

Maximisation of Shareholder's Value and The Theory of Innovative Enterprise

A Case Study Comparison of Two Automotive Enterprises

Rahul Prasad



Master Thesis

Submitted in partial fulfilment of the requirements for the degree of
Master of Science (M. Sc.) in Management of Technology

Delft University of Technology

30 August 2018

Maximisation of Shareholder's Value and The Theory of Innovative Enterprise

A Case Study Comparison of Two Automotive Enterprises

Rahul Prasad

Student Number—4633350

Master Thesis

Submitted in partial fulfilment of the requirements for the degree of
Master of Science (M. Sc.) in Management of Technology

Delft University of Technology

30 August 2018

Graduation Committee:

Prof. Dr. C.P. van Beers (Chairing Professor)

Dr. S.T.H. Storm (First Supervisor)

Dr. U. Pesch (Second Supervisor)

“The New Normal [in the United States]...is Maximising Shareholders’ Value”

— William **Lazonick** (2018)

“The agency approach promotes a legal view whereby the sole purpose of corporations—which are a societal construction—is to maximise shareholders’ returns within the confines of the law and has played a crucial role in promoting financialisation”

— Thomas **Palley** (2013)

“[T]he financialisation of corporations would manifest itself in...a structural decline in autonomous investment demand growth...and...depressed real wage growth. Both factors lower output, productivity, and employment growth...”

— Servaas **Storm** (2017)

Preface & Acknowledgement

This thesis is written and submitted to the Delft University of Technology (the Netherlands) in partial fulfilment of the requirements for the degree of Master of Science (M. Sc.) in Management of Technology (MoT).

The inspiration for the thesis comes from many axes.

After being introduced to Dr. William Lazonick's "*The Theory of Innovative Enterprise*" by Dr. Servaas Storm—which was the first set of literature that Dr. Storm advised me to read after being approached with a request to supervise my master thesis project highlighting my interest in corporate governance—I developed an insightful interest with the topic. I was following my specialisation in Economics and Finance during the same time. I started to connect the ideas taught during the course as well as my daily encounters with the Theory of Innovative Enterprise as well as the concepts of Economics.

I aspired to address the notions of inequality—which can, in part, be created by capitalist entrepreneurial behaviour—using this theory.

Being in a technology related Master's programme, I also attempted to bring together the aspects of it into the thesis project. In the extant of inequality, although a "magic bullet" solution is absent, I reasoned that certain technological progress will only exacerbate inequality.

It was also around this time, Dr. Storm published the "*The New Normal: Demand, Secular Stagnation, and the Vanishing Middle Class*" which addresses the notions of automation, unbalanced growth, and inequality—an inspiring work.

All triggered the "enthusiastic" me!

The result was an ambitious research proposal which was discarded because in no way I could have finished the project in 21 weeks. Taking a step back, I started to evaluate my possibilities again. Two important philosophies widely addressed in our programme are innovation and how to make it a responsible one. I have interpreted it and wished to apply this, beyond innovation, to all spheres. One such sphere is corporate governance. Acknowledging the fact that many of us—MoT graduates—may begin our careers leading small or large teams, start-ups, advising large corporations, I found it important to look beyond profit maximisation alone and devise ways on how the economy can gain from what I'd do.

The financialisation of non-financial corporations in many advanced economies of the world which has (in part) led to the Global Financial Crisis (GFC) is still omnipresent. This has led to unbalanced growth, inequality, and *lack of innovation*. Hence, this thesis—which probes into the financialisation of corporate governance and innovativeness of enterprises.

The research and this final thesis report would have remained only a hypothesis but for the contributions of many; sometimes they trace back to a point outside the research duration.

This thesis has its genesis in my parents and my sister for giving all the support and valuable advice when I decided to discontinue my nearly 8 years of working tenure to pursue this scholastic venture.

I would like to thank Alekhya (MoT 2015-17), Arun (MoT 2014-16), and Prateek (SET 2015-17) for always answering my questions about the Master's programme and specialisations, Vladimir for all the long *lovely* chats and comments, Elsa for reading the excerpts which I have sent during the wee hours of the morning and commenting on them, Tanya for telling me "*You are tired, stop working, let's go for a walk!*", and Akhil for patiently listening to my "*boast-y*" arguments and propositions (well,

also about life!) during the afternoons at *Locus Publicus* with the compassion of a younger brother while giggling covertly, yet being critical.

Thank you all for being my friend and helping me, at various points, to cut through the red-tape.

I would also like to thank Dr. (Wim) Sloof, Tine, Robert, Natasja, and Anita for being my family and making me feel at home.

I would like to thank my graduation committee for being patient and taking time to read, review, and comment on my work. Their comments have helped to enhance the work.

It was Dr. Pesch's lecture that I had first ever attended in this Master's programme; he has always been supportive then, throughout the programme, and it continued well into this thesis project as well. Dr. van Beers was the one who introduced me to the notions of long-term competitiveness and the VRIN conditions—I will never forget them.

I would also like to thank Dr. Zenlin Roosenboom-Kwee, Dr. Robert Verburg, Dr. Laurens Rooks, Dr. Nicole Huijts, Dr. Maarten Franssen, Dr. Marijn Janssen, Dr. Hadi Asghari, and specially Dr. Harry Bouwman from the Faculty (of TPM) for making the classroom an interesting place to be in.

Additionally, I would like to thank Dr. Colin Haslam of Royal Holloway College, University of London for clarifying my doubts on financial reporting boundaries and vertical disintegration.

I would like to thank, *especially*, Dr. Storm for being a tremendous source of inspiration for this thesis and *beyond*; I would not have known, perceived, and *loved* Economics the way I do had it not been for him. During the research, his guidance and comments have only made the thesis relevant and sharper.

Eva's love and support have sustained this work. Words are not enough to thank her, so I will not try.

The research agenda entailed exploration into variously interconnected subtopics. They are segregated into chapters in such a way to ensure the best readability. Nevertheless, sometimes, for its interconnectedness, certain topics are introduced prior to its elaboration which follows in a subsequent chapter or vice versa. In such cases, I have referred to (preceding or succeeding) paragraphs (or chapters) appropriately.

“Tell them what you are going to tell them, tell them, then tell them what you told them.”

For the sake of coherency and comprehension, there are certain repetitions of content, written elsewhere in the thesis, along with its connected arguments made in a later chapter. And, large exploratory contents are followed by a short summary. These have added more words.

I would highly recommend the reader to follow the chapters chronologically for the best indulgence.

The cover art highlights those innovative enterprises who have chosen innovation, stable and equitable growth, and equitable distribution of gains from innovation over profit-maximisation alone like the rest!

I dedicate this thesis to my nephews—Aadi & Aasthik.

Executive Summary

Twenty years ago, American-style shareholder capitalism, with its focus on maximising shareholders' value (MSV), was widening its lead (in terms of economic growth) over European-style stakeholder capitalism. American enterprises were widely viewed as the most innovative and productive, its capital markets the most efficient, its labour markets flexible and meritocratic, its product markets open and competitive. Today, that sense of confidence in and appreciation of shareholder capitalism has weakened—following the financial crisis, the long recession, and a lost decade in terms of incomes of average American households. The U.S. economy runs large trade deficits, inequality in income and wealth has risen, and there is a growing disappointment in the ability of American capitalism to deliver on its economic promise of prosperity.

The idea of shareholder primacy in corporate governance dates back to the academic critique (in the 1970s) of what is called “managerial capitalism” and centres around the “principal-agent” problem. In this case, the “principals” were the shareholders, and the misbehaving “agents” were the executives or managers who were spending too much of their time, and the shareholder’s money, worrying about employees, customers, and the community at large. Agency theorists argued that the managers engaged in maximising their self-regarding interests over shareholders’ value and that the managers would be tempted to make unproductive investments, therewith leading to a lack of innovation.

The agency theorists devised solutions to address the problem—a “market for corporate control” and “stock-based pay in executive remuneration”. When put in practise these solutions, contrary to their intentions, have manifested in the adoption of (excessive) stock buybacks to boost stock prices and reducing operating costs by making enterprises leaner which are indicative of (an apparent) superior performance. These processes, in multiple ways, have negatively affected the conditions which are conducive to innovation. This is crucial, because the justification of agency theory and MSV (in economies such as the U.S.) relies on the outcomes of superior allocative efficiency and corporate performance that it purports. Evidence of superior long-run performance of enterprises operating in economies (such as Germany) where the MSV hypothesis is not the norm guiding corporate governance (but co-determination), suggests (at the minimum) that there are approaches to corporate governance which may be superior to MSV.

In this thesis, the longer-run impacts of two alternative systems of corporate governance were explored with the aid of two business case studies—performed on General Motors (GM), from the U.S., and Volkswagen (VW), from Germany—with an aim to find the extent to which their diverse systems of corporate governance have contributed to (dis)investments in innovation. Given the uncertain, cumulative, and collective characteristics of the innovation process, it was found that the set of relations that supported the innovation process was different in these two enterprises and have contributed to the better performance of VW. Unlike the conditions at VW, the lack of a stable decision-making structure; inability to identify and confront competition; high profit-orientation, short-termism, yearly stock buybacks and regulations which permits it, and stock-based remuneration rationalised by the MSV hypothesis; flexible labour markets and downsizing; focus on

the development of “general” skills; and aggressive debt financing, have shaped the corporate governance of GM and have affected its innovative capabilities.

The thesis has encapsulated the traits and the system of co-determination that rendered superior performance and productivity at VW into the generic activities—of strategy, organisation, and finance—and aids implications for an innovative enterprise. In terms of the strategy, VW funded its operations via operating cash flow, refrained from “downsizing and distributing”, focussed on long-term competence development, and developed (enterprise-specific) capabilities in-house. In terms of organisation, VW has a stable decision-making structure, enabled hierarchical integration, and continued investing in learning processes. In terms of finance, VW restricted unproductive disgorging of cash and made funds available to finance and sustain productive investments and innovation. These are very well transferrable implications for an innovative enterprise. The policy implications concern the restriction of stock repurchases, imposing higher taxation on (unused) retained profits and dividends received by shareholders, while initiating tax exception reforms for the cash committed for—and productive investments, and restricting co-ordinated downsizing of labour force in the labour markets. These are expected to have long-term structural effects on the innovative capabilities of enterprises thereby of an economy by decreasing the reliance on debt financing, retaining focus on long-term competence—and enterprise-specific skill—development, and influencing the innovation patterns of enterprises.

Certain questions that executives may ask—who could be Managers of Technology or Innovation in a world driven by “high-tech”—to enhance performance and productivity could be: what innovations are needed? How to procure them, whether to insource or to outsource? How can the innovations be used to affect the enterprise’s mission and strategy? In general, based on the insights from this thesis, the ability of the executives to identify the needed innovations would depend on their capabilities and their incentives to do so which—in turn—are shaped by the conditions the enterprise had been exposed and adhered to over the years. If executives are aware of the notions of the theory of innovative enterprise which purport achievement of dynamic efficiency and superior performance, it would be difficult for them to endorse a perspective that informs that the enterprise’s main goal is to “maximise shareholders’ value” alone. The development and procurement of the innovation would depend on the conditions that these executives create taking into account the organisational character of the innovation process as well as their capacity to finance the process. Development of technologies this way would add to the dynamic efficiency of an enterprise which is normally the mission and/or strategy of enterprises operating in an industry although their actions are guided to maximise shareholders’ value.

It is widely recognised that the needed innovations to address future challenges of the automotive industry are radical. VW—with its strong long-term competence development motive, technocratic managers, and better debt ratios—can be expected to identify and sustain its new (radical) innovation projects and if successful, can aid VW to emerge from any cost-disadvantage. GM can be expected to possess superior proprietary technologies and radical innovations or could be in a path of acquiring them. But, it is likely that with its current low cash margins and riskier credit-risk exposure—as a result of MSV perspective in corporate governance—GM may be placed at a cost disadvantage if the innovations fail or fail to appropriate gains.

Table of Contents

Table of Contents	11
List of Tables	13
List of Figures.....	14
1 Introduction.....	17
1.1 Share Valuations and Corporate Governance	18
1.2 Varieties of Capitalism and Firm Performance	24
1.3 The Core Problem	25
1.4 Research Agenda.....	26
1.5 Research Relevance.....	28
1.6 Overview of the Report	28
2 Maximisation of Shareholders' Value	30
2.1 Corporate Governance and Agency Relationship.....	30
2.2 Origin of "Shareholder's Value"—in face of Global Competition	31
2.3 An Efficient Monitor?	34
2.4 MSV and Innovative Capabilities	37
2.5 MSV and Financialisation	41
2.6 Implication for the Research Agenda.....	42
3 Theory of the Firm	44
3.1 Neoclassical Theory of the Firm.....	44
3.2 Principal-agent Theory	45
3.3 Transaction-Cost Economies.....	47
3.4 Long-term Competitiveness and Innovation.....	49
3.5 Implication of Neoclassical Models for Innovation	50
4 The Theory of Innovative Enterprise.....	53
4.1 The Innovative Enterprise.....	53
4.2 The Social Conditions of Innovative Enterprise.....	55
4.3 Implications of TIE for Case Study Analysis—The Social Conditions	58
5 Case Study Methodology	61
5.1 e-RIS.....	61
5.2 Research Methodology	62
5.3 Defining and Selecting the Cases.....	63
5.4 Case Study Protocol.....	63
5.5 Data Analyses and Reporting.....	64
5.6 Potential Caveats	69
6 The Business Cases— General Motors and Volkswagen.....	70
6.1 General Motors—Business Case Study	70
6.1.1 The Enterprise.....	70
6.1.2 Strategic Control.....	71
6.1.3 Organisational Integration	85
6.1.4 Financial Commitment.....	87
6.1.5 Value-Added and Corporate Performance.....	91
6.1.6 Summary.....	101
6.2 Volkswagen AG—Business Case Study	102
6.2.1 The Enterprise.....	102
6.2.2 Strategic Control.....	103
6.2.3 Organisational Integration	121
6.2.4 Financial Commitment.....	125
6.2.5 Value-Added and Corporate Performance.....	132
6.2.6 Summary.....	139
7 Cross-case Analysis.....	142

7.1	Strategic Control.....	142
7.2	Organisational Integration.....	148
7.3	Financial Commitment	152
7.4	Value-Added and Corporate Performance.....	157
8	Conclusions.....	160
9	Implications and Discussions.....	167
10	Limitations and Reflection.....	184
References	191

List of Tables

Table 1.1. Net Equity Issues by Non-financial Corporations in the U.S. economy, by decade	23
Table 1.2. Amounts Spent (in billion \$) on Payouts and Spending between 2005 and 2015.....	23
Table 4.1. The Social Conditions Framework for Business Case Studies.....	59
Table 6.1. Shareholder Structure of GM	70
Table 6.2. General Motors—Executives' Compensation (2017)	84
Table 6.3. Shareholder Structure of VW	103
Table 6.4. Profits (before tax) Split Between VW's Automotive and Financial Services Division.....	114

List of Figures

Figure 6.1. Print Advertisement for GM's Saturn (1982)	75
Figure 6.2. General Motors—Ratio of Financial Assets to Tangible Assets.....	79
Figure 6.3. General Motors—Investments in Financial Securities	80
Figure 6.4. General Motors—Investments in Tangible Assets	80
Figure 6.5. General Motors—Accumulation of Financial Assets	81
Figure 6.6. General Motors—Investments in R&D.....	81
Figure 6.7. General Motors—Payouts as a percent of R&D Investments.....	82
Figure 6.8. General Motors—Patent Applications	82
Figure 6.9. General Motors—Equity in Employee Compensation	83
Figure 6.10. General Motors—Salary (Payroll) per Employee and Total Salary Paid	84
Figure 6.11. General Motors—Employment Worldwide	86
Figure 6.12. General Motors—Payouts as a percent of Net Income	87
Figure 6.13. General Motors—Payouts Over the Years.....	87
Figure 6.14. General Motors—Ratio of Cumulative Dividends to Shareholder's Funds Invested.....	88
Figure 6.15. General Motors—Capitalisation Ratio.....	89
Figure 6.16. General Motors—Cash Flow to Debt Ratio.....	90
Figure 6.17. General Motors—Total Debt.....	90
Figure 6.18. General Motors—Operating Cash Flow.....	90
Figure 6.19. General Motors—Debt to Equity Ratio —1991 to 2017.....	91
Figure 6.20. General Motors—Value-Added	91
Figure 6.21. General Motors—Profits	92
Figure 6.22. General Motors—Wages	92
Figure 6.23. General Motors—Appropriation to the State (in the form of taxes).....	92
Figure 6.24. General Motors—Appropriation to the Creditors.....	93
Figure 6.25. General Motors—Appropriation to the Shareholders (in the form of dividends).....	93
Figure 6.26. General Motors—Ratio of Dividends to Wages Paid	94
Figure 6.27. General Motors—Development of Gross Profit Margin.....	94
Figure 6.28. General Motors—Development of Gross Profit Margin.....	94
Figure 6.29. General Motors—Development of Gross Profit Margin.....	95
Figure 6.30. General Motors—Vehicles Output Worldwide.....	96
Figure 6.31. General Motors—Productivity (Output per Employee)	96
Figure 6.32. General Motors—Value-added per Employee	97
Figure 6.33. General Motors—Cost Structure as percentage of Sales	97
Figure 6.34. General Motors—Capital Intensity.....	98
Figure 6.35. General Motors—ROCE—1991 to 2006.....	99
Figure 6.36. General Motors—ROCE—2010 to 2017.....	99
Figure 6.37. General Motors—Stock Price—1991 to 2017.....	100
Figure 6.38. General Motors—Net Income	101
Figure 6.39. Volkswagen—Ratio of Financial Assets to Tangible Assets	113
Figure 6.40. Volkswagen—Investments in Financial Securities.....	113
Figure 6.41. Volkswagen—Accumulation of Financial Assets	114
Figure 6.42. Volkswagen—Investments in Tangible Assets.....	115
Figure 6.43. Volkswagen—Accumulation of Tangible Assets	115
Figure 6.44. Volkswagen—Investments in Tangible Assets in Sales percentage	116
Figure 6.45. Volkswagen—Investments in R&D	116
Figure 6.46. Volkswagen—Payouts as a percent of R&D Investments	117
Figure 6.47. Volkswagen—Patent Applications.....	117
Figure 6.48. Volkswagen—Salary (or Payroll) per Employee and Total Salary Paid.....	120
Figure 6.49. Volkswagen—Number of Apprenticeship Absorbed	122
Figure 6.50. Volkswagen—Employment Worldwide.....	125
Figure 6.51. Volkswagen—Union Members as a percent of Total Employment Worldwide	125
Figure 6.52. Volkswagen—Payouts as a percent of Net Income.....	127
Figure 6.53. Volkswagen—Payouts Over the Years	127
Figure 6.54. Volkswagen—Ratio of Cumulative Dividends to Shareholder's Funds Invested in 1991.....	128
Figure 6.55. Volkswagen—Ratio of Cash Flow to Investment in Tangible Assets.....	128
Figure 6.56. Volkswagen—Sources of Finance.....	129
Figure 6.57. Volkswagen—Capitalisation Ratio—1991 to 2017	130
Figure 6.58. Volkswagen—Cash Flow to Debt Ratio—1991 to 2017	130
Figure 6.59. Volkswagen—Total Debt	130
Figure 6.60. Volkswagen—Operating Cash Flow.....	131

Figure 6.61. Volkswagen—Debt to Equity Ratio—1991 to 2017.....	131
Figure 6.62. Volkswagen—Value-Added.....	132
Figure 6.63. Volkswagen—Profits.....	132
Figure 6.64. Volkswagen—Wages.....	133
Figure 6.65. Volkswagen—Appropriation to the State (in the form of taxes).....	133
Figure 6.66. Volkswagen—Appropriation to the Creditors	133
Figure 6.67. Volkswagen—Appropriation to the Shareholders (in the form of dividends)	134
Figure 6.68. Volkswagen—Ratio of Dividends to Wages Paid.....	134
Figure 6.69. Volkswagen—Development of Gross Profit Margin	135
Figure 6.70. Volkswagen—Vehicles Output Worldwide	135
Figure 6.71. Volkswagen—Productivity (Output per Employee).....	136
Figure 6.72. Volkswagen—Value-added per Employee.....	136
Figure 6.73. Volkswagen—Cost Structure as percentage of Sales	137
Figure 6.74. Volkswagen—Capital Intensity	137
Figure 6.75. Volkswagen —ROCE.....	137
Figure 6.76. Volkswagen —Income and Expenditures.....	138
Figure 6.77. Volkswagen—Stock Price (in \$).....	139
Figure 7.1. Volkswagen and General Motors—Amount Spent in Share Repurchases.....	143
Figure 7.2. Volkswagen and General Motors—Total Payouts as a percent of Investment in Tangible Assets.	144
Figure 7.3. Volkswagen and General Motors—Ratio of Financial Assets to Tangible Assets	144
Figure 7.4. Volkswagen and General Motors—Investments in Tangible Assets	146
Figure 7.5. Volkswagen and General Motors—Accumulation of Financial Assets	147
Figure 7.6. Volkswagen and General Motors—Employment Growth Development.....	149
Figure 7.7. Volkswagen and General Motors—Total Payouts per Retained Employee	151
Figure 7.8. Volkswagen and General Motors—Total Payouts to Wages Paid.....	151
Figure 7.9. Volkswagen and General Motors—Total Payouts as a percent of R&D Investments.....	153
Figure 7.10. Volkswagen and General Motors—Total R&D Investments.....	153
Figure 7.11. Volkswagen and General Motors—Patent Output.....	154
Figure 7.12. Volkswagen and General Motors—Payouts as a percent of Net Income.....	154
Figure 7.13. Volkswagen and General Motors—Debt to Equity Ratio.....	155
Figure 7.14. Volkswagen and General Motors—Capitalisation Ratio	155
Figure 7.15. Volkswagen and General Motors—Cash Flow to Debt Ratio	155
Figure 7.16. Volkswagen and General Motors—Value-Added.....	157
Figure 7.17. Volkswagen and General Motors—Gross Profit Margin	158
Figure 7.18. Volkswagen and General Motors—Output Growth.....	158
Figure 7.19. Volkswagen and General Motors—Stock Price (in \$).....	159

1 Introduction

Milton Friedman once wrote in a *New York Times Magazine* article that “[t]he social responsibility of business is to increase its profits” (Friedman, 1970). Friedman’s article, in part, prepared the way for what became known as the “shareholder approach” to the governance of corporations: the idea that the shareholders (or principals) of firms are to be the decreeing entity that enterprises and its management (or agents) were held “socially” responsible to. In this view, the profits ought to be distributed to the shareholders as a reward for they were argued to be the only risk-bearing participant in an enterprise. Since the early 1980s, the shareholder approach to corporate governance has gained traction and has become, especially in the U.S., the dominant perspective affecting the strategic management of (stock-listed) firms. Over time, pressures increased for higher rates of return by the shareholders on the enterprises (Lazonick, 2017b). Moreover, “[s]ome of the largest firms [in advanced economies] faced the risk of a hostile takeover if they failed to respond to the concerns of increasingly aggressive institutional investors¹” (Block & Keller, 2009, p. 5).

Enterprises, in order to maximise shareholders’ value, to accommodate their increasing pressure, and to mitigate the risk of hostile takeover, adopted few fundamental changes in their corporate governance and management of corporate finance by resorting to massive stock buybacks or repurchases (which increased the stock prices) and dividend payouts to the shareholders and institutional investors (Carpenter, Lazonick, & O’Sullivan, 2003). There was an increasing importance given to current earnings and share valuations (Hall & Soskice, 2001, p. 27). Another important aspect of the change in corporate governance was the introduction of stock-based pay for top executives in order to align their interests to that of the shareholders (Lazonick, 2017b). Moreover, large enterprises, in order to respond to the market’s competitive and dynamic forces swifter, began to downsize middle managers so as to become leaner and reduce operating costs; they also decommissioned units (and divisions) that had low productivity and outsourced them to emerging inexpensive economies (Block & Keller, 2009).

The flipside of adopting a short-termist profit orientation by the enterprises was arguably profound. Critiques have argued that the “long-term development of the innovation potential [of these enterprises] will suffer, and this ultimately will have negative consequences on employment and [economic] growth” (Jürgens, 2010, p. 1). Corporate prioritisation of maximising shareholders’ value (MSV) and the ways corporates have adopted to maximise shareholders’ value have resulted in the “unproductive disgorging of profits—through massive dividend payouts and unprecedented

¹An organisation that makes investments on behalf of its members. Some of the common institutional investors are mutual funds, investment banks, hedge funds, and insurance companies.

spending on stock repurchases—over productive investment in innovation” (Storm, 2017, p. 230). Furthermore, the excessive distributions, in the name of MSV, is claimed to have contributed to an exacerbation of income inequality (Fried & Wang, 2018; Lazonick, 2017a).

Steve Denning’s (2015) *Forbes* article “*Why U.S. Firms Are Dying: Failure to Innovate*” points out to the innovation crisis in the U.S. by presenting the assertions of many economists such as Nobel laureate Edmund S. Phelps, Robert J. Gordon, and Michael Porter (*cf.* Denning, 2015). Phelps points out to a decrease in corporate innovation (Phelps, 2013), for this underscores the phenomenon noted by Gordon of a “slowdown in innovation” in the U.S. (Gordon, 2012) as a consequence of adopting the short-termist—as well as other neoliberal—ways to maximise shareholders’ value (see Palley, 2012). Harvard business academics Michael Porter, Jan Rivkin, and Rosabeth Moss Kanter, when reporting their findings of the survey conducted in 2012 to determine the competitiveness of the U.S. economy write that the inability of American enterprises to compete with emerging innovative economies was rooted in the change of corporate’s managerial and entrepreneurial behaviour (Porter, Rivkin, & Kanter, 2013, p. 3):

“The basic narrative begins in the late 1970s and the 1980s. Through globalisation, it became possible and attractive for firms to do business in, to, and from far more [low-cost] countries. Changes in corporate governance and compensation caused U.S. managers to adopt an approach to management that focused attention on the stock price and short-term performance.”

This introductory chapter explores the problem posed by the above shift in managerial and entrepreneurial behaviour to one which focuses on MSV thereby short-term profit orientation. We start by highlighting why the MSV approach has gained so much traction in the governance of corporations, and next continue with a discussion of the theoretical justification for MSV—based on a brief review of the extant literature related to this topic. In a following sub-section, skepticism is raised against the reasons for which MSV perspective is justified. After arriving at the core problem statement, we outline our research agenda which comprises of the research objectives, the main research question, and the research approach.

1.1 Share Valuations and Corporate Governance

Executives, those who helm large stock corporations, can maximise its shareholders’ value in many ways. Normally any superior performance of an enterprise raises its stock price (Malkiel & Fama, 1970). Performance and productivity growth in an enterprise are associated with the efficiency of the productive transformations (of its resources and capital into goods and services) that occur inside an enterprise (Teece, Pisano, & Shuen, 1997). To increase the efficiency and to improve the outcomes of the productive transformations, enterprises, generally, engage either in process innovations or enter a new market through their novel inventions which in turn are rooted in product

innovation² (*cf.* Keeley & Roure, 1993; Kleiner, Thibaut; Repplinger-Hach, 2007; Utterback & Abernathy, 1975).

Process innovations can raise the stock price since normally such innovations entail that the production process is more (cost as well as operationally) efficient increasing the profitability of the enterprise; the output will also be of superior quality. An enterprise which accesses a completely new market with a unique and novel product—which embodies a product innovation—increases the prospects of a higher rate of returns in the eyes of the shareholders and investors. In either way, the newly developed innovative capabilities have increased the performance as well as the “fundamental value” of the enterprise (see *An Efficient Monitor?* in *Chapter 2*). The development or achievement of such innovative capabilities adds to the “dynamic efficiency” of the enterprise.

Successful innovations, however, require committed finance and productive investments, what is often termed as “patient capital”, in developing the innovative capabilities of an enterprise and the processes take time (Lazonick & Prencipe, 2005, p. 504). If successful, such productive investments will raise the stock market value of the enterprise, and hence shareholders’ value. However, there are other, less “fundamental”, channels to raise the stock market price of enterprises, which are more short-termist and perhaps also easier to achieve. A prominent strategy (rationalised by the MSV hypothesis) is to manage the supply and demand of the outstanding corporate stocks—or market manipulation.

On one hand, by increasing the expectations of future dividend payouts, management can increase the current demand for its stocks in the secondary market and thereby the shareholders’ value. The demand for a particular share goes up if investors see an increase in current dividend payouts. On the other hand, the supply of stocks in the stock market can be reduced by stock repurchases or buybacks which decreases the number of outstanding shares and which in turn increases the earnings per unit outstanding share. The increase in share prices, at least in the short-run, amplify a superficial positive effect suggestive of superior performance; the earnings per share (EPS) are also increased even if the net income is flat.

² Reduction in the cost of production can be achieved by process innovation which “[i]s the implementation/adoption of new or significantly improved production or delivery methods. It may involve changes in equipment, human resources, working methods or a combination of these.” (OECD, 2005, p. 11). The reduced cost of production enables the enterprise to reduce the price of a product, in principle; enterprises generally seek for its output expansion and at lower prices, more quantities of the product are demanded following the downward sloping demand function. For higher quality product, the enterprises engage in product innovation which is defined by OECD as “[t]he implementation/commercialisation of a product with improved performance characteristics such as to deliver objectively new or improved services to the consumer” (OECD, 2005, p. 32). The notion of organisational innovation—which involves the adoption of new organisational methods in business-as-usual and projects via the use of information and computer technology (ICT) (Kleiner, Thibaut; Repplinger-Hach, 2007)—is included in the process innovation in this context.

Another channel to increase the current earnings is the process of making the enterprise leaner by downsizing its labour force so as to reduce the cost of production (Block & Keller, 2009). A leaner enterprise is also able to showcase quick adaptability to the dynamic market conditions; this taken together with an apparent (higher) operational profit margin will increase the enterprise's stock price. However, these processes add only to the "static efficiency" of the enterprise since there is no improvement of the innovative capabilities of the enterprise. The factors that have led the executives to adopt the aforementioned channels of increasing shareholder's value via market manipulation and/or improving the "static efficiency" by making the enterprise leaner are justified using the dominant MSV theory of corporate governance.

Why are stock valuations deemed important? The "efficient" financial intermediation channels money from capitalists (or shareholders) to the entrepreneurs so that enterprises can engage in innovation processes (Morck, 2014). Schumpeter notes this as the social purpose of the financial sector in his famous theory of "creative destruction" (Schumpeter, 1934). Upon appropriating rents from the new (successful) entrepreneurial venture that the enterprise pursued, the entrepreneur pays a return on the investment that the capitalist or shareholder made.

In the early 1970s, corporate governance, in the face of intense global competition, was deemed inefficient in the U.S. for the superior performance that emerging economies such as Japan (with their innovative products) displayed. Leading economists argued that the managerial resource allocation, of shareholders' money, was inefficient and was used to satisfy their self-regarding interests instead of innovation. As a solution, economists proposed to put a "price" on the corporate governance in a market such that market mechanisms may solve the issue by disciplining the managers. These economists were Chicago school—a neoclassical school of economic thought—economists. The proposal and development of the solutions and its justification were amidst the period when neoclassical economics was gaining prominence. The stock valuations, the "price" of an enterprise in the stock market, thus gained importance as a monitoring device for the shareholders of their capital and corporate governance. (See *Origin of "Shareholder's Value"—in face of Global Competition* in Chapter 2 for the factors that aided MSV to gain traction).

The premises of stock valuations and its importance rely on the Efficient Markets Hypothesis (EMH): "[s]hareholders' valuation of a firm's stock reflects, by and large, the actual underlying value per share of its capital as that capital is being used. If investors expect the firm's capital to be used in more valuable ways [by the managers], then its share price rises" (Morck, 2014, p. 185). Furthermore, share prices are seen as a good measure of the true value of an enterprise's assets such that only unexpected variations in the true value of the assets can reflect in the share prices (Malkiel & Fama, 1970; Samuelson, 1965). Thus, in the process of generating and maximising shareholders' value, the argument is that the enterprise is securing superior performance by the efficient allocation of its capital.

In other words, stock valuations are argued to incentivise the enterprise to commit resources to converge its employees' skills in the interest of—and providing the best possible products and/or services (that are lower in cost and higher in quality³) to—its customers, its shareholders, and the enterprise itself thereby making the society better off. Moreover, the “free” cash flow in an enterprise—emphasis to which is also given as an indicator of performance over the accounting profits since accounts can easily be manipulated—under the MSV scheme, is to be distributed in the form of dividends to the shareholders (Lazonick, 2015). This is also under the assumption that the dividends received would be put to much efficient uses (by further investing in new innovative entrepreneurial ventures) by the shareholders than those the managers would have invested in (Lazonick, 2017b).

The justification for the latter claim was provided by Michael Jensen and William Meckling (1976) in their paper “*The Theory of the Firm*”. Jensen and Meckling argue that the enterprise-shareholder relationship suffers from a structural problem—how to align the interests of the management team (of the enterprise) and of the shareholders in the context of “efficient” financial intermediation (Jensen & Meckling, 1976, p. 308). This is because, as the neoclassical economics—which also is the premises of the MSV perspective—posit, that economic actors resort to actions that maximise their own benefits and utility. Jensen and Meckling note the information asymmetry which exists between the managers (who have control over an enterprise’s resources and have all the insider knowledge) and the shareholders (who “own” the enterprise but are relative outsiders to the daily operation of the enterprise). Shareholders suffer from an information disadvantage which is either impossible or too costly to resolve. This information asymmetry gives managers some space and discretionary power to act in their own (selfish) interest and against the interests of shareholders. Jensen and Meckling set out to design ways to solve this principal-agent problem and restore efficiency. As a first step, they argue that shareholders should be given governance rights in corporate affairs by giving them the right to vote to appoint the members that shall comprise the executive board of an enterprise. This way and assuming that financial markets are efficient (following EMH), the stock market becomes a disciplining device reigning over the discretionary powers of executives.

