No. 287 <http://dx.doi.org/10.2139/ssrn.892030>; Paul H. Rubin, 'Legal Systems as Frameworks for Market Exchanges' (2003) <http://dx.doi.org/10.2139/ssrn.413626> published in Claude Menard and Mary M. Shirley (eds) *Handbook of New Institutional Economics* (Springer 2005) 205-228.

influence the inflow of FDI[134] and have a bidirectional positive effect on the financial market and economic growth.[135]

Number of patent and trademark applications –acts as a proxy for investment in R&D, level of industrialisation and as an indicator of technological activities.[136] There is an established link between R&D and economic growth,[137] however its effect on the financial market is uncertain. Some commentators and researchers show a negative link between increased R&D expenditure and stock prices, arguing shareholder short-termism[138] while other scholars argue for positive long term impact.[139] There is yet another branch of research which links R&D and capital expenditure to corporate governance and tries to explain that the transmission channel for the effects of R&D on the financial market runs through the emergence and pre-eminence of Anglo-American corporate governance which may focus on short term turnovers.[140] Thus R&D stands in a unique position

131 WB WDI 2014 available online at <http://data.worldbank.org/indicator/TX.VAL.TECH.CD>

132 See generally Belay Seyoum, 'The role of factor conditions in high-technology exports: An empirical examination' (2004) 15 (1) The Journal of High Technology Management Research 145-162; Belay Seyoum, 'Determinants of levels of high technology exports an empirical investigation' (2005) 13 (1) Advances in Competitiveness Research 64; for a more specific case study see Miaojie Yu, 'Moving up the value chain in manufacturing for China' in Yiping Huang and Juzhong Zhuang (eds.) *Can PRC escape the middle-income trap* (2011); Kevin P. Gallagher and Roberto Porzecanski, 'Climbing Up the Technology Ladder? High-Technology Exports in China and Latin America' (2008) Center for Latin American Studies Working paper series; Abhijit Sharma and Michael Dietrich, 'The Structure and Composition of India's Exports and Industrial Transformation (1980–2000)' (2007) 21 (2) International Economic Journal 207-231; for a developed country perspective see Pontus Braunerhjelm and Per Thulin, 'Can countries create comparative advantages? R&D expenditures, high-tech exports and country size in 19 OECD countries, 1981–1999' (2008) 22 (1) International economic journal 95-111.

133 See generally Lei Yang and Keith E. Maskus, 'Intellectual Property Rights, Technology Transfer and Exports in Developing Countries' (2008) CESifo Working Paper Series No. 2464 also published at (2009) 90 (2) Journal of Development Economics 231-236; Frederick M. Abbott, 'Comparative Study of Selected Government Policies for Promoting Transfer of Technology and Competitiveness in the Colombian Pharmaceutical Sector' (2007) United States Agency for International Development - Programa MIDAS, Public Law Research Paper; Brett Berger and Robert F. Martin, 'The Chinese Export Boom: An Examination of the Detailed Trade Data' (2013) 21 (1) China &

World Economy 64-90.

[134] See Louis T. Wells, *Third world multinationals: The rise of foreign investments from developing countries* (MIT Press Books 1983); Haishun Sun and Frank Tipton, 'A Comparative Analysis of the Characteristics of Direct Foreign Investment in China, 1979-1995' (1998) 32 (2) The Journal of Developing Areas 159; Alviny So, 'Shenzhen Special Economic Zone: China's Struggle for Independent Development' (1988) 9 (2) Canadian Journal of Development Studies 313-323; Sanjaya Lall, 'Technological change and industrialization in the Asian newly industrializing economies: achievements and challenges' in Linsu Kim and Richard R. Nelson (eds.) *Technology, learning, & innovation: Experiences of newly industrializing economies* (Cambridge University Press 2000) 13-68; Sanjaya Lall, 'Export performance, technological upgrading and foreign direct investment strategies in the Asian newly industrializing economies: with special reference to Singapore in ECLAC, Division of Production, Productivity and Management, Unit of Investment and Corporate Strategies, 2000 available at http://repositorio.cepal.org/bitstream/handle/11362/4461/S00080739_en.pdf?sequence=1

[135] Sajid Anwar and Lan Phi Nguyen, 'Foreign direct investment and export spillovers: Evidence from Vietnam' (2011) 20 (2) International Business Review 177-193; Qun Bao et al., 'Do High-technology Exports Cause More Technology Spillover in China?' (2012) 20 (2) China & World Economy 1-22; I. E. Frolov and K. K. Lebedev, 'Assessing the impact of high-technology exports on the growth rate and structure of the Russian economy' (2007) 18 (5) Studies on Russian Economic Development 490-500; for a developed country perspective see Robert T. Green and Arthur W. Allaway, 'Identification of export opportunities: a shift-share approach' (1985) The Journal of Marketing 83-88; for a critical view of high technology export oriented economy see Ishak Shari, 'Economic growth and income inequality in Malaysia, 1971–95' (2000) 5 (1) Journal of the Asia Pacific Economy 112-124.

[136] Daniele Archibugi and Mario Pianta, 'Measuring technological through patents and innovation surveys' (1996) 16 (9) Technovation 451-468.

[137] See J. Schumpeter, *The Theory of Economic Development* (Harvard University Press 1934); H. Ansoff, *Corporate Strategy* (McGraw-Hill 1965); Edward J. Malecki, 'Technology and Economic Development: The Dynamics of Local, Regional, and National Change' (1997) University of Illinois working paper series; David T. Coe and Elhanan Helpman, 'International R&D spillovers' (1995) 39 (5) European Economic Review 859-887; Nancy L. Stokey, 'R&D and economic growth' (1995) 62 (3) The Review of Economic Studies 469-489; for a developed country perspective see Walter G. Park, 'International R&D spillovers and OECD economic growth' (1995) 33 (4) Economic Inquiry 571-591; Edwin Mansfield, 'Contribution of R&D to economic growth in the United States' (1972) Science 477-486; Rachel Griffith et al., 'Mapping the two faces of R&D: productivity growth in a panel of OECD industries' (200) 86 (4) Review of Economics and Statistics 883-895; Beñat Bilbao-Osorio and Andrés Rodríguez-Pose, 'From R&D to innovation and economic growth in the EU' (2004) 35 (4) Growth and Change 434-455.. for a view that intellectual property regime, which may affect R&D, affects economic growth see Keith E. Maskus, 'Intellectual Property Rights And Foreign Direct Investment' (2000) Centre for International Economic Studies Working Paper No. 22; Robert E. Litan et al., 'Rules for Growth: Promoting Innovation and Growth Through Legal Reform' Yale Law & Economics Research Paper No. 426, Stanford Law and Economics Olin Working Paper No. 410, UC Berkeley Public Law Research Paper No. 1757982; Rod Falvey et al., 'Intellectual Property Rights and Economic Growth' (2005) Internationalisation of Economic Policy Research Paper No. 2004/12 published at (2006) 10 (4) Review of Development Economics 700; Bryan Christopher Mercurio, 'Reconceptualising the Debate on Intellectual Property Rights and Economic Development' (2010) 3 (1) The Law and Development Review 65; Lewis Davis and M. Fuat Sener, 'Intellectual Property Rights, Institutional Quality and Economic Growth' (2012) working paper series available at <http://dx.doi.org/10.2139/ssrn.1815258>.

[138] See P. Drucker, 'A crisis of capitalism' *Wall Street Journal* (30 September 1986) 31; J. Stein, 'Takeover threats and managerial myopia' (1988) 96 Journal of Political Economy 61–80; M. Porter, 'Capital disadvantage: America's failing capital investment system' (1992) 70 Harvard Business Review 65–82; B. Hall, 'The stock market's valuation of R&D investment during the 1980's' (1993) 83 American Economic Review 259–264

[139] See S.H. Chan et al., 'Corporate research and development expenditures and share value' (1990) 26 Journal of Financial Economics 255–276; S. Szewczyk et al., 'The valuation of corporate R&D expenditures: evidence from investment opportunities and free cash flow' (1996) 25 Financial Management 105–110; L. Chan et al., 'The stock market valuation of research and development expenditures' (2001) 56 Journal of Finance 2431–2456; Mohsen Saad and Zaher Zantout, 'Stock price and systematic risk effects of discontinuation of corporate R&D programs' (2009) 16 (4) Journal of Empirical Finance 568-581; for studies which show mixed results see D. Chambers et al., 'Excess returns to R&D-intensive firms' (2000) 7 Review of Accounting Studies 133–158; A. Eberhart et al., 'An examination of long-term abnormal stock returns and operating performance following R&D increases' (2004) 59 Journal of Finance 623–650.

[140] See Alfred Haid and Jürgen Weigand, 'R&D, liquidity constraints, and corporate governance' (2001) Journal of Economics and Statistics 145-167; Kee H. Chung, Peter Wright and Ben Kedia, 'Corporate governance and market valuation of capital and R&D investments' (2003) 12 (2) Review of Financial Economics 161; Rob Bauer, Robin Braun and Gordon L. Clark, 'The emerging market for European corporate governance: the relationship between

among the variables studied in that it behaves as a control variable (it affects economic growth and the financial market) and at the same time also shows characteristics of interdependent variable (it is directly affected by the type of corporate governance policies chosen by the polity).

governance and capital expenditures, 1997–2005' (2008) 8 (4) Journal of Economic Geography 441-469