The argument is this. If managers do not act in the best interest of their shareholders, this will show up in a deterioration of firm performance (profits, return on equity, dividend payouts) and this

³This follows from the definition of innovation defined by Marianna Mazzucato and William Lazonick (2013): “[They] define innovation in economic terms as the process that generates higher quality products at lower unit costs so that [this] conception of innovation encompasses all types of productivity gains, whether they derive from “radical” or “incremental” innovation, or some type of innovation in between. [This definition of innovation is prequalified] with the condition that these productivity gains are achieved “at prevailing factor prices” to exclude cases where unit costs are lowered by suppressing returns to particular economic actors, e.g. by pushing down wages” (Lazonick & Mazzucato, 2013, p. 1094). This thesis uses this definition of innovation.

will depress the stock market price of the firm (see *An Efficient Monitor?* in Chapter 2). The lower stock price is a signal to shareholders that something is wrong. Shareholders can intervene and appoint new executives. Alternatively, if the stock price has come down a lot, the risk of a hostile takeover increases, which would also bring in new management as the shareholders exit. This way, an efficient stock market (operated by shareholders) constitutes a “market for corporate control”—since managers will be punished for inferior (stock price) performance. However, even if the shareholders succeed in replacing a board which might have performed not in the best interests of the shareholders with another board, the principal-agent problem may still persist. Hence, as a “complete solution to the agency problem” (Lazonick, 2017b), agency theorists proposed that the rewards of the executives were structured to be stock-based (Jensen & Murphy, 1990). The stock-based remuneration arguably provided the incentives for the managers to make (productive) decisions that would increase share valuations.

But, instead of meeting the higher quarterly earnings per share via the superior performance of an enterprise which in turn is rooted in the development of the innovative and dynamic capabilities of an enterprise by making productive investments (e.g. Nelson, 1991; Nelson & Winter, 1977; Teece, Pisano, & Shuen, 1997), for the increasing pressure from the market for corporate control for higher rate of returns and hostile take-overs together with the “additional” pecuniary benefits that the stock-based pay can offer, “senior corporate executives...[embracing] MSV perspective, [have engaged in] massive payouts [of the free cash flow] to shareholders in the forms of both cash dividends and stock buybacks...[In the U.S.,] total compensation of the top 500 managers’ ranged from an average of \$15.9 million in 2009, with 60 percent from stock-based pay, to \$32.6 million in 2015, with 82 percent from stock-based pay” (Lazonick, 2017b, p. 7). Table 1.1 tabulates the net equity issues by non-financial corporations in the U.S. economy sourced from Lazonick (2017b). The stock buybacks can be noted by the negative values of net equity issues. This is in contrast to the outcomes as intended by MSV and principal-agent models of corporate governance.

Executives, however, have always justified buybacks or repurchases arguing that it is warranted when the demand for their products are low to justify investments in innovation or when the shares are undervalued, and hence buybacks are better investments. But, since 2010, almost 60% of the non-financial U.S. stock corporations (around 3300) have engaged in stock buybacks and dividend payouts; the combined spending on which (\$885 billion) in 2015 exceeded their combined net income (\$837 billion) (Reuters, 2017b). Moreover, since 2009, the total payouts (inclusive of dividends paid and repurchases), of around 1900 enterprises, were accounted to equal 113% of their capital spending. Plausibly, the share of the total payouts in excess of the revenues and other capital

spending may be financed accessing credit markets⁴ resulting in the financialisation⁵ of these enterprises.

Table 1.1. Net Equity Issues by Non-financial Corporations in the U.S. economy, by decade (in billion \$), and as a percentage of GDP

Decade	Net Equity Issues (billion \$)	Net Equity Issues (as % of GDP)
1946-1955	143.2	0.56
1956-1965	110.9	0.30
1966-1975	316.0	0.58
1976-1985	-290.9	-0.40
1986-1995	-1,002.5	-1.00
1996-2005	-1,524.4	-1.09
2006-2015	-4,466.6	-2.65

Source: Lazonick, 2017b

Table 1.2. Amounts Spent (in billion \$) on Payouts and Spending between 2005 and 2015

Enterprise	Payouts (repurchases plus dividends, billion \$)
IBM	157
Pfizer	139
3M	48

Source: Reuters, 2017. Authors Calculation

Among the enterprises that report their R&D spending, the percentage of net income spent on innovation has averaged down to less than 50%—as compared to more than 60% in the 1990s (Fried & Wang, 2018). The massive (total) payouts in excess of what they earn may have affected the financing of or the “patient capital” required for developing the “long-term” innovative capabilities of an enterprise which is normally achieved through productive investments (Lazonick, 2015).

⁴ Debt is not undesirable as long as it can be serviced. Most modern capitalist enterprises rely on debt. Modigliani and Miller (1963) have demonstrated that the existence of tax subsidies (as in the case of U.S.) on interest payments on debt would increase the value of an enterprise arguing that more funds will be available at the enterprise’s disposal for productive investments (Modigliani & Miller, 1963). However, enterprises are not increasing their valuations via their innovative products. See “Buybacks, Not iPhone Driving Apple Valuation: BMO” by Donna Fuscaldo (2018) in *Investopedia.com* for an exposition.

⁵ Thomas Palley defines financialisation as “a process whereby financial markets, financial institutions and financial elites gain greater influence over economic policy and economic outcomes. Financialisation transforms the functioning of [an] economic system at both the macro and micro levels” (Palley, 2013, p. 1).

Table 1.2 shows the amounts spent (in billion \$) on total payouts (buybacks and dividends) of three major U.S. innovators from 2005 until 2015.

In sum, the perspective of maximising shareholder value which purports to align the interests of the managers to that of the shareholders (via marker for corporate control and stock-based compensation) to bring about efficient capital and resource allocation, may have affected the corporate governance decision-making concerning the productive investments⁶ in developing the innovative capabilities of enterprises since they seem to adopt less fundamental ways to boost share valuations. These are in contrast to the intended outcomes of the MSV, EMH, and principal-agent models. The corporate decisions may not be “optimally” governed as these models claim but may (in contrast) posit a conflict between the adoption of short-term orientation, as a result of higher pressure induced due to shareholder primacy, in corporate governance and the development of the innovative capabilities of an enterprise or the productive investments made in an enterprise.

1.2 Varieties of Capitalism and Firm Performance

Hayek (1988) argued that the strength of competitive markets, such as the stock market, is their capacity to gather and process enormous amounts of scattered information to organise the decentralised decision-making processes of economic actors (Hayek, 1988). It is on this capacity to collect and process decentralised information that shareholders and enterprises rely on to solve their co-ordination (or principal-agent) problems. Additionally, enterprises depend on the stock market for shareholder financing of new projects; shareholders based on the performance of these enterprises which is reflected in their stock price would provide the funds if they see prospects of higher returns. Also, at higher share prices, enterprises can increase its equity base by issuing more shares, which the shareholders will be willing to buy and hold, to fund new projects. Price signals—or share prices—in the competitive stock market aid investors to distinguish good investments from bad ones (Wurgler, 2000). Moreover, pressure from shareholders, of selling their shares following lower stock prices thereby increasing the risk of hostile takeover, as agency theories argue, encourages the management to undertake value maximising projects (Jensen, 1986).

Such traits of resolving co-ordination issues by market relations and funding new investments can predominantly be witnessed—as Hall and Soskice note in their book “*Varieties of Capitalism*” (VoC)—in a “Liberal Market Economy” (LME) such as the U.S. (Hall & Soskice, 2001, p. 27). Hall and Soskice write that the generalisable characteristics of LMEs’ financial system and corporate governance can be noted in the importance given by the enterprises to its current earnings, the stock

⁶ Note that development of innovative capabilities and productive investments are used interchangeably in this thesis. Productive investments are related to the investments made towards procuring capital assets or tangible assets such as equipment, labs, buildings which are needed to support—and are antecedents for—the innovation process (Heirman & Clarysse, 2007).

price, and in terms of mobilising finance—applicable to bonds, share issues, and bank lending—which is subjected to the evaluation of the enterprise based on publicly available information about it. Moreover, stock-based incentives for the top executives are also common (*ibid*).

An additional notion that Hall and Soskice introduce is that of a “Co-ordinated Market Economy” (CME). They argue that CMEs—in which enterprises solve their co-ordination problem more often in non-market relations—are also able to achieve similar performance as that of LMEs where enterprises (and economic actors) rely heavily on market relations such as the stock market. Hall and Soskice locate U.S and Germany as exemplars for LME and CME, respectively.

Tobin (1984) defined the stock market as functional form efficient if the pressure from shareholders—who monitor the stock prices—to maximise share values on the enterprise results in a more efficient allocation of the enterprise’s assets than any alternative allocation (Tobin, 1984, p. 3). Superior performance by LME, Hall and Soskice argue (which also aligns with the premises of MSV, EMH, and principal-agent models) is that the stock markets are efficient in performing their function leading to apt resource allocation. The superior efficiency that the German economy secured was argued, in contrast, to be achieved by the extent of employee participation (known as “co-determination” or “co-management”) involved in the corporate governance system and not by stock market pressure (Fohlin, 2004).

Chandler’s “*Scale and Scope*” (1990) also explicates how “different economic conditions, institutions, and cultures of the U.S., Great Britain, and Germany” (Nelson, 1991, p. 63) moulded the modern manufacturing enterprises in these countries aiding them to secure relatively similar levels of performance (see Chandler, 1990). The similar performance of enterprises in both economies (LME and CME, or U.S. and Germany) implies that decisions of economic actors in a CME in terms of corporate resource allocation may not be based on share valuations and associated mechanisms *per se* (as in the case of LME) but may depend on the extent and strength of the non-market co-ordination mechanisms that exist within the enterprise.

1.3 The Core Problem

The adoption of MSV perspective in corporate governance has arguably led to too much short-termism (reflected in lower productive investments in innovation and downsizing of the labour force) and large rises in both dividend payouts and stock repurchases for the less fundamental ways that enterprises adopt to maximise shareholders’ value. At the same time, we can see that alternative approaches to corporate governance, as for instance existing in CMEs such as Germany, have solved intra-firm and inter-firm co-ordination issues, resulting in a similar level of performance achieved by enterprises in LMEs such as the U.S. Taken together, these two findings lead us to question whether the hegemonic MSV perspective in corporate governance is as efficient as its proponents argue and

whether there is (are) an (some) alternative mechanism(s) which would yield a similar or a more efficient resource allocation and thereby performance. This forms the core problem motivating the evaluation of the MSV as well as of an alternative approach to corporate governance; the solution to which will be sought by—two case studies—analysing an enterprise where MSV has informed and affected the corporate governance and another enterprise which mainly has been resolving co-ordination issues via non-market relations.

1.4 Research Agenda

The core thesis will be built taking two perspectives which shall explore whether the MSV perspective and its application in corporate governance is efficient as is claimed, especially when it comes to productive investments; and, whether an alternative strategy of corporate governance, specifically a more non-market co-ordination mechanism⁷, can lead to at least similar, or perhaps better, performance.

The outcome will be observed as the effect of corporate governance based on these adopted perspectives on productive investments in innovation. This is because enterprises can be seen “as actors seeking to develop and exploit core competencies or dynamic capabilities understood as capacities for developing, producing, and distributing goods and services profitably” (Hall & Soskice, 2001, p. 6). Moreover, it is the successful innovations that occur in an enterprise which would be followed by increased sales (or output), firm expansion (resulting in further employment), revenues, and profits (or gross profit margins) (Capron & Hulland, 1999). These notions can be linked with the performance of the enterprise. Hence, the outcome will also be observed looking at the increase in output, gross profit margins, and employment growth. These aspects will also cover the interest of the enterprise, shareholders, and the employees since, in an economy, enterprises hire and provide income to tens of thousands of people (Lazonick, 2007).

The research objective, therefore, is:

- (1) to explore how MSV perspective operates in an enterprise and to what extent it may (positively or negatively) affect productive investments.
- (2) to explore an alternative strategy that informs corporate governance aside from MSV perspective which could be conducive to productive investments and superior performance.

While exploring the aforementioned two objectives, the following structured approach will be adopted. The theoretical underpinning pertaining to the maximisation of shareholders’ value will be studied by looking at the theories of MSV, EMH, corporate governance and stock markets that may

⁷ Later in this thesis, we will observe that MSV has also gained importance in such a corporate governance environment and how (or if) it has affected corporate resource allocation decisions such as if it undermined productive investments or not will be explored.

have led to the rise to dominance of the notion that MSV yields socially optimum and efficient resource allocation. Besides this, the extant literature highlighting the skepticism of MSV perspective's application in corporate governance that arguably undermines productive investments will be reviewed together with the channels through which it may operate in an enterprise. A review of the main theories of the firm will be conducted to understand the operation of an enterprise as explicated in economics and to argue that these theories will lead to agency problems and only static efficiency. In order to develop a unifying framework to compare the two business cases, a theory of the firm which takes into account the notions of innovation will be studied.

Following the development of the unifying framework, two business case studies will be performed on two enterprises from the automotive industry; one located in an LME, more specifically the U.S., whose corporate governance is largely shaped and affected by MSV perspective and another located in the CME of Germany to see how the non-market co-ordinated mechanisms informed its corporate governance. The business cases are that of General Motors Corporation (from U.S.) and Volkswagen AG (from Germany). Both these enterprises are large Groups with major subsidiaries or divisions. The governance strategy of the subsidiaries or divisions are aligned with the overarching corporate governance strategy of the Group; these Groups are helmed by a Board (or two Boards in the case of Germany) to which the Heads of the subsidiaries or divisions report to.

The theoretical orientation for the analysis of the business cases will be through the unifying framework which is linked to the extant literature of MSV (and its effects) and theories of the firm. Both business cases will analyse corporate governance from certain dimensions and the output—affected by these dimensions—related to productive investments while linking them via a set of relations or conditions that are deemed conducive for the innovation process.

Formulating the objective and the way forward—accommodating the business case studies—into an answerable question, the following research question emerges:

To what extent have the diverse corporate governance systems of General Motors and Volkswagen contributed to (dis)investments in innovation?

The answer to the main research question will be explored which will aid to contribute to the achievement of the research objectives. The goal of the thesis is—after critically reviewing theory and analysing two business cases—to highlight that MSV is not the only game in town, that it can be argued to be not conducive to innovation, and that there are reasons to further develop a theory of innovative enterprise in parallel to the hegemonic concept of MSV.

1.5 Research Relevance

Theoretical Relevance

The MSV approach is argued to be socially optimal as it ensures that firms operate efficiently. This is true under the assumptions of the theory, most notably the assumption that (stock) markets are efficient and the assumption of “static efficiency”. Static efficiency means that managers, under the pressure of shareholders, will organise production in a way that achieves the lowest possible costs of production—given available technology. Following Schumpeter (1934), it can be argued that innovation (and dynamic efficiency) are more important for shareholder value, firm performance and overall economic performance, than achieving static efficiency. MSV theory does not have a theory of “dynamic efficiency” or how firms innovate which can lead to superior share valuations. This thesis investigates the impacts on innovative capabilities—as well as firm performance, shareholder value, and larger economic outcomes—of the MSV approach to corporate governance and of an alternative approach. Doing so, it intends to contribute to a better (theoretical and analytical) understanding of the (possible) association between MSV and long-run firm performance (dynamic efficiency).

Practical Relevance

“The ways in which business executives allocate resources and government policy-makers implement regulations often reflect prevailing economic ideology” (Lazonick, 2012, p. 2). Maximising shareholder value, if qualified by a theory of innovation can, in the end, become a politically useful defensible monitor of corporate governance leading to efficient resource allocation and superior performance. The effectiveness of corporate governance informed by maximisation of shareholder value, therefore, will depend on the policies that promote innovative enterprises (see *Chapter 9*).

1.6 Overview of the Report

The report is structured as follows. *Chapter 2—Maximisation of Shareholders’ Value* elaborates the origin of the MSV hypothesis, how it gained importance, and how it affects and materialise in corporate governance; part of the content is covered in and hence reference is made to *Chapter 1*. *Chapter 3—Theory of the Firm* evaluates the neoclassical models of the firm and highlights their implications on innovation. *Chapter 4—The Theory of Innovative Enterprise* explores an alternative theory of the firm to draw out a unifying framework for the business case studies while linking them with the manifestations of MSV in corporate governance explored in *Chapter 2* and puts forward three overarching propositions related to corporate governance. *Chapter 5—Case Study Methodology* sets out the case study methodology and certain hypotheses for the manifestations of MSV in corporate

governance. *Chapter 6—The Business Cases* and *Chapter 7—Cross-case Analysis* present the results of the empirical analysis to validate the propositions in *Chapter 4* and the hypotheses in *Chapter 5*. Subsequently, the conclusions are presented in *Chapter 8—Conclusion*. *Chapter 9—Implications and Discussions* provides the implications of the findings and the thesis. The limitations of the thesis, author's reflection, and certain directions for future research will be presented in *Chapter 10—Limitation and Reflections*.

2 Maximisation of Shareholders' Value

This chapter seeks to explore why financial economics nominate shareholder valuations and provide an exposition of the MSV hypothesis. We will also investigate the implications of the theory of MSV for strategic management, corporate governance, and productive investments of an enterprise in this chapter. The main goal of the chapter is to prime the reader with the concepts (relevant to the problem context of this thesis) of MSV and draw implications for the research agenda.

2.1 Corporate Governance and Agency Relationship

Corporate governance—centred on the principles of accountability, transparency, fairness, and responsibility in the management of an enterprise—entails the processes and structures through which actors with vested interests in maximising the welfare of the enterprise take decisions which aid to do so. A well-organised corporate governance structure aids to attract and raise investment funds and manage enterprise performance while protecting the enterprise as much as is feasible from future financial uncertainties (Blair, 1995). Financial turmoil across the globe, such as the scandals associated with the unprincipled corporate governance of Enron Corporation, has attracted interests of policy-makers and academics in the critical analysis and regulation of good corporate governance. For instance, the EU has codified existing company law directives under a single set of rules—called the “Company Law and Corporate Governance”—that informs guidelines for activities, such as an enterprise’s financial reporting and auditing principles and protecting the interests of shareholders (EU, 2018).

Corporate governance also deals with the ownership structure and separates the owners (who fund investments) from the actors that possess control over the allocation of (corporate) resources (Jensen & Meckling, 1976). Shareholders are represented in the Board and incentives are provided to them so that they represent and pursue the interests of all shareholders (Odartey-Mills, 2015). Jensen and Meckling (1976) define an agency relationship as “a contract under which one or more persons (the principal(s)) engage another person or persons (the agent(s)) to perform some service on their behalf which involves delegating some decision-making authority to the agent” (p. 308). The relationship between the shareholders and managers of an enterprise, as can be seen, fits with this definition of the agency relationship. Managers who exercise control over the resources of enterprise—which the shareholders helped to erect—make strategic decisions in the allocation of these resources (such as new-product development, market expansion, productive investments

decisions, outsourcing, *etc.* so as to maximise returns). Part of the appropriations is returned to the shareholders in returns on their investment.

Neoclassical economics states that all actors are private utility maximisers. From this perspective, there are reasons to think that the agent may diverge from the interests of the principal and only perform in the best interest of the agent. Hence, the problem is aligning both their interests. This can be achieved, in theory at least, by other internal and external mechanisms to resolve the agency principal-agent problems such as the market for corporate control and stock-based pay in remuneration (see *Share Valuations and Corporate Governance* for the mechanism in *Chapter 1*) (Jensen & Meckling, 1976; Jensen & Murphy, 1990). The effectiveness of these mechanisms, however, depends on the context and boundary of the enterprise and the inherencies of the corporate governance structure (Agrawal & Knoeber, 1996; Odartei-Mills, 2015).

One could fairly ask the question if the relationship between the shareholders and the managers can be embedded and defined by a (complete) contract to mitigate the divergence of interests. The answer is that it becomes either too costly or impossible to define this relationship by a contract because of the large numbers of shareholders and for the fact that they enter into consensual trading of their shares that they held initially in the secondary stock market.

2.2 Origin of “Shareholder’s Value”—in face of Global Competition

Until the 1970s, in the U.S., as noted by Lazonick and O’Sullivan (2000), corporate governance entailed a “retain and reinvest” regime (p. 14-15):

“[The] corporations tended to retain both the money that they earned and the people whom they employed, and they reinvested in physical capital and complementary human resources. Retentions in the forms of earnings and capital consumption allowances provided the financial foundations for corporate growth, while the building of managerial organisations to develop and utilise productive resources enabled investments in plant, equipment and personnel to succeed”.

The mandate for economic policy (in the U.S.) was to achieve full employment (p. 34, Palley, 2012). Consequently, this ensured stable employment motivating the employees to invest in enterprise-specific knowledge and learning. It was in the best interest of the enterprise to retain their developed human capital and hence, the labour received sufficient and increasing wages to commensurate their skills and knowledge. These skilled workers contributed to the innovation process in an enterprise motivated by high wages (or rewards) and stable employment.

The prevailing economic policy, in the U.S., was based on the Keynesian school of economic thought and economists believed in the stable inverse relationship between inflation and unemployment (Musgrave, 1987). Premised on this, an increase in money supply was not associated with direct inflation but results in a decrease in interest rate thereby an increase in investments. There

will be economic expansion as a consequence therewith an increase in income, output, and employment raising the cost of production which results in higher prices. Inflation was, in a way, considered to be a by-product of economic expansion.

However, the 1970s witnessed “stagflation⁸”, a condition of slow economic growth accompanied by high levels of both inflation and unemployment. This structural problem was unexplainable according to the Keynesian economic theory which accepted the stable inverse relationship between inflation and unemployment. Friedman, a Chicago macroeconomic theorist, rejected Keynesianism asserting that “inflation is always and everywhere a monetary phenomenon” and could explain the exacerbating inflation of that time (Friedman, 1963). As also highlighted by the chairman of the Federal Reserve, Ben Bernanke, in a 2003 speech, “Friedman’s monetary framework has been so influential” (p. 208) and there was a reversal in monetary policy that arguably brought the U.S. out of the stagflation cycle (Bernanke, 2003). Thus, the Chicago school of economics—a neoclassical school of economic thought—gained predominance.

Amidst facing intense global competitions such as from Japan⁹, during the 1970s, neoclassical economists including Jensen and Meckling (1976) devised an approach—a well-founded principle that was readily endorsed for the predominance neoclassical economics enjoyed—which promulgated that markets are always superior to enterprises or organisations in the efficient allocation of resources which can lead to superior performance and predisposed that managerial control and allocation of resources were inefficient, hence the competition. It was also argued that managers strategically made decisions that only maximised their own self-interest—contrary to the interests of the shareholders or the enterprise—and were not prone to the discipline of the market mechanisms. In order to deal with the global competition, these economists argued that there was a need to take over corporate governance from managerial control and the enterprise ought to be governed exogenously by a market for corporate control.

The aim was to discipline managers to make more innovative and performance enhancing investments and the instrument to do so were the stock-prices. Coupled with the EMH, the measure

⁸ The causes of stagflation were numerous. The abolishment of Bretton Woods system, also known as the “Nixon Shock”, resulted in an enormous uncertainty concerning exchange rate and caused a decline in the growth of global trade which depressed aggregate demand thereby slowing down economic growth. The emancipation of developing countries and their assertions in the international arena kick started “cost-push inflation” as they started to ask higher prices for their exports to advanced economies. “Taylorism” or the practise of scientific management reached its saturation and labour unions became assertive which resulted in a decline in productivity growth. This affected profit share and enterprises refrained from further investments. This is, however, the Keynesian diagnosis. Also see *OECD Demand Regimes* in “*Macroeconomics Beyond the NAIRU*” by Storm and Naastepad (2012).

⁹ There existed favourable institutional context(s)—such as stable shareholding, mandate for full employment, and bank lending—that enabled the Japanese economy’s industries, especially automobile, to secure an upper edge in global competition (see “*Varieties of Capitalism and Innovative Enterprise*” by Lazonick (2007)).

of superior performance was higher stock valuations (Jensen & Meckling, 1976; Malkiel & Fama, 1970). It was during the 1970s and 1980s, that the theories in support of the MSV perspective gained traction (Lazonick & O’Sullivan, 2000). This changed the ways in which enterprises operated in fundamental ways for the increasing influence of stock market and market for corporate control in corporate governance (see *Share Valuations and Corporate Governance* in Chapter 1).

Also during this time, the U.S. adopted a neoliberal growth model (*cf.* Palley, 2012). In place of wage growth fuelling aggregate demand growth, emphasis was on borrowing and asset price inflation. The growth model was built on cheap imports and financial booms. These fermented by globalisation resulted in increased offshoring and importance of capital markets. Hence, together with the market for corporate control grew the institutional investors such as mutual funds, pension funds, *etc.* which gave shareholders much more “collective” power in governing corporate resource allocation. The increased power of the shareholders and their pressure on higher rate of returns also exacerbated deindustrialisation and offshoring by the enterprises.

Moreover, prior to the 1970s, there were restrictions to which life insurance companies and pension funds could invest in corporate equities (Lazonick & O’Sullivan, 2000). A number of legal reforms during the 1970s allowed equity-based institutional investing (*cf.* Palley, 2012). Consequently, there was a shift of the functions of Wall Street which initially raised funds for and managed Mergers and Acquisitions (M&A)—which were prominent among enterprises and industries where significant process and product innovations were methodologically developed—to appropriate large fees for their intermediation through trading of corporate equities (Chandler, 1993; Lazonick, 2015). Advancement in computer technology which enabled high velocity and large volume of stock trading reinforced the primacy of share valuations and imposed higher pressures on the stock-listed enterprises. In the automotive industry, “[t]he low market capitalisation of some of the companies has put them under threat of a hostile takeover, while institutional investors have voiced their discontent about corporate governance structures in the car industry. In sum, there [was] a strong pressure on [these] companies to change their traditional corporate governance systems” (Jürgens, Lung, Volpatto, & Frigant, 2002, p. 61).

Other factors that have contributed, at least indirectly, to increased shareholders’ primacy were the labour market flexibility and the notion of small government. Labour market flexibility enabled cost-less firing that the enterprises engaged in so as to make organisations leaner. The shortest and fastest path to respond to the increasing pressure of the shareholders was to downsize, deindustrialise, and outsource. In addition, “small-government policies have resulted in the erosion of popular economic rights and protections...as these policies undermin[ed] the legitimacy of government and push[ed] privatisation” (p. 39, Palley, 2012). As a result of privatisation, there was an increasing reliance on capital markets.

All taken together, the shareholders primacy gained sufficient traction and enterprises also adopted easier methods, which are sometimes less fundamental (such as downsizing, massive dividend payouts, and excessive stock buybacks) compared to achieving higher share valuations via the superior performance of the enterprise, to meet the targets set by the shareholders. In the course of this thesis, when references are made to “MSV perspective” or “rules and routines of MSV perspectives”, and the like, we are referring to these extreme and perverse actions that enterprises have adopted.

2.3 An Efficient Monitor?

Higher valuations of shareholders’ value would mean—as claimed by neoclassical economists—that the capital in an enterprise is allocated efficiently to yield more value (Morck, 2014). This is to say that the capital is allocated to investments that is efficient to generate more value which could be in the form of superior profits, superior product quality, low-cost products, and the like. This is premised on the EMH that in a “well-functioning market” share valuations reflect the actual underlying value of an enterprise’s capital and how efficiently they are put to use. Seeing a higher stock price, financial investors expect that the resources are put to use efficiently (today) by the enterprise and may continue into the future which would increase the stock price today as this enterprise is expected to yield higher returns.

Fama and Malkiel (1970) proposed three versions of the EMH—the weak form of EMH can be accepted if the trends in current and past stock prices (or returns) do not predict future outcomes; the strong form is satisfied if the future stock prices (or returns) cannot be predicted at all; and the semi-strong form of EMH is satisfied when publicly available information cannot be used at all to predict future outcomes (Malkiel & Fama, 1970). In other words, future outcomes cannot be known unless one has inside information. These perspectives decouple share prices from being speculatively modified using (only) publicly available information; under the condition of “well-functioning market” share prices truly reflect enterprise performance. This makes stock price an efficient monitor of superior performance. However, the necessary preconditions for the reflection of superior enterprise performance in its stock price is an efficient and well-functioning (stock) market or the absence of speculative modification of stock price (using inside information).

But how efficient or “well-functioning” is the stock market—is the stock price free from speculative modification(s)? To commence the discussion, let us start with the functions of financial intermediation and illustrate how corporate behaviour gets reflected in its stock price. In rudimentary terms, financial intermediation channels savings of the economy—which are accumulated in the hands of savers in the form of savings deposits or cash-pools—to the entrepreneurs to invest in new ventures. For instance, an enterprise can start by issuing an initial public offering or IPO which is

the process of offering an enterprise's stocks or shares to the public which can be bought in the (primary) stock market. The entrepreneur uses the raised funds to invest in the new venture and for the investments the shareholders offered, part of the appropriated gains from the returns of the new venture is returned in the form of dividends. The stock price is the monitor, as per EMH, for the shareholders to check if their money is utilised in the most efficient way.

Now consider the (simple) exposition of a fictitious enterprise "Enterprise Inc." or EInc. The managers of EInc have come up with an excellent idea, for which they need capital of \$1 million. EInc offers an IPO and raises the money in the stock market. The expectation of the shareholders is that EInc is innovative and will increase the value of the IPO above \$1 million, let us say, by 10 percent in one year. Suppose, EInc forecasts that through their new venture they can achieve an internal rate of returns (IRR) of 50 percent in one year. The valuation of the Einc after one year will be at \$1.5 million. Meeting the expectations of the shareholder, EInc can allocate \$1.1 million as shareholders' value and retain \$400,000 as earnings.

During the IPO, based on EInc's forecasts, the shareholders can be allocated 73 percent¹⁰ of the enterprise's ownership. If the EInc ownership is broken down into one million shares, during the IPO 733,333 shares can be sold in the stock market and the founders of EInc can retain the remaining (266,667) shares. The price at the time of issuance will be \$ 1.36¹¹ per share. Tobin's Q¹² value after one year, provided the new venture returns with gains as predicted, will be 1.5. Suppose the top executive of EInc manages to allocate \$300,000 as a bonus for him- or herself and this is accounted for in the books as extra costs (now the value of the enterprise is \$1.2 million). This would mean that during the IPO for a return of \$1.1 million, the shareholders would insist on owning 91.67¹³ percent of the enterprise and the stock price at IPO will be \$1.09 per share (for outstanding shares of 916,666). Tobin's Q is at 1.2. This would mean that the ownership of the (actual) founding members reduces and with more than 90 percent ownership in the hands of shareholders being traded in the stock market; there now exist a risk of hostile take-over if all the outstanding shares were to be bought by a strong block institutional investor. This will incentivise to keep the bonus (or extra costs) to a minimum. Also, suppose the enterprise is able to secure only 20% IRR, then again—with a good corporate governance that does not use corporate earnings for private benefits or excessive bonus—the Tobin's Q is at 1.2 and stock price at IPO is \$1.09 per share. The operations of the enterprise, profitability, or the bonuses, *etc.* as long as accounted for reflects in the shareholders' valuations. This is the mechanism through which an EMH operates and generates lower stock price if the enterprise has an inept management or fails to secure the anticipated returns.

¹⁰ Shareholder's value/enterprise's value = $1.1/1.5 = 73\%$

¹¹ Share price = $\$1000000 / 733333 \text{ shares} = \1.36 per share

¹² The ratio of book value of assets to market value of assets

¹³ Shareholder's value/enterprise's value = $1.1/(1.5-0.3) = 91.67\%$

The shareholders' value, as have seen from the above exposition, was maximum at IRR of 50% and when private benefits were zero. Therefore, the smaller are the private benefits and the higher the performance (or lower the costs), the higher will be the share valuation.

Nevertheless, as stated before, the key issue is that as far as the shareholders are concerned, the management is inefficient and may go for self-regarding interests (Jensen & Meckling, 1976) and an often cited normative prescription is to increase the internal ownership (the share-ownership of managers) so that management cares (Jensen & Murphy, 1990; Morck, Shleifer, & Vishny, 1988). The bonus of the management will now depend on the value of their equity—the higher the stock price of the enterprise, the higher will be the share valuations and their bonus.

We have already seen that, in the U.S., there is an increasing shareholders' primacy in corporate governance which was enabled by legal reforms. There are also the notions of globalisation, deindustrialisation, and offshoring. Moreover, the regulatory contexts permit share buybacks and the labour market is flexible which enables costless hiring and firing. Accommodating these notions together with the notion that managers have control over the corporate resource allocation (decisions) based on their power and they pursue maximising self-regarding interests, and also under the increasing pressure from the institutional investors for higher share valuations and supporting regulatory regimes (*cf.* Palley, 2012), many enterprises have resorted to a “downsize-and-distribute” regime rather than continuing the “retain-and-reinvest” regime (as mentioned before). Under this regime, “[f]or the sake of increasing [the] “free” cash flow that could be used for buybacks and dividends, an established...corporation might lay off thousands of experienced employees, both white collar and blue collar, and reduce the wages and benefits of the rest...Furthermore, several plants [were] closed-off and operations [were] outsourced to [inexpensive] emerging economies” (Lazonick, 2015, p. 11).

The “free” cash flow that ought to be distributed to the shareholders, as the agency theorists argued, is in actuality the cash flow in excess of the funds required to finance projects (with positive returns) discounting the cost of capital (Jensen, 1989). Their argument was that this “free” cash flow may be “wasted” by using it to fund projects (with negative returns) by the managers or in other inefficient activities such as catering to their self-regarding private benefits.

Share buybacks increase the earnings per unit outstanding share and dividend payouts increase the future expectation of higher dividend payout. Moreover, these channels also create a conception indicative of a current superior performance of the enterprise (which will also keep the shareholders satisfied). In either way, the demand for the shares is increased and thereby increase its price by disgorging the free cash flow.

It is, however, worth asking the question—if the MSV hypothesis can impose rationality and discipline self-interested managers, why would managers engage in such practises? The answer lies in the what the principal-agent theory of the firm lacks to purport (see *Principal-Agent Theory* in *Chapter*

3), the managers' keen (self-regarding) interest of retaining control over the enterprises, and premises enabled by the regulatory contexts. The stock price—unlike in the EMH and MSV models—can be seen as a “not-so-efficient” monitor, although the corporate behaviour are reflected in the stock price (refer *EInc exposition* above), for the following reason: in unregulated markets (or deregulated market¹⁴ such as the one which permits share buybacks and costless hiring and firing of labour force) the pursuit of private benefits based on the stock-based compensation—put in place to solve agency problem and in the process of adopting the MSV perspective—have given way to extreme behaviour that results in moving cash away from activities (such as employee retention and their training, plant expansion, *etc.*) that could have improved the efficiency of the enterprise to unproductive disgorging in the form of repurchases and dividend payouts (see *Table 1.1* and *Table 1.2* in *Chapter 1*; cf. Fried & Wang, 2018).

2.4 MSV and Innovative Capabilities

To commence the discussion in this direction let us first evaluate three characteristics of the innovation process and what is required in an enterprise to confront them. The innovation process is deemed to inherently possess three generic characteristics—uncertain, collective, and cumulative (cf. Lazonick, 2010, 2013; Lazonick & Mazzucato, 2013; O'Sullivan, 2000; O'Sullivan & Lazonick, 2010).

Innovation process generates new knowledge which is beneficial to an economy (Kleiner, Thibaut; Repplinger-Hach, 2007). However, innovation process generally involves large investments (Mazzucato, 2013). From the perspective of a single enterprise since they only account for its private benefits the enterprise might refrain from investing in innovation, since the return on investments made in the innovation process at the time of investment is unknown (Bergemann & Hege, 2005; Mazzucato, 2005). The reluctance to invest in innovation is further exacerbated since the extent to which the new knowledge generated can be protected against imitation so as to appropriate rents from the innovation to cover the enterprise's cost of innovation is uncertain. Moreover, if an enterprise selects to undertake open innovation as its innovation strategy, it is not always easy for the enterprise to find a suitable partner and if found, the level of commitment as well as the consistent participation of the partner is uncertain (West & Gallagher, 2006). In sum, “investment in innovation...is inherently uncertain; if we knew how to innovate when investments in innovation were made, it would not be an innovation” (Lazonick & Mazzucato, 2013, p. 1094). Moreover, innovation is an uncertain learning process as the additional costs that it may require and incur, the potential uses of the innovation, and its revenue generating capabilities unfold only over time.

¹⁴ For instance, the Securities and Exchange Commission (SEC) in the U.S. have sanctioned open-market repurchases on November 17, 1982.

Innovation possesses an organisational character and is collective (Dougherty, 1992; van der Panne, van Beers, & Kleinknecht, 2003). “Innovation is collective because to generate higher quality, lower cost products than were previously available, the business enterprise must integrate the skills and efforts of large numbers of people with different hierarchical responsibilities and functional capabilities into the organisational learning processes that are the essence of innovation” (Lazonick, 2013, p. 4). As a corollary, innovation is cumulative because understanding and utilising newly acquired knowledge depends on the enterprise’s absorptive capacity. “[C]ollective learning today provides the foundation for collective learning tomorrow, and these organisational learning processes must be sustained over time until, through the sale of higher quality, lower cost products, financial returns can...be generated” (*ibid*).

Lazonick (2013) argues that, in order to cultivate innovation in an enterprise, three organising elements—or generic activities—are important that confront the three characteristics of innovation process; they are—strategy, organisation, and finance (p. 4).

The strategy is required to evaluate the current state of an enterprise’s innovative capabilities and formulate an investment plan after identifying the investment opportunities that may help the enterprise to differentiate itself from its competitors by the development of the capabilities of its resources to create a low-cost process or a high-quality new product or both. An enterprise’s resources are its human and physical capital. As a result, “strategy allocates resources to investments in developing human and physical capabilities that, it is hoped, will enable the firm to compete in the chosen product markets” (Lazonick, 2013, p. 3).

The organisation is required to bring together large number of people and align them to the interest of the enterprise and utilise and develop the value-creating capabilities of its resources so as to succeed in the investment project that the enterprise makes following its (above) strategy.

Finance is required at all the stages and the processes the stages’ entail. Finance is required to organise the hierarchical responsibilities and functional capabilities of the employees and pay rewards for their efforts. Finance sustains the processes associated with innovation, production, and marketing—such as to pay for the complementing or enabling factors (labs, equipment, *etc.*), marketing of the new product so that the customers know about the superior quality that the new product embodies, and the like, “from the time at which investments in productive resources are made to the time at which financial returns are generated through the sale of products” (Lazonick, 2013, p. 4).

In an enterprise, necessary conditions¹⁵ should prevail that supports these generic activities (Lazonick, 2012). In the process of MSV, the organising elements of an enterprise confronting the

¹⁵ These conditions are defined as “The Social Conditions” of an innovative enterprise and has been defined by Lazonick and they will be elaborately discussed in *Chapter 4—The Theory of Innovative Enterprise*.

characteristics of innovation are affected—which this thesis argues (by contributing to the propositions by Lazonick (2015)) is—via affecting these conditions (see *The Social Conditions of Innovative Enterprise* in *Chapter 5*, and *Chapter 7*). To further explicate, let us explore one fundamental flaw in the MSV perspective.

Agency theorists introduced the notion of shareholders being a “residual claimant” (Fama & Jensen, 1983). The starting point of their discussion was their argument that all participants in a business enterprise are able to contribute marketable inputs in the functioning of the enterprise that gets paid its marginal product. The marketable inputs can take many forms depending on the cap the actor wears. For instance, creditors provide marketable input in the form of credits (marketable since there is a cost to capital in the market which is the interest rate), the returns to which are in the form the principal amount and interests repaid. The returns increase proportionally to the additional input the actor provides. Similar is in the case for workers, suppliers, and the like, whom all “receive a market-determined price for the goods or services...they...[offer]” (Lazonick, 2015, p. 12).

Fama and Jensen (1983) argued that it is only the shareholders that must have a legitimate claim on the “residue” that is left after honouring the guaranteed marginal product of all other actors since all other relationships (between the enterprise and the actors, besides the shareholders) are bound by a contractual agreement, *e.g.* an employment contract between the worker and the management. For their large size and since shares are traded, entering into a contract with the shareholders is either impossible or it is too costly. Therefore, “[b]y the MSV argument, shareholders are the only stakeholders who need to be incentivised to bear the risk of investing in productive resources that may result in superior economic performance” (Lazonick, 2015, p 12). Furthermore, being the only residual claimants, shareholders are considered to be the only participant in an enterprise who are keen to monitor and discipline managers for efficient resource allocation.

But, on one hand, investments in the enterprise or innovation processes are not made only, or even primarily, by shareholders alone. Entrepreneurial ventures are set-up by founding members and it is them who invest until the IPO is issued. After the IPO, the shares are traded in the (secondary) stock market and shareholders those who have purchased the shares during the IPO would no longer be holding on to these shares. This also means that the shareholders would not have any commitment to the enterprise or the nature of projects that they have invested in—since shareholders invest in shares and seek higher valuations—unlike the founding members who have set-up the enterprise. The increase in stock prices due to the high-volume trade (of its stocks) in the secondary market is not profited by the enterprise, at least directly. The consensual trade happens among traders and they are the ones who are directly benefited. The indirect benefit that the enterprise enjoys is relocated to the increase in market capitalisation of the enterprise which goes up

together with the increase in stock prices. In this situation, the enterprise can issue new equity, to fund its operations and new projects, at higher prices.

All economic actors, on the other hand, invest in the enterprise or innovation process and they all bear the risk while participating in an enterprise¹⁶ (*cf.* Lazonick, 2004, 2012; Lazonick & Mazzucato, 2013; Mazzucato, 2013). Organisations—households, governments, and business enterprises—invest in the innovation process either directly or indirectly. A business enterprise engages in the productive transformation of its productive resources. The resources are the human and physical capital. The capabilities embodied in human capital are their skills and knowledge. The capabilities in physical capital are its embodied technology that is able to perform better than its predecessor. The human and physical capital the enterprise seeks to acquire in the factor market¹⁷ to produce the goods and services would not be available for procurement in the first place had the organisations have not invested in developing the productive resources. Households invest in the (future) labour force by investing in the education of their children. Governments invest in innovation systems and national R&D labs that foster innovation of new high-tech. Business enterprises through their entrepreneurial venture bring together the human and physical capital and train the employed (current) labour force through apprenticeship and on-the-job training. Business enterprises also generate new and advanced high-tech. Furthermore, workers contribute to the business enterprise, over the years, by investing their dedicated effort and time in learning enterprise-specific knowledge and applying on their day-to-day tasks.

The risk of the investments that the households make are regarding, for instance, the future employability of their children which is uncertain and is prone to economic cyclicity. The risk that the government bear is that their investments, using the tax-payers money, may not result in a successful product or process. The business enterprise may fail in their innovation project and suffer losses which may result in bankruptcy or close-down and its workforce being laid-off.

If the conditions that support the strategy of an enterprise are primed by the notions that shareholders are the only residual claimant and their primacy takes precedence, it can undermine the abilities of the managers to evaluate the enterprise's current capability and look for new ventures or developing the capabilities since they look for faster and easier, which are less fundamental, ways to achieve higher share valuations.

We have seen in our review of the literature that managers in the name of increasing the so-called “free” cash flow and fermented by the regulatory contexts have resorted to downsizing its labour force and use the cash in massive stock buyback schemes and dividend payout. In the process of downsizing, both human (as well as physical capital) of an enterprise is downsized so that their

¹⁶This notion is derived from the concepts of “The Theory of Innovative Enterprise”. See *Chapter 4*.

¹⁷A factor market refers to a market where the factors of production such as labour, machines, raw materials, management resources, etc. are bought (hired) and sold (discharged).

allocated wages and costs can now be distributed to the shareholders in the form of dividends or can be used in repurchases. In this process, the conditions that support the organisation and finance of an enterprise is arguably affected. Laying-off of an experienced worker would also result in the loss of the capabilities (from the enterprise) that the worker has developed over the years since we have seen that innovation process is both collective and cumulative and requires organisation. The disgorged cash is required while investing in the uncertain innovation project and sustain the process until returns from sales are obtained. These will be shown empirically via the business case studies.

2.5 MSV and Financialisation

Palley (2013) argues that the agency approach “[h]as been used to rationalise the explosion in top management compensation and stock option grants, and it has also been used to justify the rise of the takeover movement and private equity investment” (p.4). Furthermore, it has prepared the way for a legalised view that “the sole purpose of corporations...is to maximise shareholder returns within the confines of the law” and has played a crucial role in promoting financialisation via the “[f]ormulation of the relationship between firms and financial markets” (Palley, 2013, p. 4). Lazonick (2011) has also emphasised in his paper, “*From Innovation to Financialisation: How Shareholder Value Ideology is Destroying the US Economy*”, that a prime factor for the decline of innovation in the U.S economy “is the way in which U.S. business corporations are governed and in particular the way in which the stock-based remuneration of corporate executives influences their resource-allocation decisions” (Lazonick, 2011, p. 1). He argues that under the influence pecuniary incentive schemes, the non-financial corporations of the U.S. are becoming financialised and that this has resulted in a reduction of investments in the productive capabilities of these enterprises.

In order to look at the effects of MSV on corporate governance it makes sense to observe characteristics of financialisation¹⁸ emerging in an enterprise and as will be shown, they can be linked to the set of relations that foster the generic activities of an enterprise to confront the characteristics of innovation process in an enterprise (see *Implications of TIE for Case Study Analysis—The Social Conditions in Chapter 4*). The characteristics can be observed in the following organising elements sought out from financialisation literature.

Krippner (2005) has noted that financialisation can be observed in the balance sheet of an enterprise looking at the shift in the ratio of financial assets to tangible assets (Krippner, 2005). Financial assets are the marketable securities, cash, and cash equivalents while tangible assets

¹⁸ The idea also emerges from Maielli and Haslam's (2016) paper—“*General Motors: A Financialised Account of Corporate Behaviour 1909–1940*”—in which they illustrate GM's financialised corporate behaviour in the earlier years since its inception by looking at certain dimensions or conduits of financialisation. Certain parts of their approach are also used in this thesis while illustrating MSV's effects on corporate governance at GM and VW.

comprise of property, plant, and equipment. Concerning the antecedents for innovation and its rate in particular, tangible assets are deemed imperative (*cf.* Heirman & Clarysse, 2007).

Palley (2013) has noted that the enterprises have been “encouraged to adopt a cult of debt finance” in the process of financialisation (Palley, 2013). Enterprises to protect the wealth of the shareholders¹⁹, rely much on debt financing draining away free cash flow from the workers reducing their funds available for union formation (Bronars & Deere, 1991). Lack of satisfaction can affect the innovation potential and performance of an enterprise (Shujahat, Ali, Nawaz, Durst, & Kianto, 2018). Furthermore, debt financing increases leverage raising the rate of return on equity capital (Palley, 2013). On a similar note, Froud *et al.* (2006) have argued that financialisation can be noted in the extent of intrusion of capital markets in corporate governance (Froud *et al.*, 2006). Stock markets have demanded a higher rate of returns on capital employed from the enterprises. In order to keep the (apparent) rate of returns²⁰ high, the debt is increased which decreases the capital employed.

Lazonick (2015) as well as Fligstein and Shin (2007) have noted that one monitor for financialisation in enterprises is the extent of inclusion of stock-based pay in the remuneration packages of the top executives with an aim—as agency theory suggests—to align the interests of the managers to that of the shareholders (Fligstein & Shin, 2007; Lazonick, 2015). The inclusion of stock-based pay in the packages, as we have seen, has resulted in disgorging the cash to boost the EPS. Additionally, there is the notion of reducing the labour force and distributing the cost-to-company (CTC) allocated to its employees in the name of “downsize and distribute” to shareholders (Lazonick, 2015). These processes affect the organisation and finance required to “confront the uncertain, collective, and cumulative characteristics of innovation process” (Lazonick, 2013, p. 4).

It can, therefore, be argued (theoretically) that via the aforementioned conduits, finance is channelled to the shareholders and capital (and stock) markets rather than investing in and developing the productive capabilities of an enterprise. Even if it was to do so, enterprise can borrow and fund projects, but can affect the innovation process (for a detailed discussion, see *Chapter 9—Implications and Discussions*)

2.6 Implication for the Research Agenda

This chapter has implications for both the theoretical analysis of this research and the empirical analysis. Theoretically, and by reviewing the extant literature, it is seen that the adoption of extreme methods in corporate governance to boost share valuations rationalised by the MSV perspective

¹⁹ Higher bargained wages would mean that the enterprises would have to channel cash allocated to the shareholders to its employees.

²⁰ if monitored by the Return on Capital Employed (ROCE); ROCE = Cash earnings or EBIT/Capital employed or (Total Assets – Total Liabilities)

affects the strategy, organisation, and finance of an enterprise and can be observed by the extent of financialisation of non-financial enterprises which may affect productive investments. The skepticism was that the MSV perspective in corporate governance that aims to solve co-ordination issue via market relations and which purports efficient resource allocation may not be conducive for productive investments and may lead to inefficient resource allocation. It is the case, theoretically, as we have seen in this chapter. To empirically test the case of MSV perspective in corporate governance undermining productive investments, this chapter will serve as the basis for the illustration of financialisation of corporate governance from the dimensions of accumulation of financial assets over tangible assets, increase in debt, inclusion of financial incentives in remuneration packages, downsizing (of employees), payouts, (dis)investments in education, training, and R&D, and the extent of capital market intrusion, and how these conduits affect the conditions that support the innovation process in an enterprise.

Certain hypotheses are developed (see *Data Analyses and Reporting* in *Chapter 5*) so as to operationalise these theoretical notions/conduits and link them with observable indicators from a business enterprise's corporate governance and financial data.

3 Theory of the Firm

Although micro-economists have developed theories of the firm—which try to explain its prominent role as an engine of growth of modern capitalist economies—Lazonick (2012) argues that they ignore the “Schumpeterian challenge” (Lazonick, 2012, p. 2). Schumpeter (1934) in his “*The Theory of Economic Development*” argued that for economic development innovation is imperative since it disrupts the “circular flow of economic life as conditioned by given circumstances”. Lazonick (2012) interprets Schumpeter’s “circular flow” as a system of markets that allocates the economy’s resources and argues that Schumpeter’s challenge was to work out a theory that aims to find “the conditions under which tendencies toward equilibrium will be disrupted and economic activity transformed” (p. 2).

This chapter is dedicated to explaining the notions of the neoclassical theories of the enterprise and argue that these dominant approaches continue (or lead) to resolving co-ordination problems via market relations and lacks a theory of innovation leading only to static efficiency. The chapter concludes by arguing the need for a library of business cases to guide corporate governance after highlighting the implications of the neoclassical models for innovation or productive investments.

3.1 Neoclassical Theory of the Firm

In neoclassical microeconomics, the firm or the enterprise is assumed to “behave” as an instrumentally rational agent whose main aim is to maximise profits. The enterprise operates in a perfectly competitive, price-clearing, markets and has no price-setting power. To do so, the enterprise hires “factors of production”, generally labour and capital, in factor markets accepting the equilibrium wage and the equilibrium price of capital. Factors are abundantly available to the enterprise. The enterprise uses available production technologies, choosing the “optimal” technique of production based on the ratio of factor prices. By assumption, there is no information asymmetry and the conditions that all enterprises face is identical. The manager of the enterprise oversees the production process and is able to acquire the factors of production at the prevailing market prices. The firm will choose that optimum production set and output that maximises the profit of the enterprise. The theory can be elegantly rendered into mathematical formulations. For instance, starting from the fundamental equation of profits being equal to the difference between total revenue and total cost, conditions for profit maximisation can be arrived at and implies that the firm will raise its level of output until the marginal revenue is equal to its marginal cost (*cf.* Biffignandi, 2013; Newman, 1998).

Neoclassical theory is useful in the analysis of the effect on an enterprise's output and production choices subjected to exogenous changes such as an increase in supply due to new entrants or sales taxes (e.g. Pritchard, 1943). As a corollary, the theory can be extended to analyse the strategic decisions or interactions in the case of imperfect market competitions, such as an oligopoly or monopoly, and market concentration (Tirole, 1988). For instance, in perfect competition, enterprises adjust by limiting their output in a market where there are new entrants (producing), while monopolies adjust by setting the price of their product above the average cost of production (of the entrant) in response to a threat of entry; in an oligopolistic market, the output of two or more large enterprises may eventually arrive at the Cournot equilibrium following the principle of profit maximisation (see Himmelweit, Simonetti, & Trigg, 2001).

Nevertheless, in the neoclassical theory, the firm itself remains a “black-box”, because the theory does not inform us how production is organised within an enterprise and how co-ordination or conflicts issues—applicable to owners, managers, workers, and consumers—are resolved (Hart, 1989). In other words, neoclassical economics would not be able to aid the analysis of the formation of the Board, corporate governance, or the internal organisation structure. More importantly, the theory does not investigate how the principle of marginalism can be achieved by the contributions of various actors working, and processes, within the firm. The opening sentence of Harold Demsetz's (1997) paper—“*The Firm in Economic Theory*”—highlights what the conventional neoclassical theory of the firm lacks (Demsetz, 1997, p. 426):

“Neoclassical theory's objective is to understand price-guided, not management guided resource allocation. The firm does not play a central role in the theory. It is that well known “black-box” into which resources go and out of which goods come, with little attention paid to how this transformation is accomplished.”

Neoclassical theory, therefore, fails to define an enterprise and its boundaries thereby not positing the consequences of strategic management, capital market intrusions, or take-overs. In rudimentary terms, the theory (only) informs how an enterprise functions given the market conditions while not asserting how its organisational structure—in terms of its strategy, management, and finance—is constituted or the importance of long-term notions of strategies and competence development, or innovation. The concept of (shareholder) ownership and (executive) control—and the (need for) alignment of their self-regarding interests or conflicts are not explicitly analysed in the standard neoclassical model.

3.2 Principal-agent Theory

The principal-agent theory addresses the limitations of the neoclassical theory, as we have seen, specifically pertaining to co-ordination issues or conflict resolutions concerning the interests of economic actors involved in an enterprise such as managers and shareholders. The starting point of

the principal-agent approach is that there is a separation of ownership and control within the firm (Fama & Jensen, 1983). While the control remains with the managers managing day-to-day operations and possessing the ability to make strategic choices yielding profits, the shareholders are the owners and they want the managers to work in their interest. Managers are thus seen as representatives of the owners that run the business for them and should do so in alignment with their interests, which is defined as maximum profits (or higher share valuations). Nevertheless, for reasons of asymmetric information, the managers' goals can deviate from the goal of the owners and managers are presumed to be interested in upward mobility possibilities, perks and bonuses, comfortable life, and so on (Hart, 1989). The conflicts are formalised by taking into account the (observable) problems as well as information asymmetries (Holmstrom, 1979). Although the enterprise is viewed as a set of feasible production possibilities, the manager can make strategic choices such as the techniques and technology to generate output, effort allocation, and investments.

In such a context, owners can enter into an agreement with the managers so as to align the interests of the managers to that of the owners' mostly through an incentive scheme which will be a function of the performance of the enterprise in terms of profits (Jensen & Murphy, 1990). The performance of the enterprise, as per EMH, will be reflected in the stock price (Malkiel & Fama, 1970; Samuelson, 1965). However, even under an optimal scheme such as performance-based pay, managers may put their interests ahead of the owners and the enterprise and may shy away from performing actions that may increase the enterprise's performance (Lazonick, 2015).

This is because the model fails to define the enterprise and its boundaries of operations. For instance, consider that supplier A has been supplying parts and raw materials to manufacturer B for some time and is the only supplier in the market, but B has no control over the quality of the parts and raw materials that A supplies. To ensure that consistent quality is always delivered, it would make sense, under the principal-agent theory, for B to enter into an agreement stating that the rewards offered (by B) to A are to be made dependent on the profits made by B. A would accept the agreement under the assumption that B's profits is a function of the quality of the supplies that A provides. Here, B's assumption is that since A's rewards are function of the quality it provides, A would ensure that its output is of good quality as B wants. In other words, A would work in the best interest of B. Nevertheless, B can generate low operating margins or profits subject to conditions besides A's supplies such as if the labour employed by B underperform and their productivity decreases due to lack of productive investments, *etc.* which may be unknown to A and may affect its appropriations²¹. Purely, based on the principal-agent theory, therefore, it is difficult to gain insights into the nature and extent the principal's (or the agent's) operations and behaviour.

²¹ It can be then argued that A can enter into another (precondition) agreement with B dictating the requirement of B's labour productivity and performance, and so on. Arriving at such complete contracting can be too costly or impossible to resolve.

In terms of the strategic choices that the managers make, we could assume that under the premises of the pecuniary incentive scheme the choices could be aligned to suit the interests of the shareholders' and maximise their value; but this would not tell the managers on strategies with which it can be achieved. Since the contract is based on the price-signal (or share prices) which appears in the market and that their own incentives are based on these price-signals, in order to achieve the targets, the managers may resort to any actions which are undefined in the principal-agent or agency relationship²² and are enabled by the regulatory contexts. The action can be in the form of stock price manipulation at the expense of productive investments. Such choices or actions—employed and rationalised by the importance of MSV hypothesis—are not directed, theoretically, to enhance innovation or innovative capabilities of the enterprise thereby the performance of the enterprise (see *Chapter 2*).

Principal-agent theory, therefore, helps to explain why the incentives of the managers are structured to be based on performance and stock prices (Barnard, 1968), but fails to inform how superior performance can be achieved.

3.3 Transaction-Cost Economies

One more way in which the neoclassical theory of the firm has been extended is by the introduction of “transactions-costs”. The seminal work of Ronald Coase (1937), “*The Nature of the Firm*”, introduced the concepts of transaction-cost economies which takes into account the costs—which is largely ignored in the neoclassical paradigm—involved in any transactions to form the premises of the “thinking, planning, and contracting” related to an enterprise's organisation and operation (Coase, 1937). Coase made a distinction between two institutional forms of co-ordinating economic decisions and transactions: “markets” and “hierarchies”. The nature of the firm is hierarchical and Coase's question was why certain transactions were done within the hierarchical setting of the firm, while other transactions were mediated via market exchange. Coase's answer centred around the notion of transactions-cost. The major component of the cost of a transaction, according to Coase but presented here in the words of Oliver Hart (1989) from his survey of theories of the firm, is the costs involved while “learning and haggling about over the terms of trade”; these costs can be very large if the length of transaction is long (Hart, 1989). The cost reduction mechanism is to entrust one actor with the authority over the terms of trade, however, within limits. For instance, the financial intermediaries supposedly reduce transaction-costs by presiding over and learning about the terms of the capital market and the transactions involved in it thereby facilitating easy access to

²² Additionally, the managers' manipulative function can influence their decisions and may point in a direction that would maximise their self-regarding benefits (from *Human-uncertainty principle*, cf. Soros, 2013). Their self-regarding benefits could be either to maximise their bonus or prevent hostile takeover so as to retain control over the enterprise, or both.

credit to actors such as households, whom otherwise would have to spend considerable amount of time and effort looking for the sources of capital, writing contract with the private lender, and so on (Fohlin, 2000).

Coase's enterprise is built on the concepts of transaction-cost economies and the key idea is that costs can be minimised if certain transactions happen *within the firm* (using the co-ordination principles inherent in a hierarchy) rather than in the market (which is based on co-ordinating by means of voluntary exchange). The organisation or hierarchy (within the firm) reduces cost by certain actors such as the top executives undertaking tasks of deciding the strategy of the enterprise while other actors or the employees in the lower tier takes instructions formulated by the top executives translating their strategy into operational efforts (Simon, 1951). Linking the notions of ownership and control, the role of owners will be to offer capital (in a market) for investments in new entrepreneurial projects that the strategic managers find that may yield higher returns saving the cost of time and effort of the owners. As a whole for the economy, in aggregate, enterprises are better equipped with information regarding new projects (in an economy) than the capitalists. Therefore, for efficient allocation of resources into these new projects—so that the economy is better-off—the capitalists provide the funds and the enterprises allocate resources.

Such a mechanism, nevertheless, inherently involves the cost of error that the top executives in the hierarchy may bring or make such as a bad investment decision by the manager. The boundaries of the enterprise, therefore, according to Coase, occur at the point when the marginal cost of savings is equal to the cost of one additional error (Coase, 1937). Hence, the incentive here is to reduce the error so as to yield higher savings. Transaction-cost theory differ from neoclassical economics by assuming bounded rationality, analysing the transaction itself over set of feasible production possibilities, describing the enterprise as a system of hierarchy over the production function, and importantly aims at the improvement of the basic governance structure over adjusting margins as in the case of neoclassical theory of firm (Williamson, 2005).

Even if being a radical change to the prevailing paradigm, transaction-cost theory is hard to formalise and suffers a fundamental conceptual weakness (Hart, 1989). The weakness is related to the dichotomy between the role of hierarchy and the trade that actually occurs in the market (Alchian & Demsetz, 1972). Consider the example that a merchant possesses the authority over procuring the grains that households consume. Here, there is no authority that the households possess to instruct the merchant to stop selling a particular type of grain or change the quality of the grain. A refusal (the merchant not catering to the interest of households) would result in the termination of the relationship and the households seeking other merchants in the consensual trading market of grains. In the same vein, there is no reason to ensure that the employee will respond and obey the authority and instructions of the employer, especially in the case of independent contractors, or that managers would work in the interest of their shareholders (or the economy). Yet again, since the co-

ordination issues between these two actors (owners and managers) are resolved in the market using stock prices as the monitor, the operations within an enterprise is in no way guided to restrict to activities that generate higher share valuations via (real) superior performance alone. This is to say that the managers can still engage in unproductive disgorging of “free” cash flow.

3.4 Long-term Competitiveness and Innovation

This section offers a very brief outline of some modern theories of the firm that focuses on long-term competence development. Modern takes on the theory of the firm have begun by looking at the long-run motivations such as sustainability of its competitive advantage and understanding the sources of sustained competitive advantage which are rooted in the extent of productive investments. In his paper, “*Firm Resources and Sustained Competitive Advantage*”, Jay Barney (1991) discusses four empirical indicators to measure a firm’s sustained competitive advantage (Barney, 1991). They are—value, rareness, imperfect imitability, and non-substitutability; in other words, the VRIN conditions. Barney writes (p. 101-102):

“[F]irm resources include all assets, capabilities, organisational processes, firm attributes, information, knowledge, etc. controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness...A firm is said to have a sustained competitive advantage when it is implementing a value creating strategy not simultaneously being implemented by any current or potential competitors and when these other firms are unable to duplicate the benefits of this strategy”.

Barney further argues that the sustainability of competitive advantage of an enterprise would depend on the exhaustion of the possibilities or attempts, by its competitors, to duplicate the VRIN resources of a competitive firm. The existing literature on innovation and competition directs towards two stylised facts—imitation threat incentivises the technologically advanced enterprise to innovate to outgrow its competitors’ capability; and, technologically laggard enterprises would choose not to innovate in the wake of intense competition and strategically decide to catch-up with the innovating enterprises (Aghion *et al.*, 2017). These effects are counteracting and if it is anticipated, for instance, that artificial intelligence can simulate effective reverse engineering and imitation, it may discourage enterprises from innovating following the latter stylised fact. Barney’s resource-based view (RBV), although it looks at the long-term motivation of an enterprise, is bounded and limited by competitor’s capabilities.

It is argued in extant academic literature that enterprises must commit resources so as to develop technologies, refine their business models, and invest in and develop additional capabilities via process and/or product innovation in order to stay competitive (*e.g.* Nelson, 1991; Nelson & Winter, 1977, 1982; Teece *et al.*, 1997).

The takeaway message here is that for superior performance and in order to stay competitive which is related to also long-term competitiveness of an enterprise, productive investments or innovation are imperative.

3.5 Implication of Neoclassical Models for Innovation

In the standard neoclassical model, the enterprise accepts the given price of the factors of production. In this context, maximising profits is only achieved by limiting the output that the enterprise produces to the level at which additional cost of production of one extra unit equalises the additional revenue obtained by selling one unit of that product. There is no organisation or management of production processes. There is no separation of ownership or control demanding a higher rate of returns. The enterprise will continue to operate without any competition (since all the enterprises in an industry are faced with the same conditions) as long as the principle of marginalism is achieved. Therefore, neoclassical theory only informs a price-guided—not a management-guided—resource allocation (as Demsetz (1997) argued) and this standard model's implications for productive investments are absent.

Inherent to the other reviewed neoclassical models besides the standard model is the notion that the co-ordination problems are always resolved in market relations and the models do not inform or restrict the path the management can follow to attain superior performance. Normally superior performance can be achieved by either process and/or product innovations.

In the principal-agent model, the co-ordination problem between the principal and the agent are solved by the system of pecuniary incentive scheme (for the agent). Furthermore, the incentive scheme is based on price-signal in a market—which is the stock price—therefore the resolution of the problems in this model is based on market relations. The principal-agent model, nevertheless, does not inform on the activities that the managers can engage in so as to increase performance and the stock price. The precondition, however, on the which the agency theorists purports their solution is that stock price as a monitor and/or the stock market is efficient.

In the same vein, in transaction-cost economics even though the economic decisions and transactions are segregated into two institutions—hierarchies and markets—where they occur and certain actors are given the authority to preside over certain activities, the co-ordination problems between the owners and managers, yet again, are resolved via market relations bringing back the similar problems faced in the principal-agent model. The precondition here is the assumption that there are (inherent) mechanisms within the hierarchy that lead to lower costs and efficient decision-making (and therefore superior performance) if organised in hierarchies.

On one hand, since the neoclassical models fail to inform how to attain superior performance via innovation or how to confront the characteristics of the innovation process, the theories of the

firm premised on the neoclassical theory lack a theory of innovative enterprise (Lazonick, Mazzucato, & Tulum, 2013). On the other hand, we have seen that the enterprises can use extreme methods rationalised by the MSV hypothesis to improve stock prices which is suggestive of a superior performance of the enterprise and may undermine productive investments and thereby, the long-term competitiveness and innovation. It should, however, be noted that the neoclassical models have not intended such a consequence nor at the same time have they succeeded in explaining the notions on how to confront the characteristics of the innovation process in an enterprise.

The operation of a neoclassical enterprise only enhances the static efficiency of the enterprise since the operation focusses on the constrained optimisation of the given conditions. The given conditions are the market and technological conditions (in the case of standard neoclassical model), achievement of maximum shareholder valuations (in the case of principal-agent theory), and the assumed efficiency (of the hierarchy) of the enterprise to know the terms of trade of optimum resource allocation (in the case of transaction-cost economies). Attainment of innovation in enterprises is important for economic progress since they are engines of growth of modern capitalist economies. Following Schumpeter (1934), it can be argued that innovation and dynamic efficiency are more important for shareholder value, firm performance, and overall economic performance, than achieving static efficiency.

These theories of the firm have defined the enterprise, analysed its nature, boundaries, and operations from various axes (such as solving co-ordination problems, RBV, importance of innovation for long-term competitiveness, *etc.*). Nevertheless, each enterprise is unique and its day-to-day decisions are rooted in its endogeneity of management, organisational structure, and committed finance; it is due to these decisions they make that some enterprises possess competitive advantage and stay innovative over the rest (Chandler, 1962).

Within our problem context, we focus on productive investments or innovation. We have also seen that the innovation (process) is uncertain, collective, and cumulative (Lazonick, 2013). Although many alternative views have confronted the neoclassical model and attempted to explain the existence and behaviour of enterprises, from the perspective of strategic management, however, it is difficult to formalise these views into a set of prescriptions or model them such that the managerial team can follow as a check-list to attain competitive advantage or induce innovation confronting its characteristics. For instance, although the RBV has evident impacts on (an enterprise's) competitive advantage, it lacks in generalisability and it can only be applied to enterprises in a predictable environment (Kraaijenbrink, Spender, & Groen, 2010).

It is due to the idiosyncratic nature of any enterprise that its strategy and organisation is unique. To guide corporate governance of enterprises, for their importance as engines of economic progress, it is of importance to investigate how the innovation process is executed and what shapes the corporate governance while confronting its characteristics (in different enterprises) and to

contribute²³ to the construction of a relevant and rigorous theory of innovative enterprise. This can be achieved by building up a database of unique business cases based on a common conceptual framework. A theory developed this way can increase the robustness of existing as well as new conceptual frameworks from which (testable) hypotheses for future research can be formulated that could “[e]laborate, modify, and possibly reject propositions that constitute the substance of existing theory” (Lazonick & Prencipe, 2005, p. 534).

²³ See Lazonick and Prencipe (2005)—“*Dynamic capabilities and sustained innovation: strategic control and financial commitment at Rolls-Royce plc*”—for such a contribution.

4 The Theory of Innovative Enterprise

The theoretical underpinning necessary to see how MSV operates and affects corporate governance has been discussed in Chapter 2—Maximisation of Shareholders’ Value. It is widely argued that corporate governance based on the MSV approach leads to high efficiency (in terms of corporate resource allocation) and very competitive enterprises (Jensen & Meckling, 1976). However, it has also been noted that the enterprises where co-ordination problems are resolved in non-market relations (such as in CME) deliver similar performance as an enterprise where the MSV approach is prominent. This suggests that alternative models of corporate governance work at least as well, and perhaps better than the MSV-based model. The main purpose of this chapter is to identify a unifying framework that is able to bring together the activities of different business enterprises so that they can be compared.

After reviewing certain theories of the firm, it has been concluded that a theory of the enterprise is needed that focusses on the operation of the enterprise aside from the constrained-optimisation of the given conditions and informs how these constraints can be transformed for innovation and performance. The search for one such theory has culminated in “The Theory of Innovative Enterprise” (TIE), developed by William Lazonick (2004—2017). The TIE focuses on strategy, organisation, and finance (that can confront the characteristics of innovation process). The expectation is that this theory may serve to explain the effects on corporate governance of enterprises that exercise the rules and routines of MSV perspective as well as an alternative perspective and how productive investments are affected by them.

This chapter will, therefore, elaborate on this alternative perspective called “The Theory of Innovative Enterprise” and the elaboration will follow Lazonick (2004—2017). The key objective of this chapter is to introduce the reader to the concepts of TIE, and to generate implications (or framework) for the business case studies.

4.1 The Innovative Enterprise

Business enterprises engage in transforming productive resources—such as human and physical capabilities embodied in the corresponding labour and physical capital—“into goods and services that can be sold” at a price that the consumers are willing to pay to generate revenues (Lazonick, 2013, p 4). After selecting the (goods and/or services) market in which an entrepreneur decides to compete, the newly set-up entrepreneurial venture or business enterprise accesses the factor market to acquire (or mobilise) the necessary human and physical capital (Solow, 1957).

Labour input is required for their aggregated physical as well as mental efforts while physical capital enables operations to be carried out with much efficiency and safety and allows the enterprise to undertake tasks which the labour are unable to perform alone. Labour is more importantly required to utilise and transform the value-creating capabilities embodied in the physical (non-living) capital. For instance, an enterprise needs the skills, knowledge, and expertise of an experienced manager to organise and manage production processes efficiently so that maximum output is obtained with given consumption of its resources.

The consumer demand is normally characterised by a downward sloping demand function. This means that higher price is associated with lower quantities of a product demanded and lower product price corresponds to higher quantities demanded. Price insensitive consumers may demand products (that are higher quality) even at higher prices for their interest and curiosity in a new technology (Moore, 1991). So defined, on one hand if an entrepreneur decides to compete in an existing market of a good (or service), the product that the entrepreneur offers must be of higher quality or lower cost, or both. On the other hand, if the entrepreneur decides to create a new market, the product that the enterprise offers must be an innovative product and must offer higher quality and better functionality than the products those were previously available (Keeley & Roure, 1993; Lazonick, 2013; Lazonick & Prencipe, 2005). In either case, through the organisation of production the enterprise endeavours to produce higher quality and/or lower-cost products. Higher quality products can be achieved by product innovation and lower cost of production which corresponds to the lower price of the product can be achieved by process innovation²⁴ (Lazonick, 2013; Utterback & Abernathy, 1975).

The organisation of production—to generate high quality and low-cost products—in an enterprise, therefore, entails the management of process and product innovation processes so that there is a productive transformation of the capabilities embodied in human and physical capital to goods and services. Hence, an innovative enterprise is a business enterprise which can “[g]enerate higher quality products at lower unit costs than those that had previously been available” by the productive transformations of an enterprise’s capabilities and “[a] theory of the firm, therefore, must, at a minimum, provide explanations for how this productive transformation occurs and how revenues are obtained” (Lazonick, 2013, p. 4).

²⁴ The cost of production can also be reduced by suppressing the wages paid to the labour but this factor is excluded in the context since such a process cannot be linked with the definitions of either process or product innovation.

4.2 The Social Conditions of Innovative Enterprise

It has been mentioned before (see *MSV and Innovative Capabilities* in Chapter 2) that the innovation process inherently possesses three characteristics—that it is uncertain, collective, and cumulative—and there are three organising elements or generic activities—strategy, organisation, and finance—required in an enterprise to confront these characteristics and foster innovation. Nevertheless, “[t]o strategise, organise, and finance is not necessarily to innovate” since there is a requirement of certain conditions or set of relations that enable the generic activities to confront the characteristics of the innovation process and to innovate (Lazonick, 2004, p. 276). These conditions are termed as the “Social Conditions of Innovative Enterprise” and they are—strategic control (related to strategy), organisational integration (related to organisation), and financial commitment (related to finance).

The TIE, as Lazonick (2012) purports, “is a theory of the social conditions that support the generic activities of an enterprise to confront the uncertain, collective, and cumulative characterises of innovation process” (p. 4); “the social conditions derives from [these] characteristics of the innovation process” and these conditions are conducive for innovation (Lazonick, 2015, p. 15).

The main accountabilities of these conditions are that the “strategic control enables executives with the abilities and incentives to invest in innovation to allocate a company’s resources to the inherently uncertain innovation process...The organisational integration mobilises the skills and efforts of people in a hierarchical and functional division of labour into the collective and cumulative learning processes that are needed for innovation...and [the] financial commitment ensures that financial resources are available to sustain the collective and cumulative innovation processes from the time that investments in these productive capabilities are made until the...products...yield financial returns” (Lazonick, 2015, p. 15).

The set of relations, as Lazonick (2013) argues, that enable executives to make productive investments depend on their abilities to evaluate the current innovative capabilities of the enterprise. It is intended that having identified the current capabilities, “those capabilities can be enhanced by strategic investments in new, typically complementary, capabilities” (p. 276). Their incentives correspond to the alignment of their personal interests to that of the enterprise. “The abilities and motivations of the executives in positions of strategic control are of critical importance to the innovative enterprise” (Lazonick, 2015, p. 15).

“The need for organisational integration derives from the developmental complexity of the innovation process—that is, innovation is a process of collective learning—combined with the imperative to secure high levels of utilisation of innovative investments” (Lazonick, 2004, p. 277). Instruments to motivate actors to apply their skills and efforts to achieve organisational objectives must be in place. Modes of compensation (in the forms of promotion, remuneration, and benefits) as well as retaining the experienced workforce are key instruments for integrating individuals into the organisation (Lazonick, 2004, 2013). In an innovative enterprise, “those engaged in collective

and cumulative learning processes generate the productivity” following the high levels of utilisation and out of which they can share in the gains (Lazonick, 2015, p. 15).

The need for financial commitment (also called “patient capital”) is that to enable “the capabilities that derive from collective learning to cumulate over time, notwithstanding the inherent uncertainty that the innovation process entails” (Lazonick, 2004, p. 277). In an innovative enterprise, retentions out of profits—what can be termed as “inside capital”—sustain the growth of the enterprise. Nevertheless, alternative sources of finance such as equity capital, debt, or bond issues often supplement this “inside capital” which may (more or less) be used to sustain the productive investments.

The “social conditions of innovative enterprise” offers an analytical framework for investigating the dynamic evolution and operation of actual enterprises (*e.g.* Carpenter, Lazonick, & O’Sullivan, 2003; Lazonick, 2007; Lazonick & Prencipe, 2005; Lazonick & Tulum, 2011; Lu, 2000).

The conditions are “social” “because, in a particular time and place, the characteristics of strategy, organisation, and finance that support innovation depend on relations among economic actors who make different contributions to the innovation process and may have different incentives to do so” (Lazonick, 2004, p. 277). The enterprise cannot be viewed as an individual economic actor while at the same time it employs a number of economic actors. Depending on their skills and accountabilities and their likelihood for obtaining returns from the enterprise, these economic actors make choices pertaining to the extent of productive contributions they would offer to the enterprise. Innovation requires these productive contributions hailing from intra-firm as well as inter-firm relations.

Although the generic activities of strategy, organisation, and finance are enriched by the social conditions that can support the innovation process, the social conditions in turn are affected by (or are formed) by the economic and regulatory regime of the industry or nation the enterprise operates in. The economic institutions in a nation, at a given time, enable the enterprises to attain competitiveness and success (Lazonick, 2007, p. 33-34):

“Japanese companies challenged the US industrial corporations in the very industrial sectors in which even as late as the 1960s US corporations seemed to have held an insurmountable competitive advantage.”

“Three business institutions—stable shareholding, permanent employment, and main bank lending—provided the social conditions for Japan’s remarkable success. Stable shareholding ensured that the top managers of Japanese industrial corporations would possess the strategic control required to make innovative investments in industries in which in the 1950s there was no inherent reason to believe that they would ultimately be successful in international competition. Permanent employment enabled the companies involved to put in place a new model of hierarchical and functional integration that enabled them to engage in collective and cumulative learning in ways that their international competitors could not. Main bank lending supplied these companies with a level of financial commitment that permitted them both to grow rapidly and to sustain

the innovation process until they could generate returns first on home and then on foreign product markets.”

The social environment (or conditions)—stable shareholding, permanent employment, and main bank lending—shaped the strategy, organisation, and finance of Japanese enterprises which aided them to rise to the technological frontier surpassing enterprises in the advanced economies like the US (Lazonick, 2007). Therefore, the social conditions are rooted in the perspectives, institutions, and the dominant business model of an economy. This is to say that if the dominant approach or business model of an economy, for instance, endorses the notion of MSV (or, alternatively, the notion of co-determination), then the conditions that shape the strategy, organisation, and finance of the enterprises operating within the limits of the business model would be primed by the notions of MSV (or respectively, co-determination).

Based on the literature review, we have seen that adopting the MSV perspective may affect productive investments. The thesis argues that it operates in an enterprise as the social conditions which support the three generic activities of an enterprise are affected. To construct the argument the thesis seeks to validate the propositions (proposed by Lazonick (2015)) which are drawn out from the social conditions of innovative enterprise and the validation will also aid to answer the main research question (p. 18-19):

“Strategic Control—Senior executives who are willing to disgorge cash annually on buybacks are likely to lose the judgmental capacity to comprehend the types of investments in organisation and technology that are required to remain innovative in their industries. The use of financial tools to justify (dis)investment in innovation reflects results in the loss of judgmental capacity. The current structure of stock-based executive remuneration creates incentives for senior executives to allocate resources in ways that achieve “timely” boosts to stock prices that help to increase their take-home pay.”

“Organisational Integration—Collective and cumulative, or organisational, learning about the technologies, markets, and competitors relevant to a particular industry is the foundation for generating the higher-quality, lower-cost goods and services that result in productivity growth. Therefore, “collective and cumulative careers²⁵” are essential for organisational learning, especially in industries that are technologically and organisationally complex. As part of a “downsize and distribute” regime, stock buybacks are done at the expense of investments in collective and cumulative careers.”

“Financial Commitment—Buybacks represent a withdrawal of internally controlled finance or “inside capital” that could be used to support investment in the company’s productive capabilities. The ability of some companies to use their cash reserves, often leveraged by borrowed funds, to manipulate their stock prices places pressures to do large-scale buybacks on other companies whose “success” is measured by stock-price performance but whose cash flow is insufficient to support their buyback habits. An

²⁵ Through collective and cumulative careers individuals develop enterprise-specific skills over years of working in an enterprise. Hence, the preconditions are that they are retained in an enterprise and necessary training are provided pertaining to enterprise-specific skill development.

enterprise that has done massive buybacks has wasted money on buybacks are not available to support the innovative process”.

Additionally, certain hypotheses are developed (in Chapter 5) to capture and transfer the observable indicators in enterprises to contribute to the validation of the above propositions.

4.3 Implications of TIE for Case Study Analysis—The Social Conditions

Following the review of MSV literature, one prominent argument that is highlighted is the fact that adoption of MSV perspective has resulted in the financialisation of corporate governance. The conduits through which finance is channelled away from productive investments to capital and stock markets are the following: an increasing ratio of financial assets to tangible assets (Krippner, 2005), the extent of debt financing (Palley, 2013), the extent of equity (or stock-based incentives) in top executives’ compensation (Lazonick, 2015), and then there is the strategy of “downsize and distribute” (*ibid*). Additionally, there are the notions of (dis)investments in education, training, and R&D. Now, how can these aspects be incorporated in our comparative analysis of corporate governance systems?

Applying the theory of innovative enterprise to develop a framework in order validate the propositions—that also can take into account the financialisation aspects of corporate governance—so as to form the basis of the case study analyses, the building blocks of an innovative enterprise are associated with the social conditions of an innovative enterprise.

Strategic control is related to the productive investments. Hence, the conduits of financialisation—investment in tangible assets (or financial assets), R&D, and education—come under the social condition of strategic control. Other aspects are in terms of the strategy, ability, and incentives which can be explored by asking the questions—What are (were) the strategies of the top executives? What is (was) the corporate governance structure? Do (did) they have the ability to evaluate current capabilities of the enterprise? The abilities can be explored via looking at the historic decisions that the executives have made which have either enabled or undermined enterprise’s success. What incentives are present to motivate productive investments? Hence, the “extent of equity in top executives’ compensation” conduit of financialisation can also be classified under this social condition.

Organisational integration is related to fostering “collective and cumulative careers” since this social condition contend to fulfil the characteristic of innovation that it is both collective and cumulative (Lazonick, 2015). Collective and cumulative careers—which Lazonick dubs as “Career With One Company” (CWOC)—imply that employees are retained within the enterprise rather than “downsizing” them. Therefore, one component of the financialisation conduit of the strategy of “downsize and distribute”—downsize—can be classified under this social condition. The other

factor which comes under this social condition is how the learning processes are (were) organised within the enterprise.

The financial commitment is related to the allocation of funds to sustain the cumulative innovation process. It facilitates the capabilities that are derived from collective learning processes in an organisation—adding to the absorptive capacity of the enterprise—to cumulate over time. Strategic control over internal finance is an important form of financial commitment and hence, this can be evaluated by looking at refinancing structure, and where the internal cash flow is (was) used. Linking these aspects, which takes into account the remaining conduits not accounted in the other two social conditions, complete the process of associating conduits of financialisation with TIE.

Table 4.1. The Social Conditions Framework for Business Case Studies

Strategic Control	Organisational Integration	Financial Commitment	Value-Added and Corporate Performance
Corporate Governance	Training and Learning	Buybacks and Dividend	Value-Added and Economic Performance
Strategy and Abilities of Executives	Downsizing	Capital Structure	Corporate Performance
Investment in Tangible and Financial Assets			
Incentives Salary and Bonus			

Additionally, one more element of the unifying framework is the notion of value-added and economic performance. This component will be used to explore the larger economic contribution of the enterprise. Table 4.1 tabulates the organising elements into “headings” under which information pertaining to the business cases will be assimilated. The headings are so developed that all the above conduits and set of relations can be segregated into an organised form. The theoretical basis for “Value-Added and Corporate Performance” will be presented together with the business case studies. This is because the explanation would require complete probing and elaboration of the notions of corporate finance literature.

In sum, what we have now is a unifying framework that can be used to compare cases, the main dimensions of which are the social conditions—strategic control, organisational integration, and financial commitment. This perspective forms the theoretical development prior to the study as is desired before an empirical research (Yin, 2013). Additionally, certain hypotheses are developed that

can be linked to the aforementioned social conditions and conduits (see *Data Analyses and Reporting* in *Chapter 5*)

5 Case Study Methodology

A multiple case study approach was undertaken for this thesis project. The need for (more) business cases to guide corporate governance has been argued before (see *Implication of Neoclassical Models for Innovation in Chapter 3*). The choice of the cases was based on the research agenda which aims to look at how corporate governance primed by different perspectives affects the productive investment decisions that the enterprise makes. Hence, the unit of analyses were business enterprises located in two different economic contexts—the U.S. and Germany. The operation of enterprises in these two economies has arguably been different since the differences in systems of corporate governance between countries are related to, and partly determined by, larger systemic differences between the economies of these countries (see Hall & Soskice, 2001; Lazonick, 2007). Therefore, it is expected that the way German enterprises operate and its investment decisions may be different from how U.S. enterprises operate.

5.1 e-RIS

Many authors including Lazonick have shown how the theory of innovative enterprise can be—linked with empirical evidence and—used to analyse enterprises, set in different times and places. While in some cases, the studies have used the theory of innovative enterprise to explain the development of dynamic capabilities of an enterprise, in other cases, the theory was used to explain the how and why economies differed in their economic performance.

These industry studies have demonstrated that the availability of and accessibility to a wide variety of resources (on the internet) have made it viable to conduct in-depth exploratory (desk) research (and analysis) of the evolution of the social conditions of innovative enterprise (e.g. Carpenter, Lazonick, & O'Sullivan, 2003; Lazonick, 2007; Lazonick & Prencipe, 2005; Lazonick & Tulum, 2011; Lu, 2000). Lazonick terms this methodology as the “e-Resources based Industry Studies” or “e-RIS” approach (Lazonick, 2012, p. 14). These studies were based on the theory of innovative enterprise; however, the framework was adapted depending on the research agenda. For instance, Lazonick and Prencipe (2015) sought to contribute to the theory of innovative enterprise through the analysis of the roles of the social conditions—of “strategic control” and “financial commitment”—played to render the development of the dynamic capabilities at Rolls-Royce plc which aided sustainable innovation process at the enterprise for over four decades from the mid-1960s (Lazonick & Prencipe, 2005). The conditions were found imperative for contributing to the development of the dynamic capabilities at Rolls Royce plc thereby enhancing the robustness of the theory of innovative enterprise.

While in “*Varieties of Capitalism and Innovative Enterprise*”, Lazonick (2007) argues that the varieties of capitalism are rooted in the national “business models” which affects the generic activities of the enterprises pursuing a dominant business model and undertook a comparative-historical synthesis of advanced economies—U.S., Britain, German, French, and Japanese—to substantiate his arguments (Lazonick, 2007, p. 22). The research was based on the collection and analyses of data that focussed on the development of skill base (in an enterprise associated with the hierarchical and functional integration) since the research agenda focused on the variation of skill bases across nations, industries, and enterprises. The social conditions were found to affect the dominant business model (of hierarchical and functional integration) in the State which enabled the whole industry to rise to the frontier. This also added to the robustness of the theory of innovative enterprise.

The research agenda of this thesis focuses on whether the MSV perspective is efficient as is claimed by its proponents, especially when it comes to productive investments; and, whether an alternative approach to corporate governance, specifically a more non-market co-ordination mechanism, can lead to at least similar, or perhaps better, performance. From the elaboration of the social conditions of an innovative enterprise (see *The Social Conditions of Innovative Enterprise* in Chapter 4), we have seen that the social conditions—of strategic control, organisational integration, and financial commitment—are imperative for an innovative enterprise and “given the very different political and cultural environments...the institutional characteristics of these social conditions [varies] across nations” (Lazonick, 2015, p. 15).

The data collection and analysis were done on the basis of the application of the theory of innovative enterprise for the framework for the case study. This is to say that the data were collected from the available public archives following the e-RIS approach (such as Annual Reports, newspaper articles, and corporate websites) to conduct a desk research so as aid us to explain how the social conditions differed in the two units of analysis and how it affected the productive investment decisions.

5.2 Research Methodology

The research methodology followed a structured approach and forms the theoretical development as emphasised by Yin (2013) prior to a case study research. Firstly, the theoretical development required for the analysis of business cases was drawn from the extant literature related to maximisation of shareholder value (such as Jensen and Mecking (1976)), financialisation literature (such as Krippner (2005)), and Lazonick’s The Theory of Innovative Enterprise literature (see Sections 2.4, 2.5 in Chapter 2; Section 3.5 in Chapter 3; Sections 4.2, 4.3 in Chapter 4). The theory of innovative enterprise—through its social conditions—served as a unifying framework to analyse both the cases.

The social conditions framework for the analysis is developed in such a way that nuances of MSV and the financialisation literature can be located and/or juxtaposed with these conditions. Based on these, hypotheses were developed, see below, which are linked with observable indicators in enterprises' data. Testing of these hypotheses together with other facts that may arise from the exploratory business case studies was expected to support the validation of the propositions pertaining to the three social conditions.

The description and analysis of the cases were based on the three social conditions of innovative enterprise (and is reported in *Chapter 6*). Under the heading of the social conditions of strategic control, organisational integration, and financial commitment, data were reported and analysed to generate implications for the social conditions and corporate governance. In this way, the data related to the business cases were segregated into blocks that could be compared.

Following the analysis, the social conditions (of the two business cases) were compared (and reported in *Chapter 7*) in such way so as to validate the propositions of Lazonick (2015) which led us to write the concluding chapters of the thesis.

5.3 Defining and Selecting the Cases

It should be noted that since the enterprises operate in a larger economic context, the boundaries of the business cases are not confined to the boundaries of the enterprise *per se*. Yin (2013) has noted that the vague boundaries between the case and its context are one of the key characteristics of exploratory studies (Yin, 2013). The following requirements were checked and matched prior to the selection of the cases—the enterprises are publicly listed or are large stock corporations; the enterprises must be located in economies that are different in their institutional characteristics. As indicated in Chapter 1, both General Motors Corporation and Volkswagen AG are large stock-listed enterprises. They are Groups with major subsidiaries and divisions. GM originates from the U.S, an LME, while VW originates from the CME of Germany. In LMEs, MSV perspective in corporate governance is the norm, while in CMEs, non-market forms of co-ordination are common. It has been argued in the VoC literature that the approach to corporate governance is different in these contexts (see Hall & Soskice, 2001).

5.4 Case Study Protocol

The standard for data collection entailed that multiple sources were used and the chain of evidence, from one to the next, was maintained throughout the data triangulation. Multiple sources that support a given fact were used during the content analysis of the data. This was based on the principles specified by Yin (2013) pertaining to data collection for case studies. The quality of the data was ensured by attending all possible supporting evidence.

As mentioned before, the business case studies were predominantly based on data derived from Annual Reports, newspaper articles and announcements, and corporate websites that offer information and data about the enterprises. The time period for the data collection ranges between 1991 and 2017. The data range was limited because of the lack of (online) availability of Annual Report data prior to 1991. Nevertheless, in the U.S., the extreme effects of adopting MSV perspective started to surface from the late 1980s (Lazonick, 2015, p. 3) and the shareholder value primacy in the European auto industry was argued to be adopted in the mid-1990s (Jürgens, Lung, Volpato, & Frigant, 2002, p. 61).

5.5 Data Analyses and Reporting

The business cases were analysed and reported following a systemic approach. Each individual business case includes both descriptive presentations as well as data-based presentation. The presentations will remain close to the dimensions drawn from the theory of innovative enterprise which are the social conditions of innovative enterprise. Hence, following a general description of the enterprise and its context, the implications of the MSV perspective (and/or the co-ordinated mechanism) on the social conditions will be presented (refer *Table 4.1*). The theoretical underpinning of these dimensions is derived from the theoretical chapters (see *Chapters 2, 3, and 4*).

During the cross-case analysis, the social conditions of both business enterprises will be compared while attempting to validate the propositions by Lazonick (2015) so as to lead us to the conclusion of the thesis.

Simple plots are used to present the (quantitative) data of the business cases. The plots are based on certain indicators and ratios. They are selected and used to test the following hypotheses (which are expected to contribute to the overarching propositions pertaining to the social conditions of an innovative enterprise).

Hypothesis 1:

The social condition of strategic control is related to the productive investment decisions made by an enterprise that can support its innovation process. Palley (2013) argues that having embraced MSV perspectives, corporates have resorted to less fundamental ways which has resulted in the financialisation of enterprises (see *MSV and Financialisation* in *Chapter 2*). Krippner (2005) had noted that financialisation can be observed in the balance sheet of an enterprise by looking at the shift in the proportion from tangible assets to financial assets (Krippner, 2005, p. 201). Concerning the antecedents for innovation and its rate, in particular, tangible assets are deemed imperative (Heirman & Clarysse, 2007). Hence, the hypothesis corresponding to the investment in tangible and financial assets is that—the ratio of financial to tangible assets will be higher in an enterprise that has adopted the (extreme)

routines rationalised by MSV indicating higher financialisation when compared to that of an enterprise that has not adopted such routines.

Hypothesis 2:

Lazonick (2015) argues that the ability of managers to invest in R&D is limited if they are willing to disgorge cash in the form of dividend and stock repurchases (*i.e.* total payouts) (p. 18). Therefore, it would make sense to look at the ratio of total payouts as a percentage of the amount invested in R&D. The hypothesis corresponding to this notion is that—*extreme practises following the adoption of MSV perspective in corporate governance can be observed in an increasing trend in the ratio of total payouts to investments in R&D.*

Hypothesis 3:

Given that the decreasing R&D investments can show in a decreasing innovation output of enterprise (*cf.* B. H. Hall, Lotti, & Mairesse, 2013), it would also make sense to look at an *ex-ante* indicator of innovation. Kleinknecht *et al.* (2002) argue that patents are often used as an “intermediate output measure of innovation” (p. 112). The authors further argue that patent records offer an overview of the technical know-how over long periods of time. Nevertheless, the systematic error in using patents as an *ex-ante* indicator of innovation are the following: innovation in low-technology sectors and the rate of innovation in small enterprises are underestimated if patents are used as an indicator. However, within the context of our thesis, we are comparing two-technology intensive (large) enterprises (from the automobile sector) thereby making the patent output a relevant monitor.

Payouts over productive investments (such as investments in tangible assets and R&D) can be expected to reflect in the patent output of an enterprise. This forms the third hypothesis and states that—*the patent output of an enterprise will be lower in an enterprise that performs payouts over productive investments compared to an enterprise that doesn't.*

Hypothesis 4:

The agency theory (and MSV perspective) view that by including stock-based pay (as a major part) in executive's compensation, the interest of the executives and shareholders can be aligned (Lazonick, 2015). As purported by the EMH hypothesis, all actions of an enterprise get reflected in the stock price of that enterprise. Hence, if the compensation is structured to be stock-based, it is expected that the corporate executives will make decisions which would improve the performance of the enterprise which gets reflected in higher share valuations. Nevertheless, Lazonick (2015) and Fligstein and Shin (2007) argue that inclusion of stock-based pay in the remuneration packages of executives is also a signal of financialisation since the corporate executives are prompted to follow

less fundamental ways—such as market manipulation of stock prices by controlling its demand and supply—that has become a common practise (Fligstein & Shin, 2007; Lazonick, 2015). Market manipulation is performed by stock repurchases and increasing future expectation of dividend payouts by paying excessive current dividends.

Our fourth hypothesis examines the extent of stock-based compensation and states that—*as a result of MSV perspective in corporate governance, an increasing trend of equity in compensation can be observed and the main component of executives' pay will be from equity.*

Hypothesis 5 and 6:

By organisational integration what Lazonick (2015) means is that in order to cultivate “collective and cumulative learning” that can foster the development of productive capabilities, particularly “in industries that are technologically and organisationally complex”, there is an imperative for “collective and cumulative careers” (p. 18). This follows from the logic that if employees remain employed in an enterprise for long periods of time, they are able to gain insights into the operations of the enterprise and are able to consistently improve their (enterprise-specific) skill-sets; these processes increase the absorptive capacity and contribute to collective and cumulative learning. Therefore, if stock buybacks are performed at the expense of an enterprise’s employees’ careers—a process highlighted by Lazonick (2015) in U.S. corporations as the strategy of “downsize and distribute”—it undermines “collective and cumulative” learning processes.

As part of the “downsize and distribute” regime, Lazonick (2015) argues that the employees are downsized so as to make funds for buybacks and dividend payouts. Employees are also downsized to make the organisation leaner and to reduce the operating cost. This will show in the total salary paid to its workforce. The argument is that the lesser are the employees, the lesser will be the salary paid²⁶. However, based on TIE, Lazonick (2004) argues that for organisational integration, relevant incentives should be in place, such as increasing pay scale, that shall motivate workers to contribute to the innovation process. This can be observed in the (increasing) salary per employee. It should be noted here that the increased salary will also correspond to a better performance of an enterprise since the source of funds to pay its employees higher wages can be attributed to be from the increased output (and/or sales). Hence, the fifth hypothesis states that—*a decline in employment growth can be observed in enterprises that follow the less fundamental ways (of downsizing) embracing the MSV perspective.*

As a corollary, the sixth hypothesis states that—*a decline in total salary paid can be observed in an enterprise that follows downsizing while an increase in salary per employee can be observed in an enterprise that rewards its employees to foster organisational integration.*

²⁶ It should be noted that higher salary paid can be observed if together with a decline in employee base, the salaries of the retained workers are increased considerably. The assumption here is that the marginal product of the retained employees has remained constant.

Hypothesis 7:

Another key aspect of the “downsize and distribute” strategy, as Lazonick (2015) points out, are related to the induced effects of this strategy on the organisational integration and financial commitment of an enterprise. The financial commitment is referred to as the “internally controlled finance that could be used to support investment in the company’s productive capabilities” (p. 19). Lazonick argues that under this regime the competitiveness of enterprise is undermined since they are not retaining the profits and reinvesting in new product and/or process innovation (Lazonick, 2015). As an example, Lazonick (2015) highlights that between 2004 and 2013, nearly 60 percent of the U.S enterprise’s net income was disgorged in the forms of dividends and stock repurchases (p. 8).

Instead of retaining and reinvesting, enterprises adopt a cult of debt to finance their day-to-day operations and innovation activities (Palley, 2013). We have discussed that “inside capital” is often supplemented by other sources of finance; one such source is the bank debt. More bank debts—as a source of leveraging—are also taken on by enterprises to increase its value. It is important to know the extent of external debt since they have to be (quickly) repaid—which may further require enterprises to follow short-termist ways—and high levels of debt pose higher risks (see *Hypothesis 10* below).

Rather than maximising the shareholders’ value via a superior performance of an enterprise, as argued by Lazonick (2015) and Palley (2013), enterprises, as a result of adopting less fundamental ways, have engaged in the unproductive disgorging of cash, sometimes more than the net income (see *Share Valuations and Corporate Governance in Chapter 1*)—this forms the basis of our seventh hypothesis which states that—*total payouts (dividends and buybacks) as a percentage of net income can be observed to be more than 100 % in enterprises that follows extreme measures in the name of MSV.*

Hypothesis 8 and 9:

Suppose an investor invests in an enterprise (in the base year B) with an expectation that over certain period of years (say, $B + 20$), the shareholders’ value is increased (*i.e.* an increase in stock price of an enterprise as per EMH) and during this period dividends are paid as part of the residual claim. Following the less fundamental ways to increase shareholders’ value, which can result in a lack of increase in stock price—since cash are disgorged over productive investments—massive dividend payouts are made to satisfy shareholders and the cumulative excessive pay may exceed the invested capital in the base year B . This can be observed by monitoring the stock price over the years and the ratio of cumulative dividend paid (over the period) to the invested capital in the base year. This indicator will also tell us if dividend paid was truly a residual claim or not. It is important to note that the time-series of the data (of the two enterprises) is long enough see the aforementioned effects. Therefore, two hypothesis (eighth and ninth) that follows are—*a true increase in the performance thereby*

the shareholders' value can be observed in the increase in the stock price of an enterprise; and given the increased stock price, the cumulative dividends paid will be lower in an enterprise that has not followed extreme measures (of excessive dividend payout) than an enterprise that has followed extreme measures in the name of MSV.

Hypothesis 10:

Palley (2013) has noted that the enterprises have been “encouraged to adopt a cult of debt finance” in the process of financialisation (Palley, 2013). The capitalisation ratio compares total debt to total capitalisation (capital structure). The total capital structure comprises of the total debt and total equity. The capitalisation ratio reflects the extent to which a company is operating on its equity (and/or debt). The reason for adopting debt²⁷ financing is the lack of generating sufficient cash flow. Cash flow can be generated by increasing sales combined with reducing operating cost. Both can be achieved by either process or product innovation and will result in higher-quality and lower-cost products (Lazonick & Mazzucato, 2013). The main argument here is that an enterprise seeking less fundamental ways to maximise shareholders' value will underperform in terms of their innovation output thereby lacking the ability to generate sufficient cash flow and uses debt to sustain operations. Also, the insufficient cash flow increases the likelihood of not being able to service the debt. This can be observed in a declining ratio of cash flow to debt. Moreover, higher debt financing can be observed in a higher debt to equity ratio. Debt to equity ratio gives the measure of an enterprise's debt in relation with its equity; a higher ratio indicates aggressive debt financing and is associated with higher risk.

Therefore, the hypothesis is that—*a declining capitalisation ratio and cash flow to debt ratio, and a high debt to equity ratio can be observed for a financialised enterprise.*

Hypothesis 11:

Value-added (calculated within the context of this thesis) is the total appropriated value in the form of wages paid to the employees, taxes paid to the State, profits retained by the enterprise, dividend payouts to the shareholders, and interests (and principal) paid to the creditor. These are the key actors that benefit from the operation of an enterprise in an economy. For equitable distribution of the productivity gains, all actors ought to be rewarded consistently (their marginal product or residual claim) since their contribution towards innovative activities (of an enterprise thereby an economy) will depend on their incentives to do so (Lazonick, 2004, p. 277). The eleventh hypothesis evaluates that—*an increasing shareholder primacy following the MSV perspectives in corporate governance can be*

²⁷ Modigliani and Miller (1963) argue that debt is not undesirable as long as it can be serviced. The main source of funds, normally, to service the debts are the operating revenues.

observed in the increasing rewards received by shareholders (in the form of dividends) over the rewards received by other actors (in the form wages, taxes, interests, retained profits).

Comparing this notion among enterprises will help us to know if MSV perspective (and how it operates in an enterprise) is really leading to a superior outcome as agency theorists argue.

Indicators to Compare Enterprises:

As per Jürgens *et al.* (2002), the employment growth and the development of gross profit margins could reasonably be seen as indicators of economic performance since they cover the interests of both the employees as well as that of the shareholders (p. 79). Corporate performance can be analysed by looking at the total output and stock prices (as EMH hypothesis contends). These indicators can be used to evaluate the extent to which (the compared) enterprises have contributed to the interest of employees (employment growth), shareholders (gross profit margin and stock prices), and the enterprise itself (output growth).

5.6 Potential Caveats

One main shortcoming in this research, in terms of the data, is the fact that the cases are strategically selected in the sense that Volkswagen AG was known (to the author) for their co-determination in corporate governance. This creates an inherent selection bias. Nevertheless, the extent to which this mechanism safeguards (or not) Volkswagen AG from resorting to disinvestments following its greater reliance (over time) on the MSV approach—a fact unknown to the author prior to the analysis—is the subject of the investigation undertaken in this thesis. A second caveat is the reliability of the data since most information was extracted from public domain archives. The reliability would depend on the data availability (and quality) at the time of the research and the extent of cross-referencing while data triangulation. The working hypothesis is that facts reported in the Annual Reports are up-to-date (at the time of data extraction), legitimate, and have undergone multiple audits.

6 The Business Cases— General Motors and Volkswagen

Drawing further on the core problem statement and the framework developed premised on the theory of innovative enterprise, data for two enterprises from two different economies that differ in their corporate governance system were collected and presented here so as to seek answer to the main research question—To what extent have the diverse corporate governance systems of these enterprises contributed to (dis)investments in innovation?

The description complied and presented in this section—of the two business cases of General Motors Corporation and Volkswagen AG—is extensive for its exploratory nature and is structured to fit within the three social conditions of an innovative enterprise. Nonetheless, wherever regarded necessary, additional information has been provided that proved supportive to answer the research questions.

6.1 General Motors—Business Case Study

6.1.1 The Enterprise

General Motors Corporation (henceforth GM) is headquartered in Detroit, U.S. and is a public (stock-market-listed) American multinational corporation founded in 1908. Together with the business lines that design and manufacture automobiles and automotive parts, GM also distributes vehicles and vehicular parts and provides financial services. Currently, the auto brands in the portfolio of GM's division are Buick, Cadillac, Chevrolet, GMC, Holden, and Wuling (GM, 2018b).

Table 6.1. Shareholder Structure of GM

Owner(s)	Ownership (Percentage)
Institutional Ownership	83.2
General Public Ownership	13.3
Public Company Ownership	3.4
Insider Ownership	0.1

Note(s):

- All percentages presented are rounded.
- Voting Rights Distribution: “The secretary prepares a complete list of the shareholders entitled to vote at the meeting in compliance with the provisions of Delaware law and the certificate of incorporation before every meeting of shareholders” (GM Bylaws, 2017)

Source: GM Annual Report, 2017

As of May 2017, GM was evaluated at a market capitalisation (market cap) of \$51.9 billion and its output accounted to 9.6 million units with a sales revenue of \$145.59 billion (GM Annual Report, 2017). GM employed 180,000 employees worldwide as of December 2017. The enterprise is helmed by Ms. Mary T. Barra as the Chairwoman and Chief Executive, and Mr. Dan Ammann as the President. The shareholder structure as of 10 August 2017 is shown in Table 6.1.

6.1.2 Strategic Control

Corporate Governance

GM was one of the extended four business cases that Chandler (1962) had used in his book “*Strategy and Structure*” to analyse the dynamics of managerial capitalism in the U.S. (see Chandler, 1962). Chandler observed that it involved productive investments and the co-ordination of capabilities in a multi-divisional structure (or the M-form organisation). Another feature that he observed was the notion of separation of (share) ownership and (managerial) control in the enterprise—a prominent feature of the Old Economy Business Model or OEBM of American industrialisation and capitalism as Lazonick (2008) argues—which led the U.S. to secure relatively superior levels of economic performance between 1910s and 1970s (see Lazonick, 2008).

GM is governed by a Board of Directors that meets throughout the year. The members of the Board are appointed by the shareholders and serve as their representatives; there are no labour representations in the Board. The Board decides the overall strategy and is entitled to oversee and guide GM’s Divisional Managers (of its divisions) (GM, 2018a). The election for the Board’s appointment is uncontested and requires a majority vote and is held annually. There is no stable shareholding and decision-making structure as the Board is bound to change with the annual elections.

Over the years, there has been increasing shareholder engagement in corporate governance (Baysinger & Butler, 1985). The Board adopted policies which—gave the Director’s unrestricted access to external management and independent advisors (which includes both consultants and academics); encouraged feedback from shareholders through their direct engagement; gave proxy access for shareholders during Board’s appointment, and gave shareholders right to call for special meetings (GM, 2016). The increasing shareholder engagement largely influenced the Board, as new members are elected, which in turn influenced or affected the decisions of the Divisional Managers. This was in contrast to the decisions made by the career (Divisional) Managers—who spent most of their careers with one enterprise and brought with them a range of experience specific to the enterprise—in the so-called OEBM (Chandler, 1962; GM, 2018a; Lazonick, 2008).

GM—with its mechanistic structure²⁸—has a definitive division of work and hierarchy of employment (Aylor, 2014). GM had faced problems in the early 1900s following its inception and in order to get a grip on the matter, then Chief Executive Officer or CEO, Mr. Alfred Sloan, Jr., reorganised the organisation into separate divisions or business lines (Maielli & Haslam, 2016). Each division would have its own projects and business-as-usual as well as its functional hierarchy. Business-as-usual was delegated to the Divisional Managers. Although the divisions were independent in terms of its operations and strategic decisions (aligned with the overarching corporate strategy), the financial control—of the whole enterprise and the divisions—remained with the Board (*ibid*).

Such an organisation structural innovation—by Sloan—enhanced certain aspects of corporate governance at GM. The corporate leadership could monitor the performance of its businesses in isolation with each other rather than monitoring averaged figures which consisted of both high and low performing operations. This structure enabled comparison of divisions which improved strategic resource allocation and the low performing divisions felt the need for improvement (Maielli & Haslam, 2016).

Sloan’s proposition to facilitate co-ordination and monitoring of the decentralised responsibilities entitled to the Divisional Managers was to give emphasis on the financial side of things such as cost, price, volume, rate of return on investment, and profit (Sloan, 1964, p. 140). Furthermore, Sloan’s (1964) book, “*My Years with General Motors*”, talks about the significance of offering credit finance to customers and the creation of GM’s holding company so that dealership finance and risk management could be underwritten (p. 152). During the early period itself within the OEBM, GM was aggressive in giving loans to its customers ensuring that GM’s outputs are sold (Maielli & Haslam, 2016). There was an emphasis on growth by volume sold. Other aspects at GM noted by Maielli and Haslam (2016) in the financialised corporate behaviour during the early 1900s still persists and can be observed in their process of “raising and issuing bonds, generating wholesale funds, and providing different types of credit funding and insurance products to customers” (p. 252). Moreover, Sloan also had adopted broad enterprise-level “incentive compensation” which shared the gains with the employee partner’s (Sloan, 1964, p. 421). Sloan emphasised that this was not to reduce employee turnover but also to align interests of the employee to that of shareholders. Such an orientation also still lasts in GM’s current corporate governance practise as will be elaborated in a subsequent section.

In sum, GM is an enterprise that has been operating for over 100 years. Sloan’s style of corporate governance and multi-divisional enterprise highlights the notion of a mechanistic management

²⁸ An enterprise with a mechanistic structure is highly hierarchical and bureaucratic. The main features that can be observed in such an enterprise is the presence of central authority and specialised divisions reporting to this centralized authority.

structure. There is the notion of shareholder primacy in corporate governance. The enterprise is managed by the Board. The Board is an elected committee selected by the shareholders (annually) and there is also increasing shareholder engagement in the corporate governance. There is no stable shareholding and decision-making structure and there are no labour representations in the Board. Although different divisions are given their freedom in responding to the market conditions, the financial control remains with the Board. The key orientation is profit motive which was emphasised to facilitate co-ordinated divisional control. The growth strategy was to expand by volume sold. Even during the early years (within OEBM), GM was observed to be capitalised²⁹ (as well as financialised) and incentive-based compensation was part of its employees' salary (*cf.* Maielli & Haslam, 2016).

Strategy and Abilities of Executives

The central strategy that GM employed was Sloan's brainchild of semi-autonomous divisions and gaining profits through economies of scale (*i.e.* large sales volume). The divisional heads respond and adapt to the changes in market demand, new product technologies, and opportunities to generate a return on investment for the shareholders. In order to do so, the divisional managers were free to manage their own divisions (Maielli & Haslam, 2016) and make decisions however subject to the strategies established by the corporate leadership (Sloan, 1964, p. 131).

During the 1970s-80s, while GM was struggling to secure positive levels of profits due to OPEC's oil embargo and recession, it was Roger B. Smith who served as the CEO. While he took the helm, the reputation of GM was tarnished due to quality issues of its automobiles, lack of engineering performance of its diesel engines, and bad labour relations (Maynard, 2007). These were the main issues at stake. Acclimatising to the economic crisis and loss of goodwill, Smith, during his reign, engaged in restructuring the organisation, which, in turn, was like revamping of Sloan's legacy (GM, 2017).

While revamping Sloan's organisation, arguably to gain competitiveness, Smith began consolidating divisions and segregated them to large and small cars segments. The informal and constructive relationship that prevailed across the divisions began to experience friction which put

²⁹ The New Economy Business Model (NEBM), as Lazonick (2008) calls it for the period post-1970s in the U.S. developed following a specific interpretation—that managerialism is inefficient and there is a need for shareholder supremacy—of Chandler's notion of separation of ownership and control and led to an increasing shift towards financialisation (Lazonick, 2008). He argues, as a consequence, that senior executives are highly motivated by the financial incentives developed to deliver shareholders' value and enhance shareholder primacy thereby resorting to disgorging of cash as total payouts at the expense of productive investments. It can be seen from the policies adopted that GM is an enterprise that endorses shareholder supremacy even during the days that fall outside the NEBM. The argument here (also see Maielli & Haslam, 2016) is that even before 1970s and during the years after GM's inception, the enterprise was highly financialised. All modern enterprises are capitalised and rely on debt, but the aforementioned explanation sets GM apart.

GM out of its normal functioning track for around 18 months. The restructuring resulted in added costs, more levels of bureaucracy, and duplication of efforts and staff. These transformations were also not welcomed by the employee base of GM for their lock-in with Sloan's corporate culture (CNBC, 2005).

He opened a new division to make small cars—Saturn—which wasn't positively received since the American road passengers wanted SUVs (Ingrassia, 2009). In 1982, he also decommissioned GM's division of medium and heavy trucks while importing Isuzu (Japan) trucks to access lighter trucks market at the same time consolidating the sales and services of these trucks. In 1982, he negotiated a deal with the United Automobile Workers (UAW) to cut the planned pay rise for the workers while at the same time offering generous bonuses to the senior corporate leaders which further exacerbated the bad labour relations. Profits started to rise in 1983 following the wage cut and consolidation of the truck's divisions' operations (UPI, 1983). Seeing this, he continued to reorganise, diversify, and deindustrialise.

The spotlight theme of his tenure which ended in 1990 was his vision of modernising GM. He was considered ahead of his time for his attempts in automating the production processes and diversifying into technology and services; nevertheless, these weren't welcomed by the staff of GM. The diversification and expansion (by acquisitions) were mostly failures³⁰ and these were pursued even during the wake of the massive closure of GM's plants and downsizing. GM suffered major losses and by the time Smith retired, the enterprise was the highest "cost" producer (Finkelstein, 2003). Figure 6.1 shows a print advertisement (1982) for GM's Saturn with Smith holding the Saturn emerging from a computer console in a (futuristic) background highlighting the (intended) progression Smith was making during that time.

The unsatisfactory consequences of Smith's management were to be fixed by another Smith—John Francis "Jack" Smith Jr.—who helmed the enterprise as the Chairman of the Board between 1996 to 2003 and as the CEO from 1992 to 2000. Jack continued the restructuring of GM engaging in deep cost-cutting but also improved the vehicles. These approaches encountered less resistance as opposed to (Roger) Smith's for there was a requirement for these changes—as viewed by all—to adrift from the near bankruptcy (Taylor, 1994). While the enterprise was recovering, foreign automakers gained market share in the U.S. During the early 1990s the profits rebounded as GM's SUVs and (Isuzu) lighter trucks gained popularity. Reagan administration sought import quotas for car imports while Clinton administration opened U.S to open foreign markets but emphasised trade sanctions in an effort to create equal grounds to the U.S automakers (Sanger, 1995).

³⁰ It is famously known that Smith's robots, instead of painting and welding the cars, painted each other and welded the doors shut (Graban, 2016).

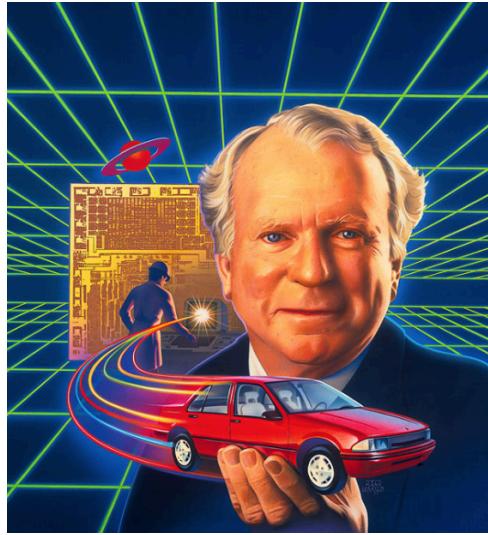


Figure 6.1. Print Advertisement for GM's Saturn (1982)
(Source: (Nielson, 2017))

The year 1998 was a crucial year in the history of GM. The management entrusted the workers with higher production demands, while at the same time refusing to hire new workers or invest in new machinery. The workers began to complain since there was less safety and many workers resulted in stress and injuries (Levin, 1998). The workers began a strike on 5 June 1998 with a demand that GM hired more full-time workers to reduce overtime hours. The strike began with an initial 3,400 workers striking, who walked off from their jobs. Additional factors that lead to the strike were: outsourcing of GM's capabilities (which was enforced in 1997 following a dispute and then an efficiency agreement between the UAW and GM to eliminate non-competitive work practises), and GM's unethical move of "salvaging" valuable components from the closed-off Flint plant while the striking workers were away for the "Memorial Day" (CNN Money, 1998b). Within a week, an additional 5,800 workers joined them. GM suffered major production losses in their 16 assembly plants (in U.S., Canada, and Mexico) to which the Flint stamping plant delivered "just on time" (*ibid*). Nearly, 8,500 GM workers were furloughed and a total of 9,655 workers were told not to report to work (in North American plants) because of the halt in production. The strike reduced the average output by 12,000 units per day (Allen, 2013; CNN Money, 1998a).

The strike ended on 29 July 1998 with GM promising not to close the striking plants and invest \$180 million in new equipment while at the same time the workers agreed to change their working routines so as to increase the output by 15 percent (Burkstr, 1998). Overall, the strike cost GM \$2 billion and dealerships had to delay sales (Allen, 2013). Upon reopening, GM continued producing the 1998 models (around 300,000 units) to use up inventories but delayed the production of the newer 1999 models (CNN Money, 1998b).

Richard Wagoner became the President and the Chief Executive in June 2000 and was elected as the Chairman of the Board on 1 May 2003. Wagoner joined GM in 1981 as an analyst. He also

held positions as managing director and GM's Chief Financial Officer, and Chief Operating Officer. Just like his predecessors, Wagoner was also not an engineer. He helmed GM between 2000 and 2009. Despite his long years of experience, under his leadership, GM suffered \$85 billion in losses (Maynard, 2006). Wagoner pointed out that the main reasons for the massive losses were that he was only left with "little room to manoeuvre" since he was fixing the past "30 years of management mistakes", and the investments made in the development of GM's EV1 electric car programme while the demand was for SUVs among American households (Naughton, 2007). To boost sales, in 2001, Wagoner adopted the Keep America Rolling sales programme which offered interest-free credit finance to GM's customers.

In 2004, Wagoner engaged in the development and revamping of GM's existing line of models of SUVs and trucks to launch them as 2006 and 2007 models. GM was affected by the economic cyclicity of the increase in fuel prices during the early 2000s. Many plants in Northern America suffered major losses and Wagoner took direct control of these plants, by April 2005. In July 2005, he announced that he intends to close off several plants that were non-competent and were making losses and lay off nearly 25,000 employees in the process. Upon enforcement, in the process, GM's output reduced from 6 million units to 5 million units, while the strategy still was to grow by quantities sold (CTEA, 2005; Isidore, 2005).

During the global financial crisis, GM found itself on the verge of bankruptcy and sought government support. Nevertheless, within 9 months, GM declared bankruptcy on 1 June 2009 (Isidore, 2009). It is also known that Wagoner flew private corporate jet to Washington, D.C. for the hearing and sometimes rode GM's hybrid cars from Detroit to D.C. for the subsequent hearings (Levs, 2009). While Wagoner was praised for major operational enhancements, cost-reduction changes, and improved vehicle quality, he was also criticised for adopting only incremental changes when the market demanded radical initiatives following the global financial crisis (Anderson, 2009).

The incremental changes that he adopted were in fact away from the required Chapter 11 restructuring moves so that GM remained sustainable in the market and exclusive of further government support. The Obama administration rejected the initial proposition and gave a period of two months to submit a revised (restructuring) proposal (Brien, 2009). Wagoner resigned during this period and was replaced by Fritz Henderson, GM's then Chief Operating Officer, in March 2009.

Henderson joined GM in 1984 and has held several leadership positions but was mostly helming the financial services divisions of GM—GMAC (Taylor, 2009). He was also not an engineer. Following his resignation on 1 December 2009, Edward Whitacre, Jr.—former head of AT&T Inc.—was appointed as an interim CEO and by January 2010, he was appointed as the permanent CEO and Chairman of the Board. He was keen to "kill off" GM's brands and projects (Hirsch, 2010). Projects that Wagoner and Henderson endorsed such as the one which could stand against

Toyota's Prius competition, were discontinued. Meanwhile, Prius gained popularity around the world and in the U.S. He resigned by September 2010, succumbing to the issues raised by shareholders that he could not deliver their expectations and enhance GM's market image and success.

Daniel Akerson took the helm of GM until end of the year and then Mary T. Barra took charge. Barra took charge while GM was emerging from its recent bankruptcy and was attempting to regain its footing. Barra joined GM as a co-op student (in 1980) when she was 18 at the (then) General Motors Institute (GMI) and held several engineering positions as well as management positions (Nisen, 2013). She was also sent to Stanford University, by GM, to pursue her MBA degree. She also held positions as Vice President of the global manufacturing and engineering, global human resources, global purchasing and supply chain, and global product development.

She is known for optimising the operations related to purchasing, product design, manufacturing, engineering, worker hours, and transforming GM from a traditional automaker to a "tech company" that invested in the future (such as autonomous driving technology) (Kuehner-Hebert, 2018). She was successful in reducing the number of automobile platforms and many cars could emerge out from a common platform and promoted cross-collaboration across functions. Analysts have noted that "Barra's knowledge of GM and its unique dynamics would prove critical as the company worked to regain its footing" (Rosen, 2016). Nevertheless, she had to issue 84 safety recalls which involved around 30 million cars. The problem was attributed to the faulty ignition switch (Stout, 2014).

Challenged by public scrutiny and a tarnished image, Barra restored the workmanship of her people. Learning from the incident, Barra encouraged workers to report problems in a timely manner and whistle-blowing—which was a radical change in the enterprise's culture—promoting courage and integrity. Rather than disagreeing with the managers of the divisions, Barra gave them sufficient autonomy which empowered them to make decisions for themselves returning GM back to Sloan's original semi-autonomous (working) structure (Rosen, 2016). In this way, as business analysts note, Barra took her knowledge of GM's environment and created a positive movement and change.

Barra is known for transforming GM by cutting unprofitable ventures and preparing GM for the future (Phelan, 2017). She executed a major deal which sold Opel to PSA, since Opel was making huge losses worldwide, majorly in Europe. Now the losing money in Europe lost through Opel, was invested in the U.S. and China which resulted in an increase in annual sales of 40 million units. She also removed GM from the unprofitable Russian market and decreased manufacturing in loss-making Australia (Matousek, 2017). Highlighting her sense of new product development strategies, she endorsed product development in electric cars and with driverless technology. GM's Chevy Bolt EV stood rival to Elon Musk's Tesla. She also acquired start-ups that focussed on driverless technology (Cruise Automation) and is hired more software engineers to support the acquired high-

tech ventures. Moreover, she also invested in the ride-sharing venture—Maven (Kuehner-Hebert, 2018).

In sum, GM's generic competitive strategy is to benefit from economies of scale and manage division semi-autonomously. One major highlight is that it appears that the most of the (non-engineers) top executives have failed to identify this core structure and strategy of GM and the issues that need to be resolved such as quality issues of its automobiles, lack of engineering performance of its diesel engines, and bad labour relations. The executives engaged in revamping the (working) culture that had been instated by Sloan and has resorted in actions (such as wage cuts, automation, diversification) which only further worsened the relationship with the labour force and did not address the issues at stake. Their policies only worsened the already existing labour relations and the new capabilities that were adopted from external sources failed to succeed. Moreover, the leaders deindustrialised GM, thereby losing capabilities, and imported from emerging economies.

Certain executives also seem to follow their self-regarding interests, such as Smith increasing bonuses while wages were cut, and reaped excessive benefits from the enterprise, such as flying corporate private jet while emerging from bankruptcy. Another major highlight is regarding the relationship between the (certain) leaders and enterprise's labour force. There were many plant closures, outsourcing of capabilities, downsizing, and increased production demand (without investing much in new equipment). All these have resulted in labour union strikes which resulted in further plant closures and unemployment. In terms of product development, some leaders seem to identify the market requirement and focussed on SUVs and lighter trucks and invested in new product development (such as the one prepared to stand competition to Toyota) and boost production. Nevertheless, such engagements were “killed” by executives hired from outside the GM family such as Henderson.

Mary T. Barra when compared to all her predecessors had some variety moves and productive investments such as money saved from selling off Opel was invested in U.S. and China in processes which increased the sales by 40 million units, and the investments made towards autonomous technology and sharing economy. She also reinstated the culture back to that induced by Sloan's governance and gave Divisional Managers their autonomy. Furthermore, she promoted stewardship of her employees promoting their responsibility towards the enterprise. Just like other executives, she has also, however, closed off (or reduced) operations of loss-making divisions (such as in Russia and Australia), but at the same time expanded operations in U.S. and China to make operating margin via the GM's strategy of economies of scale or growth by quantities sold. She also invested in autonomous-driving technology, electric vehicles, acquired high-tech ventures, and hired more software engineers.

Investment in Tangible and Financial Assets

During the period between 1991 and 2017, the overall asset structure of GM changes predominantly from tangible assets to financial (liquid) assets (*Figure 6.2*), especially after the year 2000. Tangible assets comprise of the plant and equipment while the financial assets consist of cash, marketable securities, and outstanding loans which are backed by liabilities such as bond liabilities; the loans are the ones issued by GM to their customers to credit finance their purchase of GM's passenger and commercial vehicle. There is also a decreasing trend in the investments made towards financial (or marketable securities) (*Figure 6.3*). Figure 6.4 reveals a decreasing trend of investments in tangible assets at GM. Therefore, the increasing trend in the ratio of financial assets to tangible assets indicates an increase in cash balances or loan outstanding considerably (*Figure 6.5*); this can be observed especially after 2005 where the investment in financial securities have also declined.

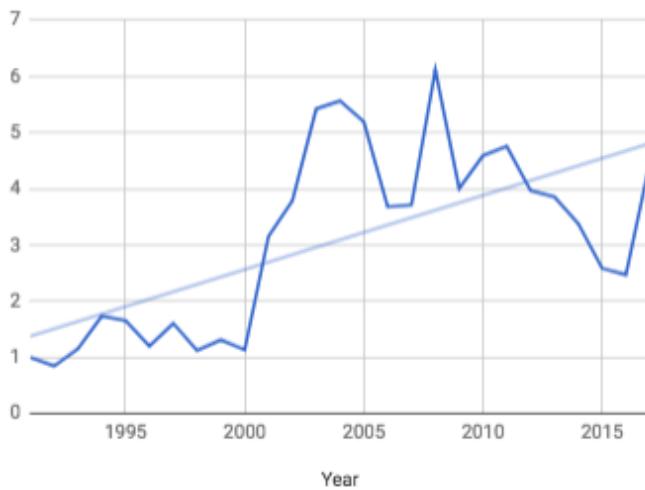


Figure 6.2. General Motors—Ratio of Financial Assets to Tangible Assets
(Base Year (1991) = 1)—1991 to 2017 (Source: GM Annual Reports, 1991-2017)

Following GM's contracts with the United Automobile Workers (UAW) in the (late) 1990s, there was an increase in the labour cost related to pensions and health care (Guilford, 2011). One clause was that laid-off UAW members were to receive 95 percent of their pay which (in effect) transformed the hourly labour costs into a fixed cost payable towards the downsized employees. GM's way forward was to keep the workers on payroll to build cars and generate cash. The excessive production and supply of automobiles lasted for several years and the period of excessive supply coincided with the crisis period following the 9/11 attack (Doward, 2002).

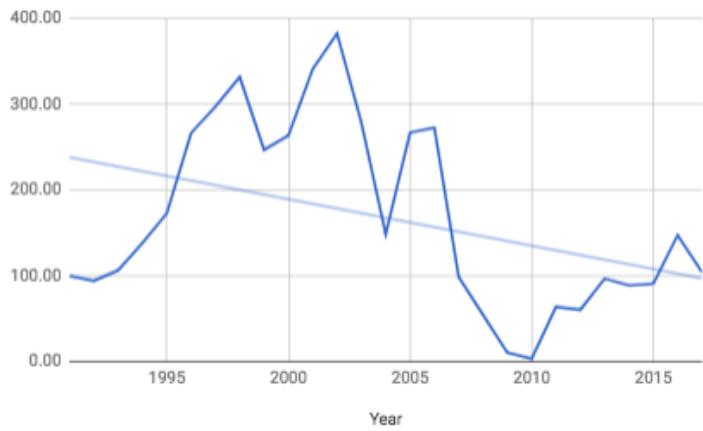


Figure 6.3. General Motors—Investments in Financial Securities
(Base Year (1991) = 100)—1991 to 2017 (*Source: GM Annual Reports, 1991-2017*)

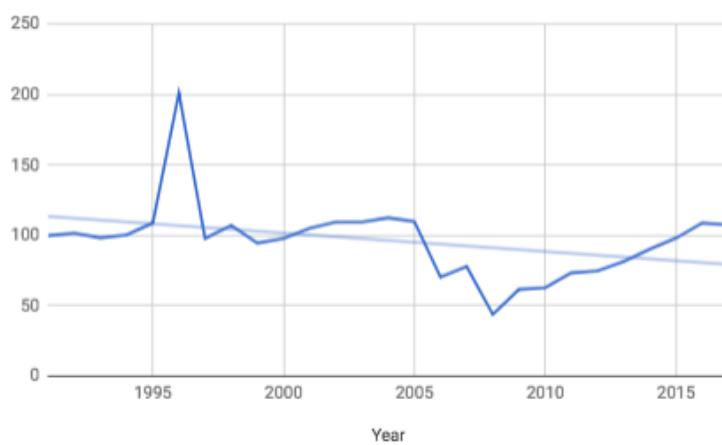


Figure 6.4. General Motors—Investments in Tangible Assets
(Base Year (1991) = 100)—1991 to 2017 (*Source: GM Annual Reports, 1991-2017*)

Following the 9/11 attacks, traumatised American customers stopped purchases of cars (Meredith, 2001). In order to prevent a collapse of sales (of GM's already excessive supply), also as a response to the plea of Bush's administration, GM began its new campaign—Keep America Rolling—which provided interest-free credits to GM's customers and was successful (Guilford, 2011). The loans issued to credit finance GM's customers during this time and later were an increasingly important component of the financial assets underscoring GM's strategy to credit finance car sales and generate higher profit from quantities sold. Figure 6.5 plots the GM's accumulation of financial assets over the same period.

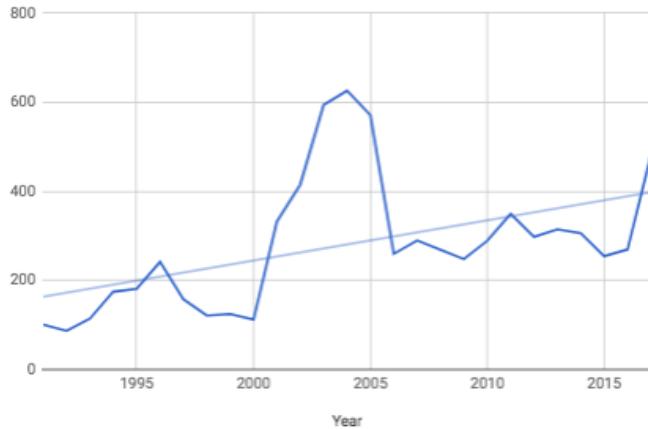


Figure 6.5. General Motors—Accumulation of Financial Assets
(Base Year (1991) = 100)—1991 to 2017 (*Source: GM Annual Reports, 1991-2017*)

R&D and Patent Output

Generally, the amount spent by GM for R&D during the period between 1991 and 2017 shows an increasing trend (*Figure 6.6*). Figure 6.7 plots the ratio of total payouts to R&D investments and the trend is increasing. This is to say that—since the R&D investments are also increasing—the total payouts are increasing more than the than R&D investments. It is observed that during this period, on an average the total payouts equalled 38 percent of the total R&D expenditure, and the simple trend highlights an increasing percentage of total payouts over R&D investments. Figure 6.8 plots the patents filed by GM between 2003 and 2017³¹. The trend is increasing.

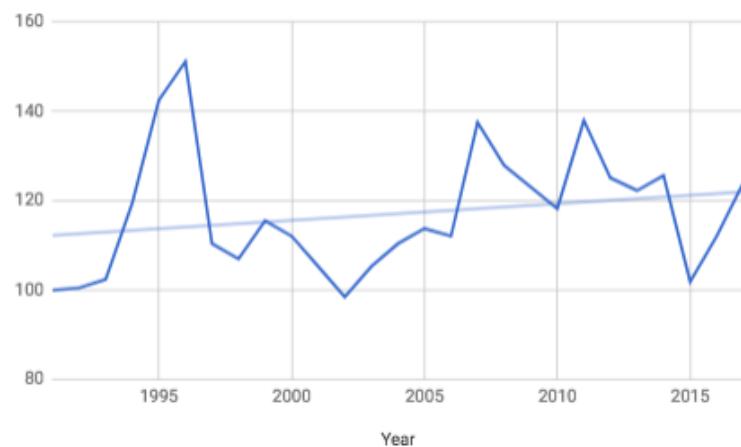


Figure 6.6. General Motors—Investments in R&D
(Base Year (1991) = 100)—1991 to 2017 (*Source: GM Annual Reports, 1991-2017*)

³¹ Time series is limited to this period for the lack of availability of data.

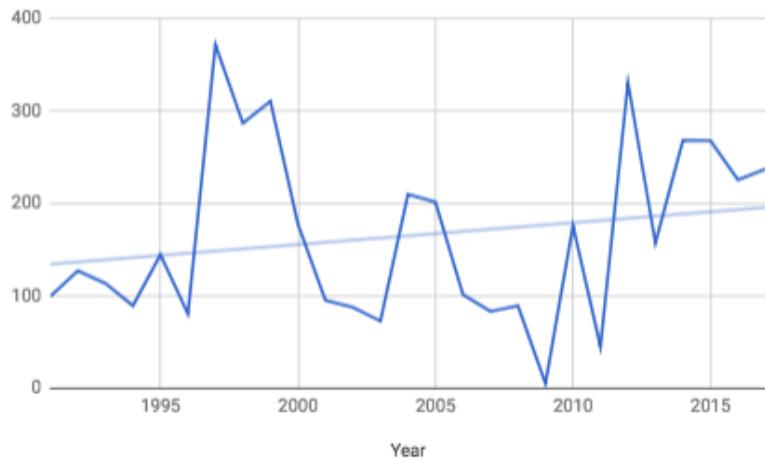


Figure 6.7. General Motors—Payouts as a percent of R&D Investments
(Base Year (1991) = 100)—1991 to 2017 (*Source: GM Annual Reports, 1991-2017*)

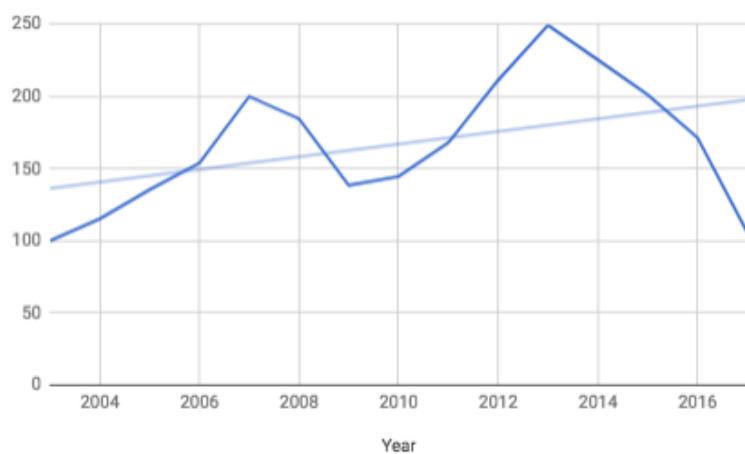


Figure 6.8. General Motors—Patent Applications
(Base Year (1991) = 100)—2003 to 2017 (*Source: Justia, 2003-2017*)

Incentives, Salary and Bonus

Figure 6.9 plots the equity in employee compensation in GM's salaries and shows an increasing trend. At GM, the equity in salary or compensation is not only for the executives but these incentives are applicable to other functional managers and workers as well. GM's financial incentive schemes date back to the time of Sloan (Maielli & Haslam, 2016). There were many schemes introduced such as the Management Corporation (in 1930) for the managers, and a Savings and Investment plan for other employees whose savings, upon maturity, could be converted to preferred stocks. Sloan's idea of introducing these schemes was to extend the responsibility and productivity of the employees by enhancing their feeling of having a definite financial share in the business (*ibid*). These schemes still persist in GM but in an incarnated form.

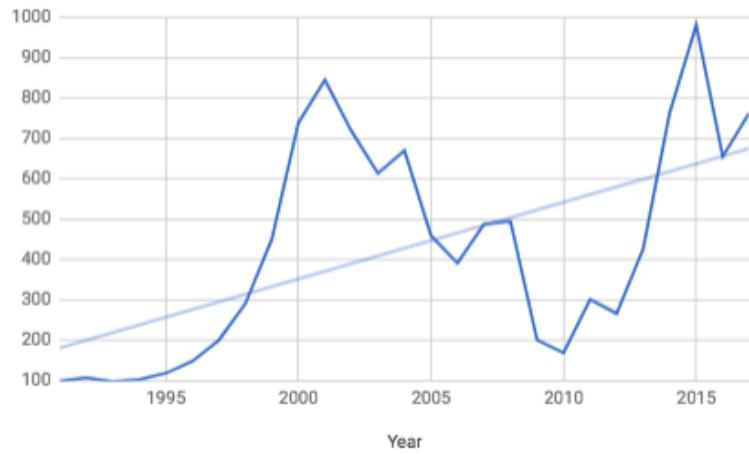


Figure 6.9. General Motors—Equity in Employee Compensation
(Base Year (1991) = 100)—2003 to 2017 (*Source: GM Annual Reports, 1991-2017*)

In GM, in terms of the capital allocation process, the target to be achieved for Return On Invested Capital (ROIC) or Return On Capital Employed (ROCE) is 20 percent or greater (Foley, Boland, & Lemm, 2017). The executives' compensations are aligned with the score of ROIC that returned every quarter so that the executives worked to achieve the ROCE target. GM calculates ROIC in the following manner: the numerator is the earnings before income tax (adjusted)—or EBIT—and the denominator consists of the sum of shareholder's equity, debt and interest liabilities, (negative) accounting goodwill, and (negative) income tax asset (*ibid*). Keeping all others constant, a decrease in the value of shareholder's equity—*i.e.* the value of outstanding shares—would mean an increase in ROIC. Since the compensation of the executives is aligned with the achievement of 20 percent or more ROIC, it can be argued that they have all the incentives to engage in stock repurchase which would reduce shareholder's equity thereby increasing the ROIC and hence the compensation received. Also, since, as will be shown later on, that the required ROIC of 20 percent or more was never achieved during this period.

Table 6.2 tabulates the compensation of the top five earners at GM for the year 2017 and it appears that a considerable share of their compensation came from the equity they owned Accepting the assumption that these executives have all the incentive to manipulate the stock prices, the breakdown of their compensation indicate that they are paid more than their marginal product and such levels are achieved by the inclusion of equity in their compensation.

One can compare these figures to the salary of GM's average worker received: in 2017, the average salary of an intern was \$36,879 per annum and \$116,733 per annum for Senior Quality Assurance Engineer. Average hourly pay ranged from roughly \$11.88 per hour for a Security Officer to \$57.72 per hour for Network Engineer (Indeed, 2018). When compared to the Senior Quality Assurance Engineer, the CEO received 188 times the engineer's salary.

Table 6.2. General Motors—Executives' Compensation (2017)

Title	Total Cash (\$)	Equity (\$)	Other (\$)	Total Compensation (\$)	Equity/Total Compensation (Percentage)
President	3,588,800	5,312,600	356,918	9,258,318	57.4
Chairman and Chief Executive Officer	7,056,000	13,987,573	861,683	21,905,256	63.9
Executive Vice President & President, Europe	4,193,253	2,555,427	12,563	6,761,243	37.8
Executive Vice President, Global Product Development, Purchasing and Supply Chain	2,970,000	4,357,672	344,446	7,672,118	56.8
Executive Vice President & Chief Financial Officer	2,722,500	4,007,995	316,430	7,046,925	56.9
Executive Vice President, & President, North America	2,472,800	2,898,354	287,373	5,658,527	51.8

Source: GM Annual Report, 2017

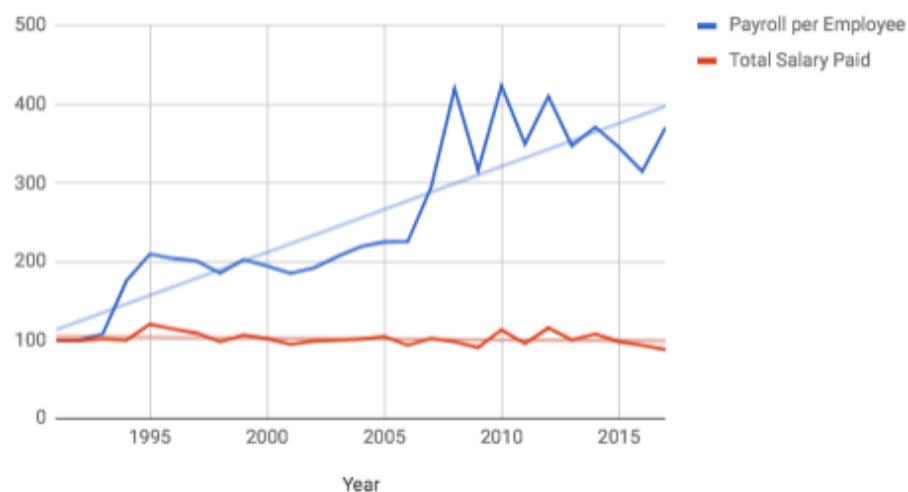
**Figure 6.10.** General Motors—Salary (Payroll) per Employee and Total Salary Paid (Base Year (1991) = 100)—1991 to 2017 (Source: GM Annual Reports, 1991-2017)

Figure 6.10 plots the salary per employee and total salary paid during the period between 1991 and 2017. Over the years, the salary paid to the employee has remained untransformed while at the same time the payroll (or salary) per employee has increased. This is because there has been considerable downsizing in GM over this period (see *Figure 6.11*). Although including stock-options in employee's compensation was intended to increase responsibility and productivity, the massive layoffs witnessed (by the employees) could negatively affect employee motivation and negatively affect their contribution.

6.1.3 Organisational Integration

Within the divisions, in GM, there is a high level of segregation and specialisation. For instance, the engineers are segregated into creative designers and R&D engineers. Several organisational theory case studies have criticised this level of segregation at GM, arguing that it led to a slow decision-making process and repetition of efforts (Aylor, 2014). GM's organisational structure is bureaucratic and responsibility has been arranged and distributed hierarchically. This enabled functional specialisation and grouping of similar workforces with similar expertise and those who perform similar tasks within and across divisions. A critique aimed at the origin of such bureaucracy in GM is pointed at the management style of Sloan. O'Toole had noted that GM's governance primarily focused on systems and structures and profits, but was less about the people, principles, and values (O'Toole, 2001, p. 160).

Training and Learning

The General Motors Institute (GMI) was established in Flint by GM, in 1926 (Kettering, 2018). GMI focused on training plant supervisors and engineers and also offered extension courses and a work-study co-operative program. In 1982, as the operations in the Flint plant reduced, GMI split from GM to become a private institution. In 1998, the institute was renamed as Kettering University (KU). GM continued to be associated with KU in the form of offering co-operative education programme to the University students and trained them in a range of skills required for the automotive industry (Burden, 2015). Nevertheless, over the years the number of students being absorbed into the co-operative education programme went down. In 2009, GM reduced its 173 co-op students at KU to 103. Of the 103 students, only 42 students were retained at GM. During the years 2009 and 2012, many students that were given the prospect for a job at GM were not offered positions. During the years after 2009, on an average GM hired only 350 interns as opposed to 1500 interns during the late 1990s and early 2000s (J. Morrison, 2009).

In 2013, GM joined with the Centre for Automotive Research at Stanford University, in their effort to extract "the best and brightest ideas and recruit top students studying toward careers" in

STEM (Stanford, 2018). Also, GM started a 12-week GM technician career programme seeing the projected employment (requirement) growth (of more than 6 percent by 2026) for skilled automotive technicians, according to the Bureau of Labour Statistics (BLS). The trainees absorbed can gain “general” skills that are widely applicable in the automotive industry worldwide (ASEP, 2018). In the fine print of the prospectus, however, GM writes that they cannot guarantee employment or salary. Additionally, there is the GM-ASEP programme which reduced the training time to become a highly trained automotive technician to less than two years. The training concludes with a GM certification but absorption into GM facilities is not guaranteed. Several participating centres/colleges offer the programme across the country. For both GM technician career programme and GM ASEP, the students have to pay their fees for their education and are not subsidised by GM (or the government).

With regard to the training for existing employed, the UAW and GM have developed training (including college education) programmes that trained workers in a variety of “general” skills since the early 1980s (JAS, 2017). The training aimed to cater to the enterprise’s demand as well as to improve the employer’s employability in the future as their employment with GM became uncertain. For the senior executives’, GM has joined with Stanford University, in an attempt to refine the leadership styles and skills of the executives via a Transformational Leadership programme (Cruz, 2016). The cost of training for the executives was shouldered by GM.

Downsizing

Figure 6.11 highlights the employment growth in GM between the year 1991 and 2017. Clearly, GM has been downsizing its labour force during this period.

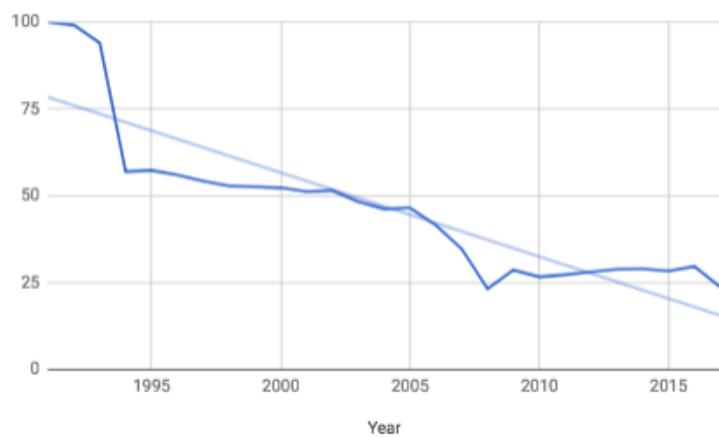


Figure 6.11. General Motors—Employment Worldwide
(Base Year (1991) = 100)—1991 to 2017 (Source: GM Annual Reports, 1991-2017)

6.1.4 Financial Commitment

Buybacks and Dividend

Figure 6.12 shows the total payouts (dividends on ordinary and preference shares plus stock repurchases) as a percentage of GM's net income over the period 1991 to 2017. During this period, GM disgorged around 63 percent of its net income of \$120.6 billion—which amounted to \$75.3 billion—in the form dividends and stock repurchases (GM Annual Reports, 1991-2017). In some cases, the payouts have been more than the net income. The negative (percentage) values indicate that GM had engaged in stock repurchases and dividend payouts even while suffering losses.

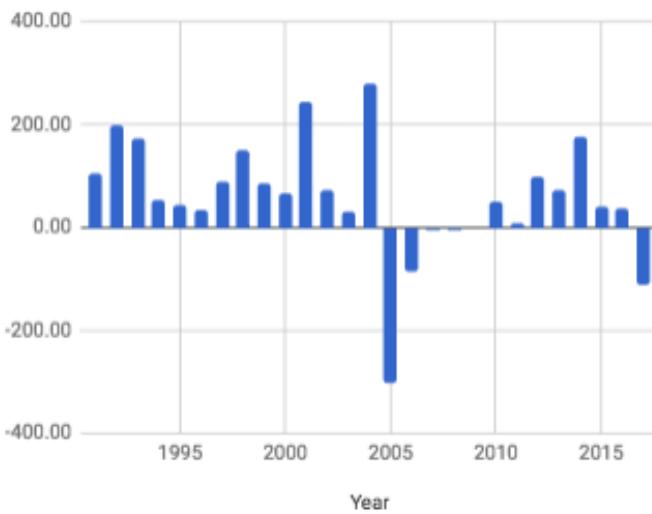


Figure 6.12. General Motors—Payouts as a percent of Net Income
—1991 to 2017 (*Source: GM Annual Reports, 1991-2017*)

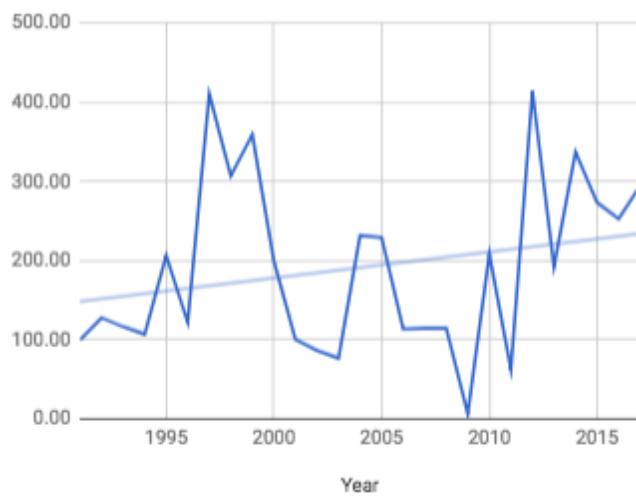


Figure 6.13. General Motors—Payouts Over the Years
(Base Year (1991) = 100)—1991 to 2017 (*Source: GM Annual Reports, 1991-2017*)

Figure 6.13 plots the payouts by GM over the years. A simple trend shows that over the years the amount used in payouts have been increasing. Over the same period, the cumulative dividends

received by shareholders is higher than the share capital invested in the base year. In Figure 6.14, it can be seen that had the shareholders participated in GM's financing activities since 1991 until 2017, for every \$1 invested, the shareholders' cumulative residual claims or dividends, over this period, amount to \$1.3. This means that the amount invested by a particular shareholder in 1991 have been recouped and received 30 percent more by 2017.

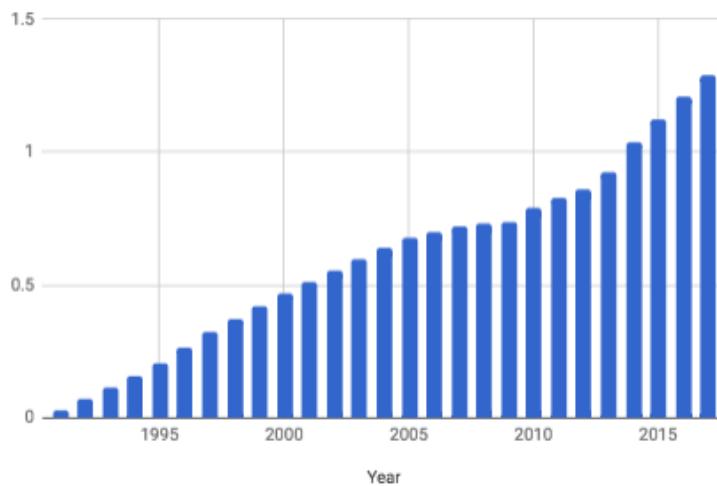


Figure 6.14. General Motors—Ratio of Cumulative Dividends to Shareholder's Funds Invested in 1991—1991 to 2017 (*Source: GM Annual Reports, 1991-2017*)

Capital Structure

Figure 6.15 plots the capitalisation ratio³² of GM during the period between 1991 and 2017. The period can be sub-divided into three periods. The period between 1991 and 2008, shows that the ratio was over 90 percent (average ratio over the period was at 92%). This means that GM's operations during this period was debt financed by \$92 and stock market financed by \$8 for every \$100 of capital structure. Given that such average values were to continue into the period after 2017, Figure 6.14 indicates that for \$8 of investments, the shareholder would receive more than \$10 in dividends—which is more than the invested amount, so much for a residual claim.

In 2009, GM—after filing for Chapter 11 reorganisation (bankruptcy) on 1 June 2009 —received \$33 billion in “debtor-in-possession” financing in bail-out. GM reported \$82.29 billion in assets and \$172.81 billion in debt (Rauh & Zingales, 2009). For the period between 2010 and 2017, the average capitalisation ratio was 86 percent. To service such high debt, an enterprise should generate operating cash flow. The cash flow to debt ratio for GM during the same period is shown in Figure 6.16 and the trend is decreasing indicating a decrease in cash flow or an increase in debt.

³² The capitalisation ratio compares total debt to total capitalisation (capital structure). The total capital structure comprises of the total debt and total equity. The capitalisation ratio reflects the extent to which a company is operating on its equity (and/or debt).

The general trend of long-term debt for GM is decreasing (*Figure 6.17*). This decline is due to the fall in total debt in the years after 2005. Post-2015, the debt levels have increased more than the base year (of 1991). Moreover, in most cases, the total debt has remained more than the base year. Since the cash flow to debt ratio is also declining (*Figure 6.16*), a decline in total debt highlights a decrease in average operating cash-flow, which is confirmed by plotting the operating cash flow of GM over the years (*Figure 6.18*). Taken together, assuming that such a trend would continue into the future, the debt financing strategy of GM could run the risk of being unable to service adding to the outcome of financialised behaviour of an enterprise, in this case GM (Palley, 2013). We observe that the cash flow to debt ratio of GM is generally low; it is usually banks and monopolies (such as electrical utilities) which have lower debt ratios (and higher debt to equity ratio) (Jensen & Meckling, 1976).

Figure 6.19 plots GM's debt to equity ratio during the period between 1991 and 2017. The ratio was higher during the period before bankruptcy (average ratio of 15.5) than during the period after bankruptcy (average ratio of 3.5). Normally, retail and commercial banks (in the U.S.) have an average ratio of 2.2 (January 2015) and investment banks (also in the U.S.) have an average ratio of 3.1 (January 2015). Comparing these with GM indicates that GM has been aggressive in debt financing its growth and also indicate the financialised behaviour of GM.

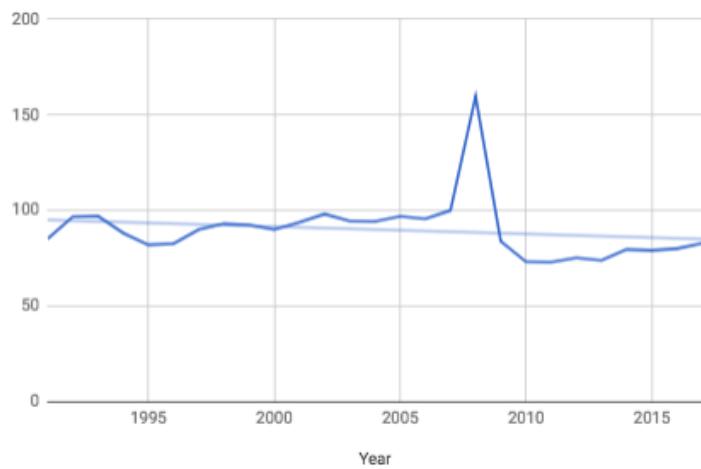


Figure 6.15. General Motors—Capitalisation Ratio
—1991 to 2017 (*Source: GM Annual Reports, 1991-2017*)

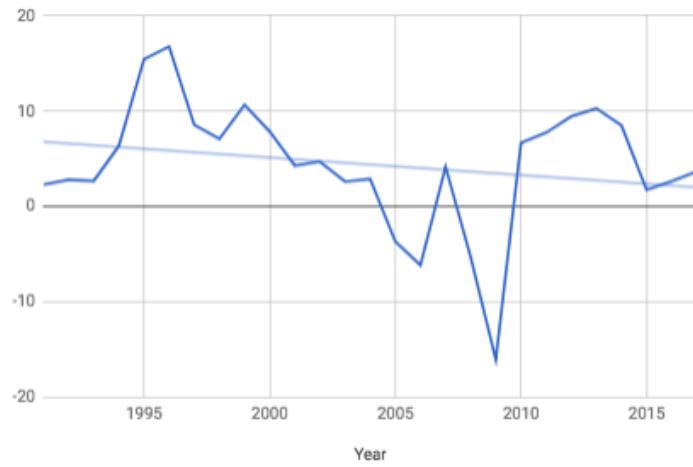


Figure 6.16. General Motors—Cash Flow to Debt Ratio
—1991 to 2017 (*Source: GM Annual Reports, 1991-2017*)

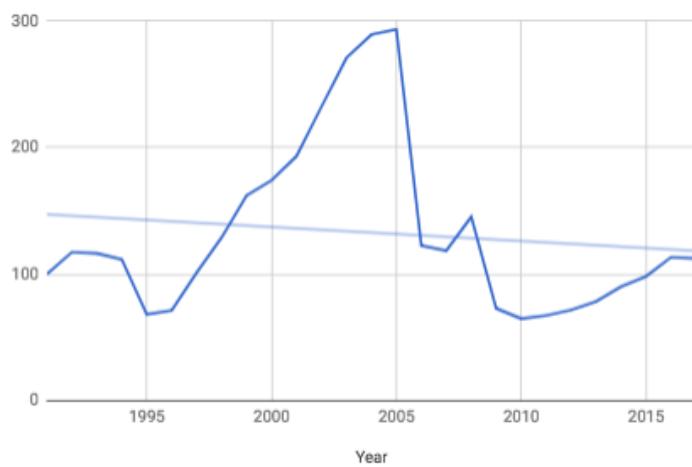


Figure 6.17. General Motors—Total Debt
(Base Year (1991) = 100)—1991 to 2017 (*Source: GM Annual Reports, 1991-2017*)

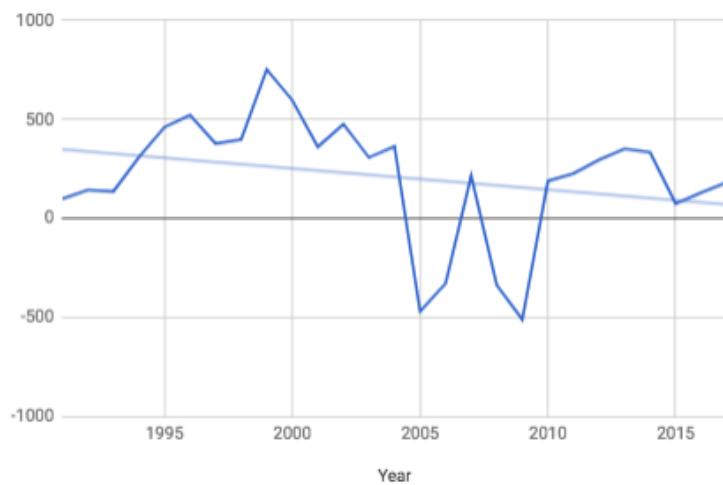


Figure 6.18. General Motors—Operating Cash Flow
(Base Year (1991) = 100)—1991 to 2017 (*Source: GM Annual Reports, 1991-2017*)

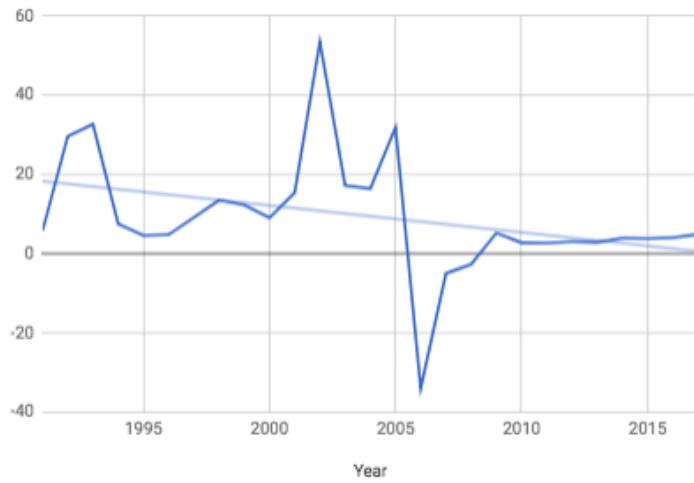


Figure 6.19. General Motors—Debt to Equity Ratio —1991 to 2017
(Source: GM Annual Reports, 1991-2017)

6.1.5 Value-Added and Corporate Performance

Value-Added and Economic Performance

Figure 6.20 to Figure 6.25 plot the amounts appropriated in the form of (total) value-added, profits, wages, taxes (to the State), creditors, and shareholders.

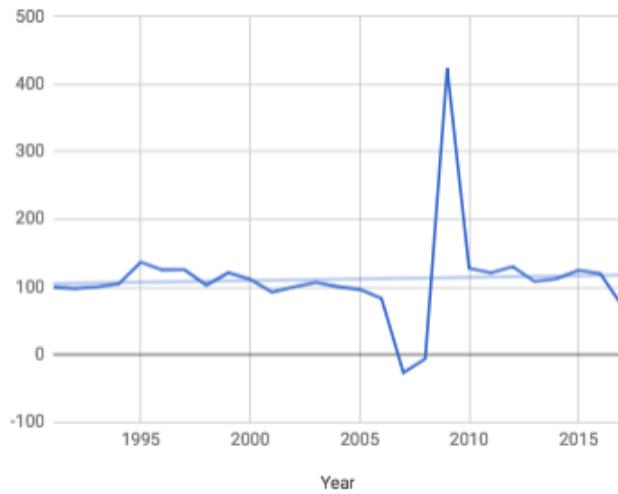


Figure 6.20. General Motors—Value-Added
(Base Year (1991) = 100)—1991 to 2017 (Source: GM Annual Reports, 1991-2017)

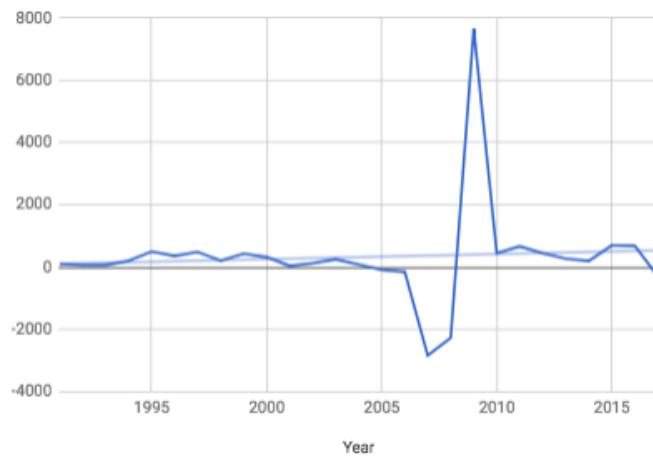


Figure 6.21. General Motors—Profits
 (Base Year (1991) = 100)—1991 to 2017 (*Source: GM Annual Reports, 1991-2017*)

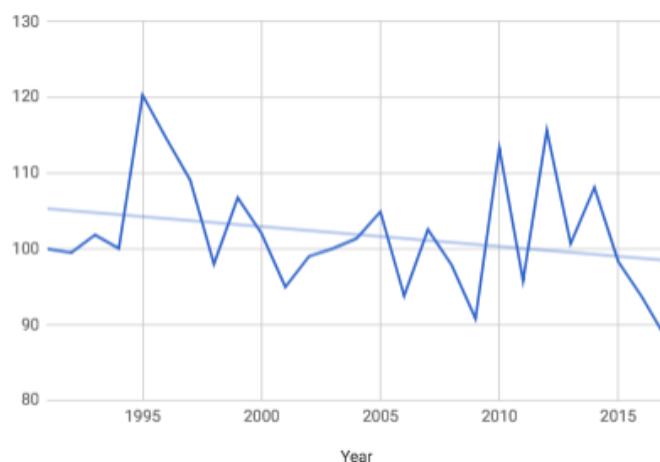


Figure 6.22. General Motors—Wages
 (Base Year (1991) = 100)—1991 to 2017 (*Source: GM Annual Reports, 1991-2017*)

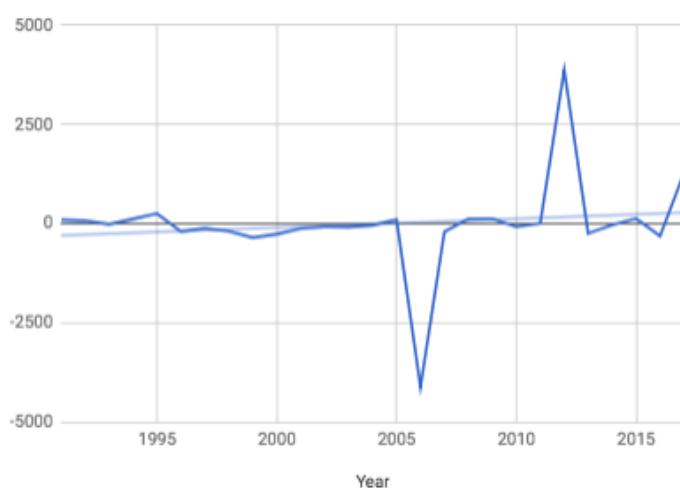


Figure 6.23. General Motors—Appropriation to the State (in the form of taxes)
 (Base Year (1991) = 100)—1991 to 2017 (*Source: GM Annual Reports, 1991-2017*)

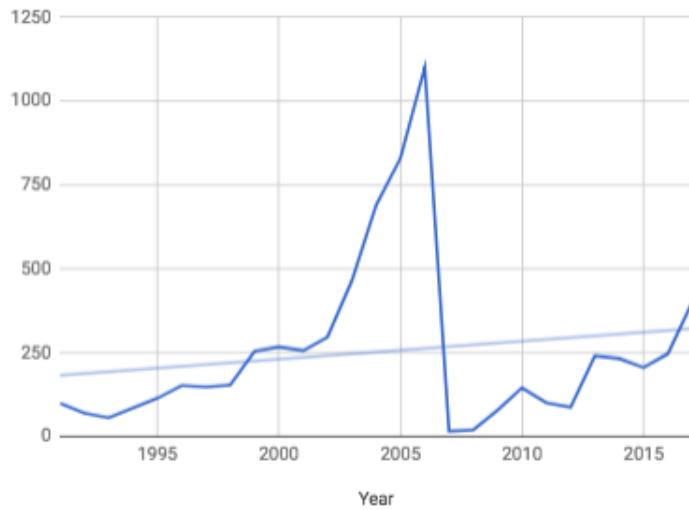


Figure 6.24. General Motors—Appropriation to the Creditors
(Base Year (1991) = 100)—1991 to 2017 (*Source: GM Annual Reports, 1991-2017*)

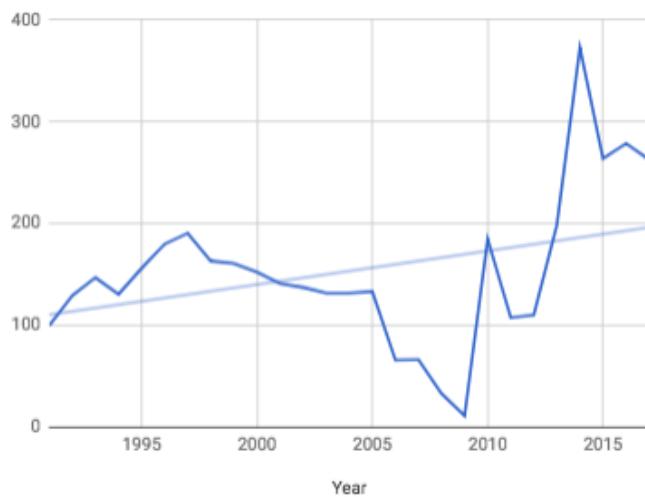


Figure 6.25. General Motors—Appropriation to the Shareholders (in the form of dividends)
(Base Year (1991) = 100)—1991 to 2017 (*Source: GM Annual Reports, 1991-2017*)

It can be seen that (increase in) trend for the appropriations by the shareholders is steeper than the increasing trends of value-added, profits, appropriations to the State and the creditors. Appropriations to the State are most of the times negative for the tax benefits GM enjoyed for its interest payments. Strikingly, the trend for wages paid is downward sloping. The spike in 2009 in the profits is due to GM's Chapter 11 reorganisation. Furthermore, Figure 6.26 plots the ratio of dividend payouts (to shareholders) to wages (received by GM employees). From the graph, it can be seen that the ratio of dividends to wages paid has increased 3 times. This clearly indicates a major shareholder orientation.

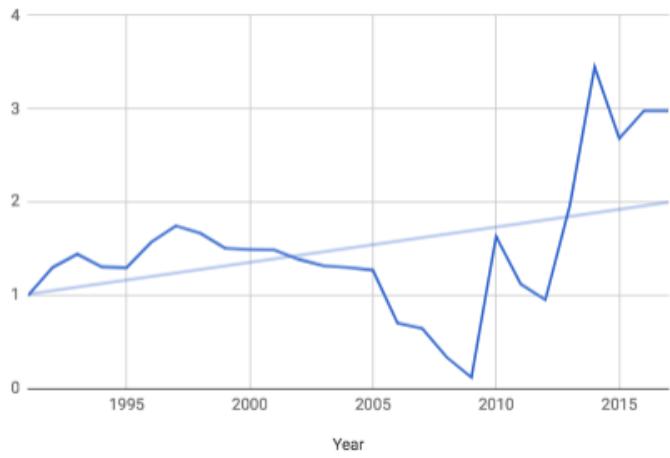


Figure 6.26. General Motors—Ratio of Dividends to Wages Paid
(Base Year (1991) = 1)—1991 to 2017 (*Source: GM Annual Reports, 1991-2017*)

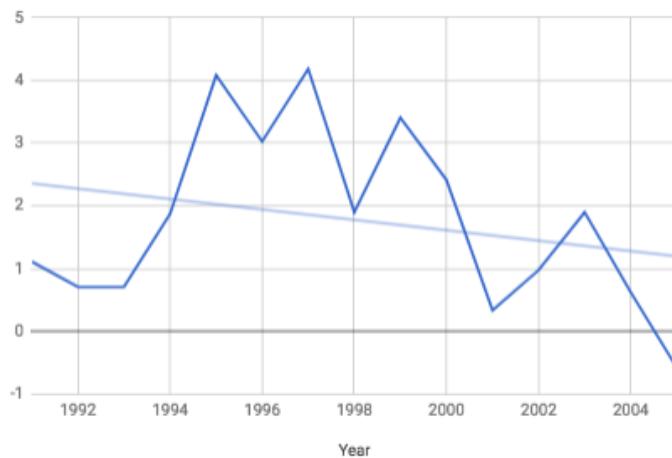


Figure 6.27. General Motors—Development of Gross Profit Margin
—1991 to 2005 (*Source: GM Annual Reports, 1991-2005*)

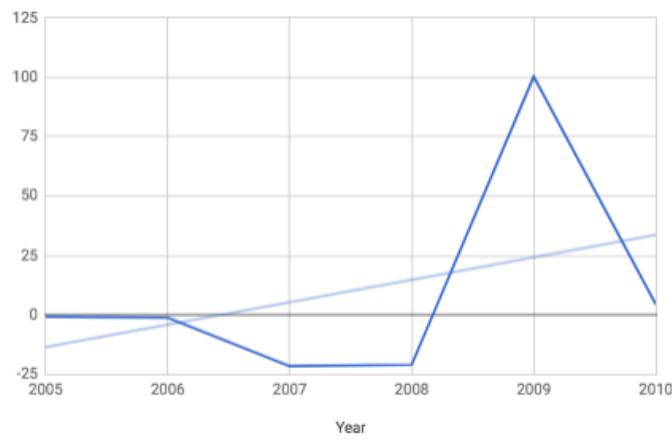


Figure 6.28. General Motors—Development of Gross Profit Margin
—2005 to 2010 (*Source: GM Annual Reports, 2005-2010*)

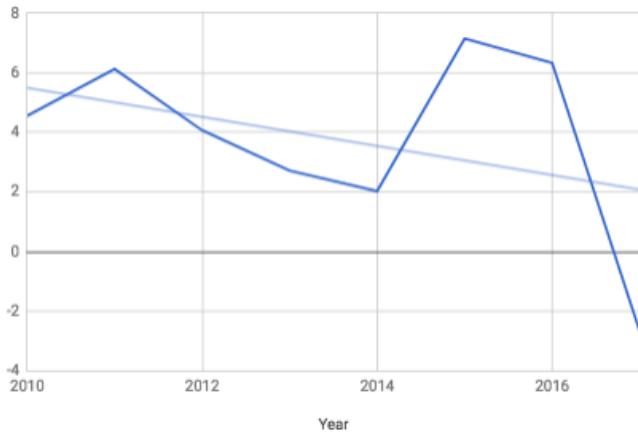


Figure 6.29. General Motors—Development of Gross Profit Margin
—2010 to 2017 (*Source: GM Annual Reports, 2010-2017*)

We have seen that the employment growth at GM is decreasing (see *Figure 6.11*). Figure 6.27 to Figure 6.29 plot development of gross profit margin. Gross profit margin is given by the ratio of profits before tax to total revenues. For the sake of visualisation, the gross profit margin is plotted for three subperiods, 1991-2005, 2005-2010, and 2010-2017. The average values during these periods were 1.8, 10.2, and 3.8 percent, respectively. The high value between 2005 and 2010 is due to Chapter 11 reorganisation. Overall, the trend for the gross profit margin is decreasing. In the case of GM, corporate governance behaviour rationalised by the MSV perspective may not have led always lead to superior economic performance monitored by employment growth and development of gross profit margin.

Corporate Performance

The main indicators of corporate performance analysed here are GM's (physical) output of vehicles, its corresponding productivity (output per employee), and its financial correlate (*i.e.* value-added per employee).

The output (*Figure 6.30*) is generally increasing. GM shrank its operations worldwide—shedding old brands, dealerships, and many workers—in the year 2009 when it went through bankruptcy (Rauh & Zingales, 2009). Following Chapter 11 reorganisation the new GM revealed a strategy for expansion of operations and sales. The enterprise also announced that more than \$6.9 billion will be invested to upgrade or expand operations in twelve States in the U.S., an investment which was claimed to create or retain more than 17,600 jobs (GM Annual Report, 2009). Besides expansion in the U.S., GM was aggressively expanding and investing in the People's Republic of China. Even before bankruptcy, GM was the largest foreign car maker in China (Bensinger, 2009).

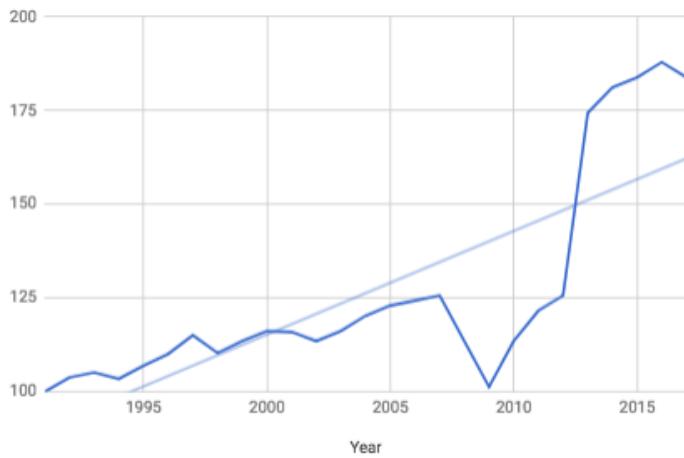


Figure 6.30. General Motors—Vehicles Output Worldwide
(Base Year (1991) = 100)—1991 to 2017 (Source: GM Annual Reports, 1991-2017)

In May 2010, the new GM sold 231,183 in China, which was a 21 percent growth from the previous year. That compares with 245,256 vehicles sold in the U.S. (an increase of 11 percent from the previous year and the highest in 33 months) (GM Annual Report, 2010). The record sales continued over several years. All of GM's American brands—GMC, Buick, Cadillac, and Chevy—experienced success. "China is now GM's largest market...Strong sales in China made up for the slower sales in the United States. The milestone led GM...to record profit" (CNN, 2017).

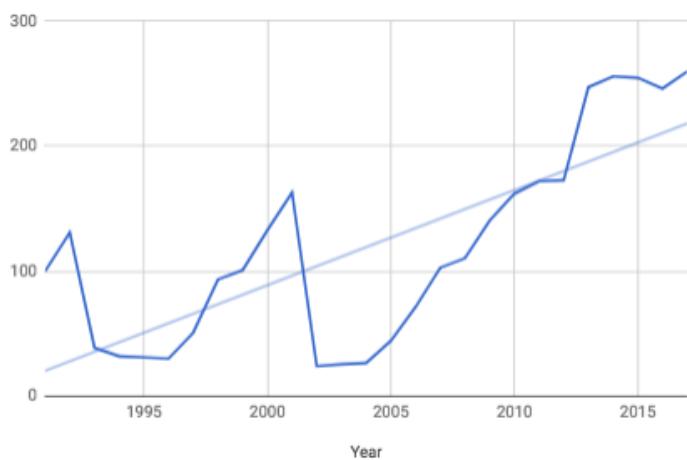


Figure 6.31. General Motors—Productivity (Output per Employee)
(Base Year (1991) = 100)—1991 to 2017 (Source: GM Annual Reports, 1991-2017)

The increase in productivity (see *Figure 6.31*) does not seem to relate one-to-one with its financial correlate (*Figure 6.32*). Although the simple trend is increasing, in terms of the steepness, the productivity growth seems to outgrow the value-added per employee. During the period, between 1991 and 2017, record profits were observed in the years 2015 and 2016 (over \$9 billion). This could mean that the proceeds from the sales were not directly reflected in the profits and wages but might have been used in debt repayment and other financing activities. Nevertheless, we have seen an increase

in the debt structure of GM indicating that proceeds from the sales were not enough to sustain GM's operations (see *Figure 6.15* to *Figure 6.19*).

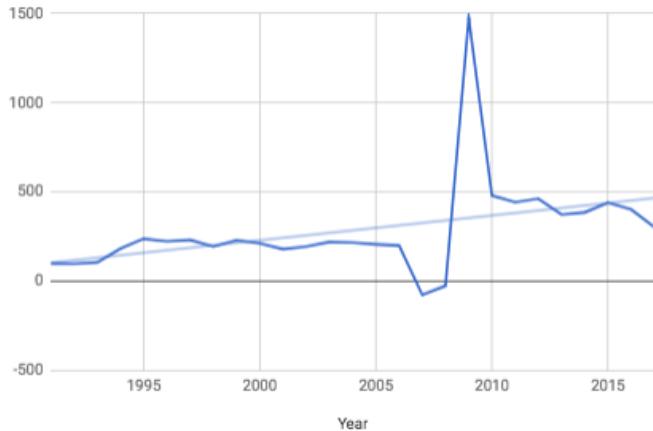


Figure 6.32. General Motors—Value-added per Employee
(Base Year (1991) = 100) —1991 to 2017 (*Source: GM Annual Reports, 1991-2017*)

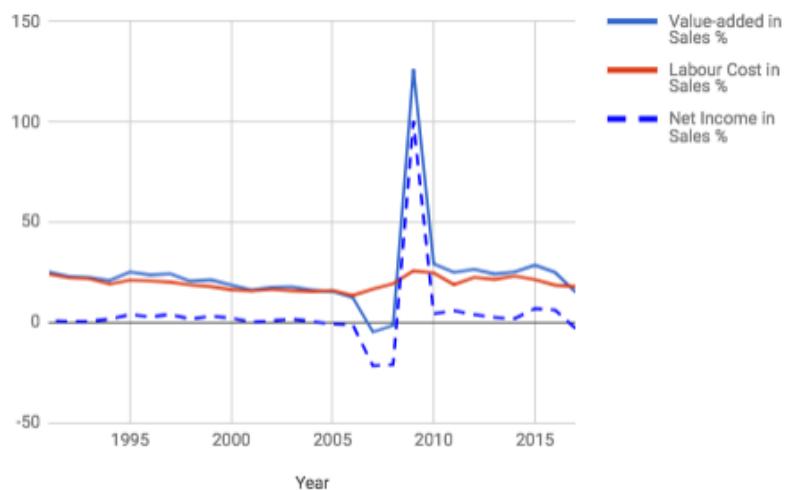


Figure 6.33. General Motors—Cost Structure as percentage of Sales
—1991 to 2017 (*Source: GM Annual Reports, 1991-2017*)

This part of the business case study will look at the cost structure, margins, and return on capital for the period between 1991 and 2017. This will be done by looking at certain key ratios. The value-added to sales ratio gives an approximate indication of the share of value-added from its value chain. Other important ratios that are considered are the labour cost to sales ratio and cash (or net income) to sales ratio. Figure 6.33 plots GM's cost structure as a percentage of sales.

It can be seen that the general trend (of value-added to sales ratio) is flat—during the periods 1991 to 2006 and 2010 to 2017—indicating that GM was unable to capture more of the value chain within its financial reporting boundaries. Between the years, 2006 and 2010, the trend is interrupted by cyclicalities. Those were the years GM suffered major losses and also, the bankruptcy. The spike

in 2009 is the cash received following GM's Chapter 11 reorganisation. The relatively consistent labour cost to sales ratio may mislead that the cash could have been spent on employment cost. But it has already been shown that it was during this period, 1991 until 2017, the employment was decreasing, thereby reducing the employment cost. Hence, the untransformed cash margin indicates an increase in the operating cost due to vertical disintegration (or offshoring) and increasing reliance on external suppliers³³.

ROCE or ROIC tells us the efficiency of capital employed. A higher ROCE implies a more economical use of capital. ROCE can be found by taking the ratio of cash margin (cash or net income/sales) to capital intensity (capital employed/sales). Since the cash margin is observed to be untransformed, a decrease in capital intensity can increase ROCE indicative of superior capital allocation. Figure 6.34 below plots the capital intensity of GM for the years 1991 to 2017 and is increasing indicating that the capital employed per unit sale has been increasing over the years.

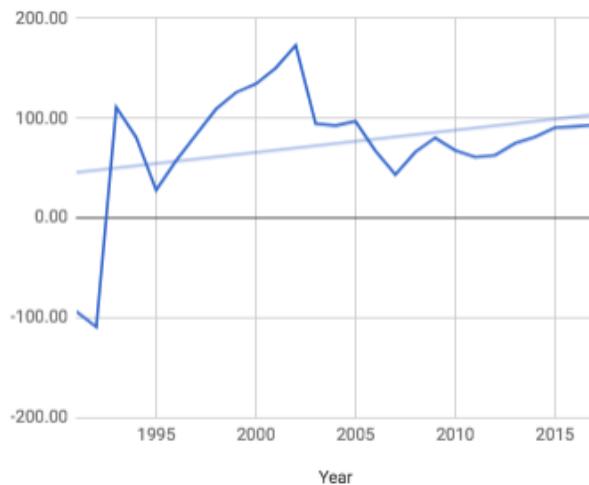


Figure 6.34. General Motors—Capital Intensity
—1991 to 2017 (Source: GM Annual Reports, 1991-2017)

The ROCE of GM are presented in two plots—Figure 6.35 and Figure 6.36. The values of the period 2006-2010 are higher due to cash received following the Chapter 11 reorganisation and if included, would not indicate the actual trend of ROCE at GM. From the plots, it can be seen that in both old and new GM, the ROCE is showing a declining trend indicating a less economical use of GM's cash. GM's capital allocation strategy is that the enterprise should achieve a ROCE or ROIC of 20 percent or more. The incentives of the executives are aligned with the achievement of ROCE

³³ Vertical integration (of value chain) or development of production capabilities in-house would have shown in an increase in operating or cash margin. It would mean that the enterprise captures more of its value chain within its own financial reporting boundaries. This approach to accounting is known as the “Nature of Expenses Approach” (see “*Accounting for Business Models: Increasing the Visibility of Stakeholders*” by Haslam et. al. (2015)).

scores (Foley *et al.*, 2017). However, an analysis of the ROCE during the period highlights a value less than 20 percent. Hence, this might have incentivised them to engage in stock repurchases so as to increase the equity levels in their compensation.

A comparatively unchanged cash margin, over the years, in combination with an increasing capital intensity induced a structurally declining trend of its ROCE. Reviewing the annual reports, it is observed that GM employed most of its net income (sometimes more) to service GM's own loans given to customers, dividend payouts, and stock repurchases. Moreover, GM has not succeeded to increase its cash or operating margin (or an increasing net income) which could have increased the efficiency of capital allocation or ROCE provided the capital employed per unit output declined. The output (productivity) is increasing (see *Figure 6.30*) but it has failed to translate into an increasing cash margins since the revenues are used to service loans and paying external suppliers. The strategy of growth by volume sold appears not to be effective for GM.

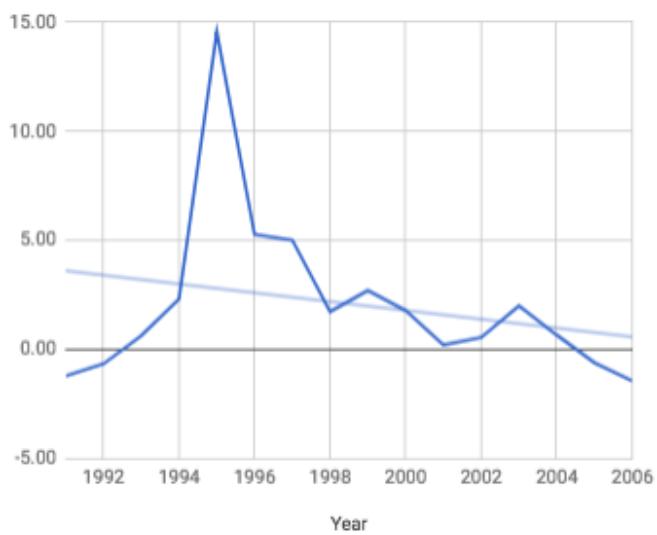


Figure 6.35. General Motors—ROCE—1991 to 2006
(Source: GM Annual Reports, 1991-2006)

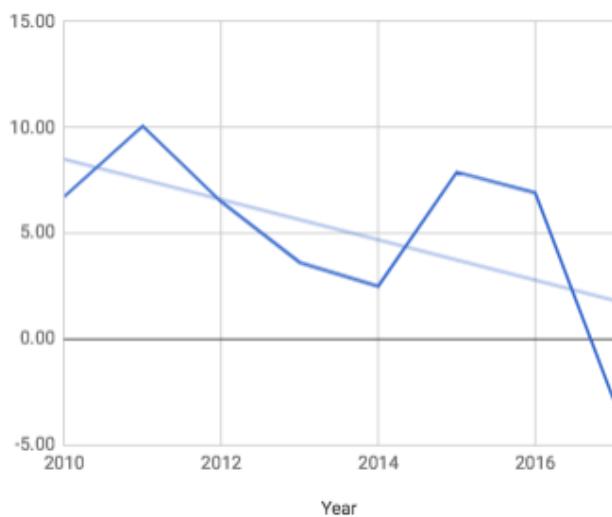


Figure 6.36. General Motors—ROCE—2010 to 2017
—2010 to 2017 (Source: GM Annual Reports, 2010-2017)

Finally, turning to the stock price of GM shares over the years, between 1991 and 2017, the period can be divided into two sub-periods—the sub-period between 1991 and 2005, when the average stock price was over \$45 a share, and the sub-period between 2005 and 2017, when the average stock price is less than \$30 a share (*Figure 6.37*). This latter sub-period also corresponds to the sub-period when the dividend payouts also increased (see *Figure 6.13*) probably to keep shareholders satisfied. The former sub-period corresponds to a higher operating cash flow region (see *Figure 6.18*).

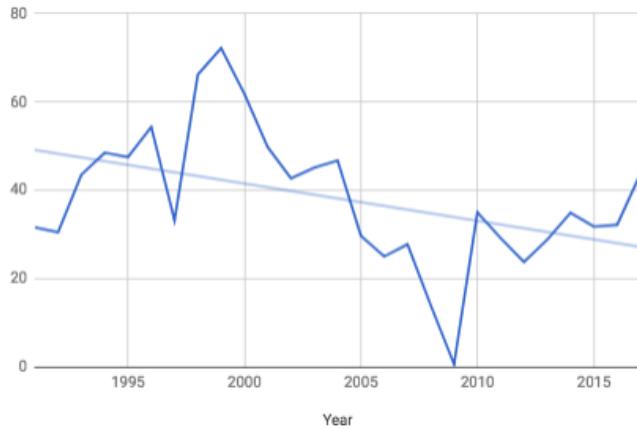


Figure 6.37. General Motors—Stock Price—1991 to 2017
(Source: GM Annual Reports, 1991-2017)

Operating cash flow measures the cash generated by an enterprise's normal operations such as production, sales, *etc.* The measure gives an indication if the enterprise is generating enough (positive) cash to sustain and expand its operations or should it expand its alternative (external) sources of finance. Operating cash flow is, sometimes, used by analysts to evaluate an enterprise since it gives a very clear view of the enterprise's current operations while removing certain accounting effects. This may imply that the large institutional shareholders and their analysts might have monitored GM's performance based on the operating cash flow not really net income since during the sub-period—1991 and 2005—the net income has been decreasing (*Figure 6.38*).

Keeping a focus on the operating cash flow—by either increasing output (which was the case) and reducing the cost of production or vertically integrating in the value-chain—would have increased both the ROCE as well as the stock prices. On one hand, the increased ROCE, as well as stock prices (following increased operating cash flow), could have disincentivised the executives to engage in stock buybacks and/or downsizing; on the other hand, the disgorged cash could have used to invest in process innovation to reduce production costs and retain the employees and train them to increase their productivity which could have reduced the operating costs further kick-starting a positive loop. Nevertheless, economic cyclicalities and other eventualities could rupture the flow.

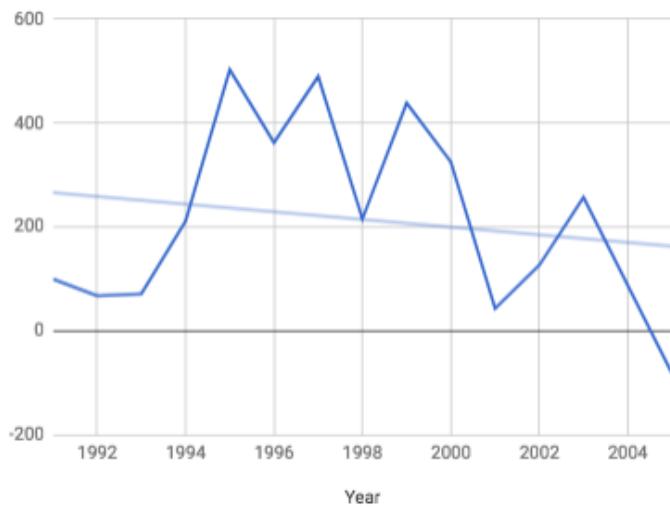


Figure 6.38. General Motors—Net Income
(Base Year (1991) = 100)—1991 to 2017 (Source: GM Annual Reports, 1991-2017)

6.1.6 Summary

GM is governed by shareholders' representatives; they are appointed by the shareholders via the annual election. There is no stable shareholding or decision-making structure, and there are no labour representations in the Board. There is also no policy that required labour union formation and they were not involved in key decision-making.

At GM, there is the notion of high shareholder primacy in corporate governance and key orientation is profit motive. Higher profits were aimed to be achieved by the increased volume of sales. In order to facilitate this, GM underwrote loans to its customers and offered interest-free credit.

Most of the (non-engineers) top executives have failed to identify the core strategy of GM as well as the issues (tarnished labour relations, underperforming vehicles, and its quality issues) that needed to be resolved but continued revamping the (working) culture and have resorted in actions (such as wage cuts, automation, and diversification). There were many plant closures, outsourcing of capabilities, downsizing, and increased production demand (without investing much in new equipment); this worsened the labour relations. The leaders seem to respond to market conditions as they engaged in developing products that the customers demanded and new product developments, nevertheless some of these engagements were “killed” by executives hired from outside the GM. The current CEO seems to have restored the culture to its original form. Moreover, investments from loss-making regions were rechannelled to prospect regions. Her focus is one high-tech such as electric and autonomous vehicles.

In terms of employee training, the new education programmes that GM has instated are not subsided. Moreover, normally, the training seems to focus on developing “general” skills to ensure the worker’s future employability but not enterprise-specific skills. There has also been a decrease in

the number of internship and apprenticeship GM offered over the years. Job offers for the interns or apprentices are not guaranteed after training.

There is evidence of financialised behaviour at GM indicating perverse effects of adopting measures rationalised by the MSV perspective. It is noted in the increasing adjustment in the composition of assets from tangible assets to financial assets, aggressive debt financing, increased capital market intrusion, and the presence of stock-based pay in remunerations. Shares were repurchased every year during the observed period. Employment growth has declined over the years while at the same time the total payouts have increased. Total payouts were most of the times more than the net income. The ratio of total payouts to R&D investments was also increasing. There is evidence of vertical disintegration. Debt ratios indicate that service of debts can be at risk due to insufficient operating cash margins.

In terms of value added, the shareholder primacy is evident from the increase in appropriations to shareholders when compared to other economic actors. The cumulative dividends paid have exceeded the shareholders' capital (invested in the base year) and the ratio of dividends to wages has increased 3 times. The productivity growth does not seem to relate one-to-one with its financial (value-added) correlate indicating that the productivity growth has not translated into higher profits and wages. The stock price, employment growth, and gross profit margin were also declining over the years indicating a lack of economic performance.

6.2 Volkswagen AG—Business Case Study

6.2.1 The Enterprise

Volkswagen AG or the Volkswagen Group (henceforth VW) is headquartered in Wolfsburg, Lower Saxony, Germany and is a public (stock-listed) German multinational automotive manufacturing enterprise founded in 1937. VW is bifurcated into two major divisions—automotive and financial services. The former engages in designing, manufacturing, and distributing passenger as well as commercial vehicles, motorcycles, engines, and turbomachinery. The latter engages in financing, leasing, and fleet management. VW was the world's largest automaker with a global sales of 10.7 million units in 2017 and has secured the largest market share in Europe (Bomey, 2017; Reuters, 2017a).

As of May 2017, VW was evaluated at a market capitalisation of \$72.9 billion with a sales revenue of \$240.34 billion (from an output of 10.7 million units) and it employed 642,292 employees; these figures are inclusive of the output, sales, and employment worldwide of the 12 major subsidiaries including premier automakers within the group—Audi, SEAT, ŠKODA, Bentley, Bugatti, Lamborghini, Porsche, Ducati, Volkswagen Commercial Vehicles, Scania, and MAN (Volkswagen, 2018e). The group is currently helmed by Mr. Hans-Dieter Pötsch as the Chairman of the

Supervisory Board and Dr. Herbert Diess as the Chairman of the Board of Management. The shareholder structure and voting rights distribution as of 31 December 2017 are shown in Table 6.3 (Volkswagen, 2018c).

Table 6.3. Shareholder Structure of VW

Owner(s)	Ownership (Percentage)	Voting Rights Distribution (Percentage)
Porsche Automobil Holding SE	30.8	52.2
Qatar Holding LLC	14.6	17.0
State of Lower Saxony	11.8	20.0
Foreign Institutional Investors	24.5	
Private Shareholders/Others	15.6	
German Institutional Investors	2.7	

Note(s): All percentages presented are rounded.

Source: Volkswagen, 2018c

6.2.2 Strategic Control

Corporate Governance

The governance structure of Volkswagen (or “people’s car”) is often cited as an example of co-determination and accepting the notions of MSV perspective has been surfacing since the 1993 (Haipeter, 2006; Jürgens, 2010). Co-determination—a prominent characteristic of the corporate governance system of German enterprises—permits the workers to exercise rights and in participating in the management of wage as well as non-wage matters such as work organisation (Frick, 1996).

Traditionally, Volkswagenwerk GmbH (VW GmbH) or Volkswagen Works Limited—run as a State enterprise—transformed into a stock corporation—Volkswagenwerk *Aktiengesellschaft* or Volkswagen AG—on 22 August 1960 (Volkswagen, 2018b). This was following the majority gained at the West German parliament to approve the privatisation of VW GmbH and that 60% of the ownership was to be sold as “people’s share”. To safeguard the State’s influence in the enterprise, the remaining 40% shares were equally distributed between the Federal Government (of Germany) and the State of Lower Saxony. The remaining (60%) shares were held by VW employees, banks, insurance companies, and private investors (Haipeter, 2006; Jürgens, 2010; Volkswagen, 2018b, 2018c).

The 40% share ownership gave the State a leading influence in the Supervisory Board (*Aufsichtsrat*)—which determined the strategy and appointment of the management board (*Vorstand*)—through its representatives who were ministers of finance and economic affairs (Volkswagen, 2018b). Whilst Social Democrat majorities governed both Lower Saxony and the

Federal Republic, the Supervisory Board of VW mostly comprised of labour-oriented representatives (McGaughey, 2015). The representatives of the labour union are also key members of the Supervisory Board.

In 1988, the Federal Government sold the held 20% of VW shares, nonetheless, the Lower Saxony remained the only large block owner and the governmental influence still dominated (Jürgens, 1998). This is due to the clause in the special law termed as the “VW Act” enacted when VW GmbH became an AG. This gave Lower Saxony veto power over major decisions and outvoting. Furthermore, two positions or representations in the Supervisory Board for the State ownership were guaranteed for the State ownership—a practise which still persists (Volkswagen, 2018b). Other important clauses in the VW Act entail that the decisions relating to new plants or relocation (as a corollary labour downsizing and mobility) required a two-thirds majority in the Supervisory Board, thereby ensuring that the State and labour representatives in the board could hardly be overruled; and banks (who represented their investors) were to have authorisation for proxy voting from each shareholder prior to the shareholders’ assembly increasing the effort for the banks to do so—since many investors do not authorise the bank for proxy voting promptly—thereby decreasing the attainment of sufficient proxy voting power (Büchelhofer, 2002).

Such protectionism in its clauses led the European Court of Justice, in 2007, to rule that it was illegal in the EU and the court aimed to prevent State representatives in the Supervisory Board (BBC, 2007). Although rewritten, in 2008, which removed restrictions on share ownership, major decisions still required a two-thirds majority and the veto continued to rest with Lower Saxony (Stevis, 2011). In 2013, Germany won the EU Court battle over “VW Act”, with the court ruling that the redraft of the law—VW Articles of Association—complied in full with EU regulations.

Currently, the Supervisory Board comprises of 20 members conforming to the German Co-determination Act; half of which are representatives of shareholders and the other half are representatives of the employees. As long as the State of Lower Saxony holds (directly or indirectly) at least 15% of the ordinary or common shares, it can appoint two of their representatives in the Supervisory Board. Of the other half who elected by the labour force, 7 are employee representatives and 3 are representatives of the trade union (Volkswagen, 2018d). The two-tier system of corporate governance and the appointments of the members of the Supervisory Board is in accordance with the VW Articles of Association. All these ensured stable ownership and coherent decision-making.

With regards to the (trade) union influence, IG Metall³⁴ Chairman, as well as Chairmen of the Works Council(s), are members of the Supervisory Board; in this way, the interests of the labour were well represented in the Board in affairs especially concerning the selection of the Management Board (Soskice, 1990). VW corporate governance policy specifies prodigious and reciprocal

³⁴ IG Metall is the country’s largest and dominant metalworker’s union.

“jointness” between the members of the Board and Works councils. It was this policy together with the first German CEO’s—Heinrich Nordhoff—vision of a well-knit “VW family” which laid the foundation of the continuing partnership between the management and IG Metall (Volkswagen, 2018b).

Hugo Bork was the first IG Metall member to become the chairman of the Works council. Nordhoff was Chief Executive from 1949 to 1968, while Bork held his position from 1951 to 1971; their partnership grew stronger for nearly two decades together with it the reciprocal relationship between IG Metall and management. Moreover, in 1995, about 96% of the VW’s Wolfsburg plant employees, including 90% of non-plant employees, were members of the IG Metall which ensured that the union always had a margin during the Works council elections and their representation was always present in the board to continue nurturing the relationship (Jürgens, 1998). The relationship between the Board of Management and Works council grew stronger and was reinforced by the lengthy reigns of their leadership, as Jürgens (2010) notes in his work that studied the system of co-determination and corporate governance of various German enterprises (p. 11):

“The position of the Chief Works council representative was held by four persons through the years from 1951 to 2001. During this time the company had six chief executives on the management side. The long periods of continuity and at times close personal relationship helped to solve problems in many cases before they could turn into conflicts or even threaten industrial peace. The influence of the Works council at VW has often been cited as an example of “co-management”.”

The aforementioned traits remained central to the evolution of the corporate governance system—co-management—the prevailed into the years that followed. One pre-condition for the stable relationship was that there was no significant changes in neo-corporatism³⁵ system in Germany as well as at VW; the case of VW’s co-determination is often cited as an example of German neo-corporatism (Jürgens, 2010; Speidel, 2000). The system seems to be insulated from political party’s orientation as was evident from the continued support, in the same vein as Social Democrats, offered by Conservatives as well for the system of co-determination (McGaughey, 2015). Nevertheless, VW “seemed” to have adopted shareholders’ value principles in the view of the critiques imposed upon by investors on the enterprise’s underperformance in the early 1990s (Jürgens, 2010; Jürgens *et al.*, 2002).

³⁵ “Neo-corporatism is a much more structured theory of interest group activity than pluralism. It is a modern version of State corporatism, which emerged in the late 19th century in authoritarian systems and had several manifestations in the first half of the 20th century—for example, in Adolf Hitler’s Germany and Francisco Franco’s Spain. In this system, society is seen as a corporate—that is, united and hierarchical—body in which the government dominates and all sectors of society (*e.g.*, business, the military, and labour) are required to work for the public interest as defined by the government” (Encyclopedia Britannica, 2018).

In sum, the corporate governance structure of VW exemplifies the system of co-determination as articulated in the VW Articles of Association and German Code of Corporate Governance; there is a dual-board system—the Supervisory Board as well as Board of Management—governing VW. All major decisions, proposed by the Board of Management, have to be approved by the Supervisory Board with a two-thirds majority; 50 percent of its members are union and employee representatives. There is stable ownership and decision-making structure. In this way, labour interests are well represented in the Board through the trade union and Works council representatives. The relationship between the union and the Board of Management is strong. Most of the employees are members of the union. The State (of Lower Saxony) exercises a veto over major decisions and is guaranteed two representations in the Supervisory Board as long as at least 15% of ownership shares are held. As will be shown (in the next subsection), there has been an increase in the equity base and redefinition of performance indicators suggestive of the adoption of MSV perspective.

Strategy and Abilities of Executives

The first part of this section summarises the key highlights of the strategy and the abilities of the top executives between the founding years and early 1990s. The management during the early years are contributed to the structural aspects of VW's corporate governance. The latter part (post-1990s) will elaborate more closely the strategies and the abilities and also will discuss the arrival of MSV at VW.

Between the late 1940s and early 1970s, the main strategy that VW and its leadership pursued was adding the notions of quality, technical excellence, aggressive exporting, and rigorous service standards. Initially, the new product strategy was to make incremental improvements while keeping the styling the same and several new product development were halted (Volkswagen, 2018a). This is clearly evident, for instance, from the looks that VW Beetle adorned over the years. These strategies were enormously successful. They were committed to improving the workmanship. The workers were given liberal benefits and their pay scales were increased (compared to other automakers). Following the increasing competition, the leadership adopted new product development and also further invested in expansion projects and capabilities expecting the dividend load on the enterprise after going public (Mintzberg, 1978). After noting the state-of-the-art in automotive engines at that time and identifying the requisites to stay competitive in the market, VW acquired NSU—which possessed the state-of-the-art know-how in water-cooled, four-stroke engines, and front-wheel-drive layouts (Jürgens, 1998).

After early 1970s, certain new product development (such as the mid-engine predecessor to the Beetle) were halted and development focus was aligned to expand the acquired expertise from NSU following Europe's then leading first-mover, Fiat, which also rolled out state-of-the-art and adopted modular assembly strategy or *Baukastensystem*. Adopting such a strategy which entailed that an entire

range of cars ranging from a super-mini rival to the Fiat 127 to a full-size family car that share the same design architecture and (most of the) components could be produced from the same assembly line reducing the requirements on tooling and training. With sufficient instinct of being production and automotive engineers, the top executives allocated resources to consolidate the product and production planning (Jürgens, 2010). Moreover, the marketing strategy was made aggressive which in turn emphasised the need for performance, reliability, and service to honour the marketing manifesto.

In 1974, Rudolf Leiding (then VW's CEO) developed further the concept of VW Golf (a concept originally developed by Leiding's predecessor Kurt Lotz) and started rolling out from VW's Wolfsburg plant (Mintzberg, 1978). Golf is argued as to have saved VW from bankruptcy during the time (due to the 1973 oil embargo by OPEC) when the sales of the Beetle were declining.

The succeeding CEO was Toni Schmücker (from Ford) and brought with him the methods and systems at Ford. Schmücker downsized the Wolfsburg plant workforce by 25,000 employees and closed the loss-making plant in Australia; at the same time he opened the plants in Mexico and Brazil (Volkswagen, 2018g). In 1976, he secured a deal to open a VW assembly plant in Pennsylvania, U.S. This was in response to the pressure from the downward dollar exchange rate affecting VW's exports to the U.S (Mintzberg, 1978). In the same year, VW ventured into light truck segment securing 40% of the market share. Also, in the same year, the 4-cylinder 1.5 litre diesel engine with 50 bhp left the assembly line for the first time and was used in Golf-Diesel for the first time (Volkswagen, 2008). It had a fuel consumption of 6 litres per 100 km and set new standards of fuel economy in the automotive industry.

Often expansionist leadership during the time, in 1978, unified cross-brand identity and a major strategy of establishing a centralised parts warehouse as well as administrative offices for good communication was undertaken via major investments allocated for its inception and expansion.

The helm of the group between 1982 and 1993 was held by Carl Hahn—a business administrator and economist by education—who had earlier worked at the OECD. Hahn had joined VW in 1953 as assistant to first post-war Chief Heinrich Nordhoff. The intended marketing strategy of Nordhoff was further endorsed and developed by Hahn in the U.S. Under his reign, there were major acquisitions by the group—in 1982, “VW [signed] a co-operation agreement with the Spanish car maker Seat. It [bought] a majority share in 1986 and [acquired] Seat outright in 1990; [and in 1991,] VW [signed] a co-operation agreement with Czech car maker Škoda, which then [became] VW's fourth brand as it raised its equity share to 60% in 1994 and 70% in 1995” (Bowler, 2015). In 1985, Hahn was able to push the earnings of VW up by 140 % and initiated looking beyond the one-car strategy launching the second-generation edition of the Golf. After an early success, VW sales plummeted due to intense competition from Japanese automakers between 1982 and 1992. In 1986, Hahn also uncovered a case of foreign-exchange fraud and thereby cleaned the group's business

practises; VW allegedly suspected “possible collusion of company employees [with illegal financial market speculators]” (Tagliabue, 1987). The MSV perspective seems to have slowly infiltrated the enterprise. Although Hahn expanded the group through M&A, VW was in major financial loss securing only a 2.8% after-tax profit margin; pre-tax margins declined by 36% in a period of three years between 1989 and 1992. Moreover, Hahn could not keep the manufacturing and development costs under control. Hahn was ultimately replaced by Ferdinand Karl Piëch, in 1993, by the decision of the Supervisory Board.

When Piëch assumed the charge as the Chief Executive, VW was overspending, overmanned, and inefficient while at the same time it had lost its reputation for quality (Economist, 2012). Piëch was considered as a ruthless hirer and firer, a strategy he employed to get a firm grip on the group’s semi-independent brands and portfolio of factories and plants worldwide. Piëch had the vision of making VW the world’s biggest automaker, by volume, by 2018 and achieved this target in 2011 (*ibid*). After the closure of the Pennsylvanian factory in 1988, VW captured a large market share which rose over 25% in 2012 in the U.S. This was achieved by investing in a big new plant in Chattanooga, Tennessee, revamping the dealer network, and launching a new family saloon Jetta—an American favourite. The plant here also extended the German’s system of apprenticeship by offering school going students an opportunity to train at the plant. Moreover, they also endorsed and emphasised to close the skill-gap with the local labour force by spreading the importance of STEM education and investing in it.

Elkins and Keller (2004) in their paper that surveyed best practises for R&D project leaders, quote what Martin Winterkorn, the Vice President of R&D at VW, in 1999, said about Piech (Elkins & Keller, 2004, p. 9):

“Piëch not only has ideas, but he also helps us to realise them. He makes sure we are provided with the right environment for our work, whether that means extra money, or machinery or making quick decisions. He is not the sort of boss who leaves ideas behind him. He works to help us realise them.”

Piëch is known for the enabling context that he had always attempted to create for innovation at VW, which the outsiders often termed as the “Volkswagen Way” for leadership and innovation (Economist, 2012). His passion for engineering and production-ist approach pervaded the group, while Winterkorn got Piëch’s vision done. Hans-Dieter Pötsch, as the financial lead, helped the funding by presiding over the cost.

Although, “[i]n terms of ownership...[VW] has only a limited exposure to the stock markets,...it...has...put shareholder interests higher on their priority lists and show[ed] signs of a change in its corporate governance systems” (Jürgens et al., 2002, p. 62). Piëch’s leadership had driven the acceptance of the MSV perspective—responding to the dismay of institutional investors regarding the dismal records of profitability of the enterprise—and had stressed the need for

profitability with high sales target when he took charge in 1993 (Jürgens, 2010). Piëch had endorsed product quality with rigour during his reign taking a production-ist approach and it was with the same rigour, since 1998, that he pushed to achieving financial and profitability goals.

An event that also triggered a reorientation in VW's corporate governance was the Mannesmann takeover by the Vodafone in 1999 (DW, 2000). The enterprises became aware of the situation of a hostile takeover. During this period the market capitalisation of VW was €15 billion (\$17.4 billion) and it found itself an easy prey for a hostile takeover. The VW Act which required a two-thirds majority and Lower Saxony's veto, although, could prevent such a scenario but Piëch's leadership had identified that the State cannot be relied upon forever.

Nevertheless, MSV perspective is not a norm which is very evident in VW's corporate governance; the term "shareholder value" is seldom referred to in their Annual Reports (1991-2017). Since 1998, shareholders were prominently recognised as a main entity but together with them were also an emphasis on the importance of customers and employees. VW spokesperson, in 1996, mentioned that the enterprise rejects the notion of shareholder value while it endorses a stakeholder concept which includes the customer, the employees, and the shareholder. There are no measures or evidence that highlight a reorientation towards MSV (see *Value-Added and Economic Performance* of VW below). Moreover, the shareholder value in VW is not related to short-termism which can be underscored by VW's emphasis on achieving top scores in sustainability indices such as the Dow Jones Sustainability Index, STOXX, and the Foothsie Good Europe 50 (Goutas & Lane, 2009). This shows VW's commitment towards achieving long-term competitiveness and in offering investors value-oriented investment opportunities.

VW endorses the notion of "workholder value" hatched by the labour relations in 1999 which required the personnel policy to take into account two sets of goals or targets (Clarke & Chanlat, 2009). On one hand, it took into account those related to workholder value such as knowledge management, social responsibility, employability, and flexibility, and on the other, it took into account the traits of shareholder value with an aim to increase company value among investors by increasing profitability and return-on-capital. However, this was not given high-exposure among shareholders or in public relations (Lippert, Huzzard, Jürgens, & Lazonick, 2014). It may be because of such an orientation that financial analysts and investors often stated VW—as "Europe's least transparent car maker" or as a "socialist company"—and found it harder to hold VW's shares. Nevertheless, VW's displayed sufficient success that could calm these people down.

VW attempted—but failed—to mobilise capital in 1997 with an aim to provide the enterprise with funds, supposedly as investors speculated, for a major M&A (Jürgens, 2010). However, when institutional investors insisted on having more concrete information regarding the M&A, Piëch refused to provide it. This highlights Piëch's inadequate priority towards public relations with the shareholders which affected the relationship with investors.

Following this, the investor relations functions were restructured and over 100 one-to-one meetings with financial analysts and investors were held explaining corporate strategy (Volkswagen, 2000). VW informed its commitment, in its 2000 Annual Report, to endorse OECD principles on corporate governance which adequately contains a chapter written about the rights and equitable treatment of shareholders and key ownership functions. The 2000 annual report also had some debuts—the report adopted the International Accounting Standards (IAS) as well as there was segmental reporting—and moreover, VW adopted new definitions of rate of returns requirements, as well as reoriented focus on financial rate of returns as the central indicator of corporate success; as a consequence new targets were set which were based on cost of capital and return-on-capital (Haipeter, 2006; Volkswagen, 2000).

Traditionally, at VW financial targets focused on returns on sales (which is the ratio of net income to net sales) and sales growth to be achieved in the subsequent years (Goutas & Lane, 2009). The traditional performance measurement system, however, did not give information of the capital deployed yield returns, an information important from an investor's perspective. In 2003, VW implemented the financial target systems which gave the rate of return for unit employed capital or ROCE or ROIC. This led the corporate governance to shift towards a decentralised controlling system and result orientation which focused on achieving the specific targets by the business lines individually. The new system which did so was clearly taking into account the interests of the capital markets and shareholders' (Jürgens, 2010).

Jürgens (2010) had noticed that the (new financial) result-oriented system, however, in practise can be seen only in few cases but which clearly are cases of staying competitive (p. 21). In Wolfsburg, for instance, in the plant that makes trim parts, the result-oriented system was introduced since the production of trim parts was subjected to external forces due to outsourcing. Similar was the case in the Brunswick component producing plant that makes axles and parts of the steering system. There was a strong competition from the supplier market regarding these component parts. Component parts production is an integral part of the VW and a large labour force is engaged in the production. Work councils proposed to set (internal) targets for these in-house component manufacturing units in relation with the output level of the competitors so that they can rise themselves to the occasion and would not be seen as underperformers (by the investors or public) that ought to be outsourced following the pressure from the shareholders which would affect the shop floor workers of these units.

Piëch also began seeing stock (or capital) market as a source of finance while keeping long-term motives the primary aim. Although VW has not used the market for it *per se*, he aimed at increasing the profitability of VW to aid capital market interaction, increase market value, and to attract investors in order “to finance [VW’s] future projects and innovation. Investments and innovation, [Piëch emphasised], ensured the long-term stability of employment” (Jürgens, 2010, p. 21). All the

aforementioned initiatives were supported by the Works council via their representations in the Supervisory Board (Goutas & Lane, 2009).

Operationally, the MSV approach does not dominate corporate governance at VW. Porsche AG, in 2008, had acquired a majority ownership of the group but the representatives in the Board have curbed Porsche from exercising a more active role in the management for they were known for their profit-orientation (Goutas & Lane, 2009). The labour union representatives outvoted Porsche which restricted them to co-operate with Audi and any mode of co-operation in the future would need the approval of the Supervisory Board. Lower Saxony also emphasised that they retained the veto over radical changes.

The group has been split into two divisions—Automotive Division and Financial Services which also include the financing division (Volkswagen, 2000). They also internal loans to VW. As part of meeting the high rate of returns targets of VW, such as 8 percent set by the management, the development of the Financial Services Division and its reciprocal interaction with the capital market was imperative, deemed the leadership. The evidence from the refinancing structure shows that there has been an increasing importance of bonds and credit from banks. Most of the reinvestments happened through the commercial paper and Euro-medium Term Notes (EMTN) programme together with internal company loans. It is the policy of VW concerning financing investments and business-as-usual is to use existing cash-flow, however, equity base has increased at certain instances.

VW has always attempted to maintain its hitherto ownership structure whenever its equity base was increased. Cash intake from the stock market, prior to 1991, was mainly during acquisitions—DM 600 million to DM 750 million, in 1965, during the acquisition of Audi Union from Daimler-Benz; VW's equity base was increased in 1970 during the productive investments made in the next generation of Beetle; shares worth DM 300 million were issued, in 1977, to finance the investment in new plant in the U.S. and the during acquisition of Triumph-Adler; and another DM 300 million was added during the acquisition of Seat in 1986. After 1991, the equity base was increased for several acquisitions and buyouts (see *Corporate Performance* of VW below).

In sum, even during the early days, VW's leadership pursued a strategy that focused on the notions of quality, technical excellence, aggressive exporting, and rigorous service standard. They also aimed at improving the workmanship and aimed at incremental improvements keeping styling the same. These proved effective and inspired workers commitment, however, due to increasing competition new product developments were required. During the early 1970s and since then, VW enhanced their efficiency through their modular assembly and common platform strategies. The expansion of the enterprise was mainly within the core capability of automotive itself. This is to say that the leadership had the abilities to evaluate the core capabilities and market conditions and adapt.

Looking at the shareholders' value orientation within the VW organisation it is clear that the term "shareholders' value" is seldom used in the Annual Reports. Since 1998, shareholders were

prominently recognised as a main entity but together with them were also an emphasis on the importance of customers and employees; VW spokesperson, in 1996, mentioned that the enterprise rejects the notion of shareholder value while it endorses a stakeholder concept which embraces actors besides the shareholder. MSV perspective have not been completely adopted as it is but have reconciled it with the notion of long-term success and competitiveness as is evident in VW's practises. Instead VW endorses the notion of "workholder value" hatched by the labour relations in 1999 which required the personnel policy to take into account two sets of goals or targets. On one hand, it took into account those related to workholder value such as knowledge management, social responsibility, employability, and flexibility, and on the other, it took into account the traits of shareholder value with an aim to increase company value among investors by increasing profitability and return-on-capital.

A gradual improvement to investor relations was observed in changes in management, improved public relations, change towards financial targets as a monitor for operations, and expansion of the Financial Service Division and the corresponding reliance on capital markets. Changes in ownership have also been attempted but due to conflicting Board's interests they could not be implemented. This reinforced VW's stable ownership and decision-making structure. Changes in incentives structure were also noted that included stock-option based pay programme but it was largely for employee stock ownership and welfare (see *Incentives, Salary and Bonus* below). It is observed that under Piëch's reign, VW did not completely adopt the MSV approach. Although shareholder's interests were given a greater voice and weight, the emphasis on "workholder value" has not been superseded. The leadership also possessed the ability to identify the market and technological constraints as is evident from several cases when the leadership have abandoned new product development and continued enhancing their common platform strategy—a core strength of VW. There are instances when the leadership also adopted the notions of MSV at communicative or public relations, and the financial targets they set. Nevertheless, it was observed that the changes were rather improving the stakeholder value rather than shareholder value alone and focused on long-term competence development.

Investment in Tangible and Financial Assets

During the period 1991-2017, the asset structure of VW changes from tangible assets to financial (liquid) assets (see *Figure 6.39*), and investments in financial securities is increasing (see *Figure 6.40*).

Higher rate-of-returns targets of VW, such as a target of 8 percent return on investments, was including the returns from the Financial Services Division. Piëch and his successor Pischetsrieder planned that at least one-third of VW's profits came from—and expanded—the Financial Services Division (Financial Times, 2001). This can also be discerned from the accumulation of financial assets in *Figure 6.41*. However, the source of VW's profits was its core—automotive—value-chain

which contributed up to 80 percent of its profits (see *Table 6.4*) and consistent investments were made towards it. Figure 6.42 reveals the increasing trend of investments in tangible assets at VW and the accumulation of tangible assets over the years (see *Figure 6.43*) and confirms VW's investment strategy.

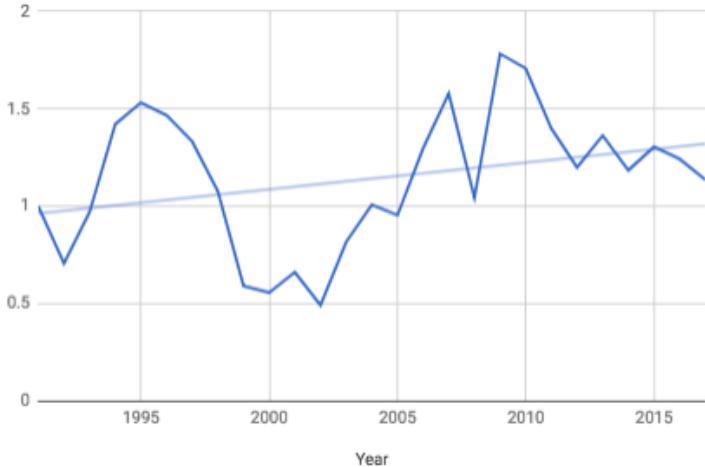


Figure 6.39. Volkswagen—Ratio of Financial Assets to Tangible Assets
(Base Year (1991) = 1)—1991 to 2017 (*Source: VW Annual Reports, 1991-2017*)

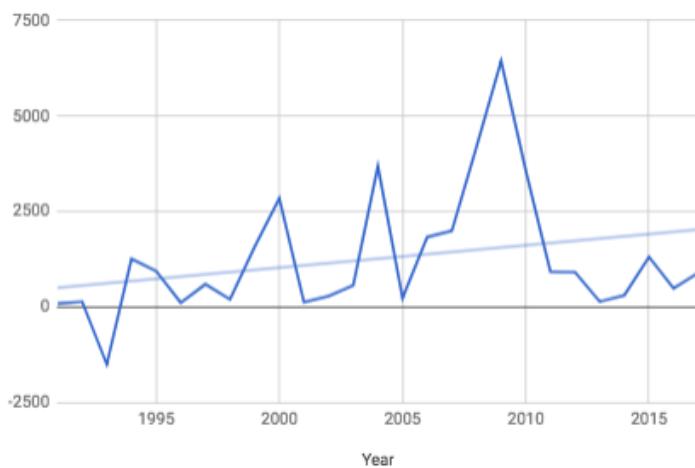


Figure 6.40. Volkswagen—Investments in Financial Securities
(Base Year (1991) = 100)—1991 to 2017 (*Source: VW Annual Reports, 1991-2017*)

The investments in tangible assets (as a percentage of sales) are decreasing (see *Figure 6.44*). Between 1991 and 2000, the average investments (in tangible assets) as a percentage of sales was 7.5%. In 2000-01, the capital investments in the Automotive Division of VW ranged between 8.0% and 7.6% of sales. This was the highest ratio compared to other automakers as such BMW (7.0%), Toyota (6.8%), and General Motors (6.5%) (Jürgens, 2010, p. 26-27). The Chief Financial Officer, then, regarded VW's investment as high and stated that he intended to bring down the CAPEX. Following this decision, as can be seen in Figure 6.44, the average for the remaining years, since

2001, for VW, is around 6.5%. This can also be seen as VW's orientation towards giving importance to financial targets.

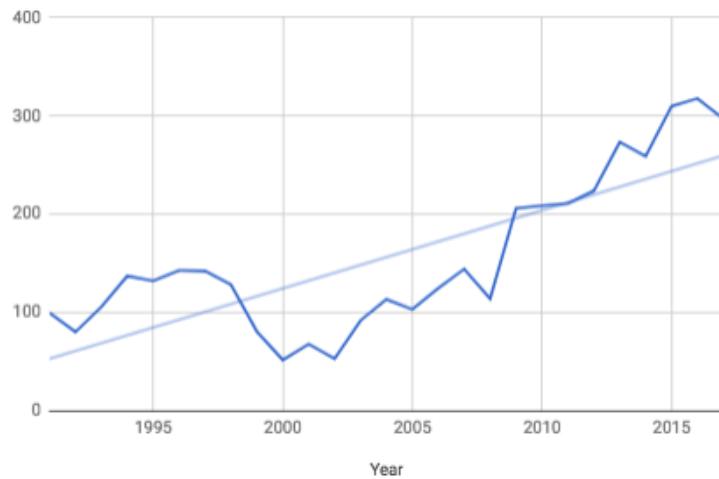


Figure 6.41. Volkswagen—Accumulation of Financial Assets
(Base Year (1991) = 100)—1991 to 2017 (*Source: VW Annual Reports, 1991-2017*)

Table 6.4. Profits (before tax) Split Between VW's Automotive and Financial Services Division (in € million)

Year	VW Group	Automotive	Financial Services
		(% of VW Group Profit)	(% of VW Group Profit)
2002	3986	3247 (81)	739 (19)
2003	1354	443 (33)	911 (67)
2004	1099	172 (16)	927 (84)
2005	1621	620 (38)	1001 (62)
2006	1793	774 (43)	1019 (57)
2007	6543	5474 (84)	1069 (16)
2008	6608	5677 (86)	931 (14)
2009	1261	603 (48)	657 (52)
2010	8994	7878 (86)	1116 (14)
2011	18228	17002 (93)	1226 (7)
2012	16495	12668 (77)	3827 (23)
2013	17794	14788 (83)	3005 (17)

Source: VW Annual Reports, 2002-2013

Capital investments, on an average over the period, remained at 8 percent (of sales) which can be seen and linked with the high expenditures in new product development; VW adopts an approach of a common platform strategy, but yet, the enterprise has invested considerable amounts in its new product programmes, component strategy, and modernisation of manufacturing techniques (Lippert

et al., 2014). Works council have played a major role to ensure that productive investments are made, consistently. Through the council's representatives, the workers are involved throughout the planning processes. For instance, the financial performance indicators and targets which the VW adopted are thoroughly scrutinised by these representatives. The Works council overruled any shifts to a (financialised) strategy or attempts to revamp the strategy that directs the Board towards financial performance alone which may pose a risk on the long-term employment of workers (*ibid*).

VW had, however, attempted to diversify out of its automotive business; the acquisition of Triumph-Adler in 1978 was the only case. Nevertheless, Triumph-Adler was sold in 1985 (Tagliabue, 1981). The finance was raised from the stock market by issuing new shares but measures were taken so as not to affect the existing corporate governance structure. After the sales of the Triumph-Adler, any notion of migration from VW's existing value-chain was to be realised via the Financial Services Division; which is in line with the intended expansion of the division, during the 1990s. Nevertheless, now, there exists no policy or evidence that highlight the migration out of VW's core capabilities.

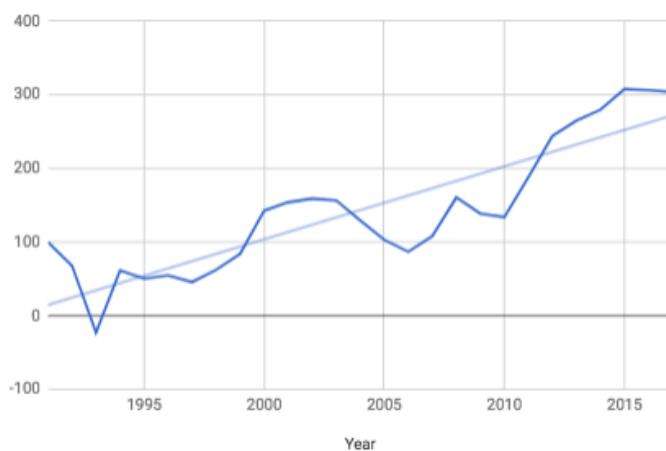


Figure 6.42. Volkswagen—Investments in Tangible Assets
(Base Year (1991) = 100)—1991 to 2017 (*Source: VW Annual Reports, 1991-2017*)

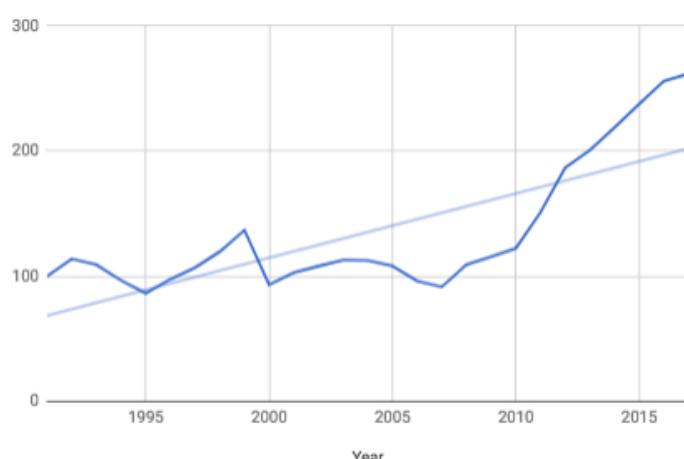


Figure 6.43. Volkswagen—Accumulation of Tangible Assets
(Base Year (1991) = 100)—1991 to 2017 (*Source: VW Annual Reports, 1991-2017*)

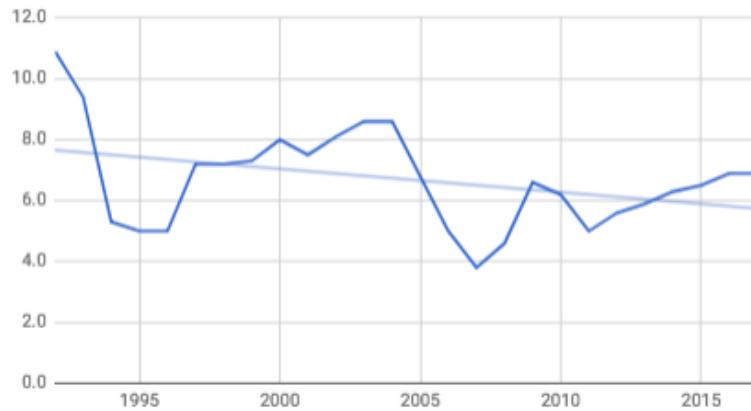


Figure 6.44. Volkswagen—Investments in Tangible Assets in Sales percentage
—1991 to 2017 (Source: *VW Annual Reports, 1991-2017*)

R&D and Patent Output

Generally, the amount spent by VW for R&D during the period between 1991 and 2017 shows an increasing trend (*Figure 6.45*).

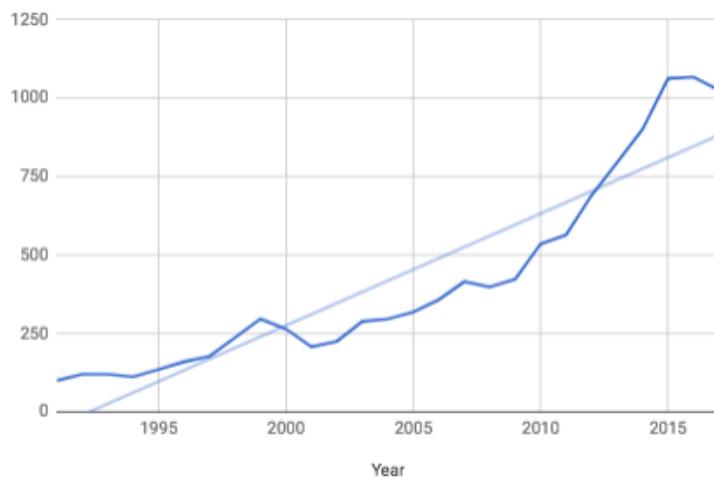


Figure 6.45. Volkswagen—Investments in R&D
(Base Year (1991) = 100)—1991 to 2017 (Source: *VW Annual Reports, 1991-2017*)

Investments in innovation and development of the productive capabilities shows an upward trend at VW indicative of committed finance in innovation. The finance is committed since the ratio of total payouts to R&D investments at VW has remained consistent over the years (*Figure 6.46*).

In 2017, there were 6,244 patent applications filed (worldwide) for employee invention and 50 percent of the filed applications were in Germany. Most of the inventions were related to driver assistance systems, conventional and alternative drive systems, and lightweight construction. The R&D spending amounted to 7.3% of the sales revenue, in 2017, although companies outside automotive sector globally have more staggering figures (DW, 2017). The World Economic Forum, however, reports that in 2015, the amount spent in R&D at VW exceeded top innovators such as

Samsung, Intel, Microsoft, Google, Toyota, and Amazon (Brodie, 2017). Figure 6.47 shows the patents filed by VW for the period between 1997 and 2017: time series is limited to this period for the lack of availability of data.

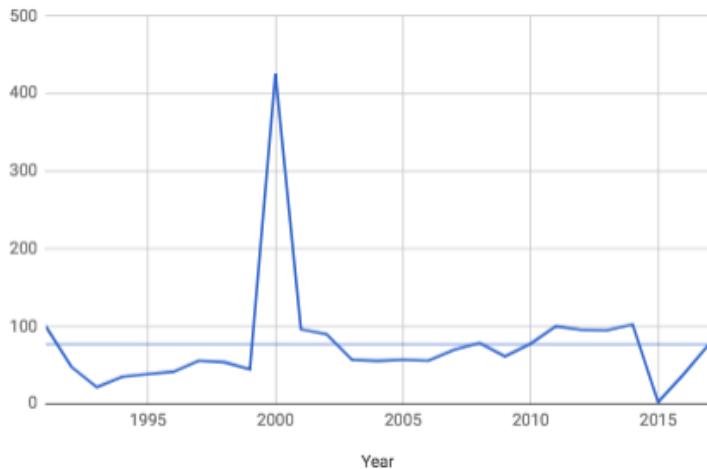


Figure 6.46. Volkswagen—Payouts as a percent of R&D Investments
(Base Year (1991) = 100)—1991 to 2017 (Source: *VW Annual Reports, 1991-2017*)

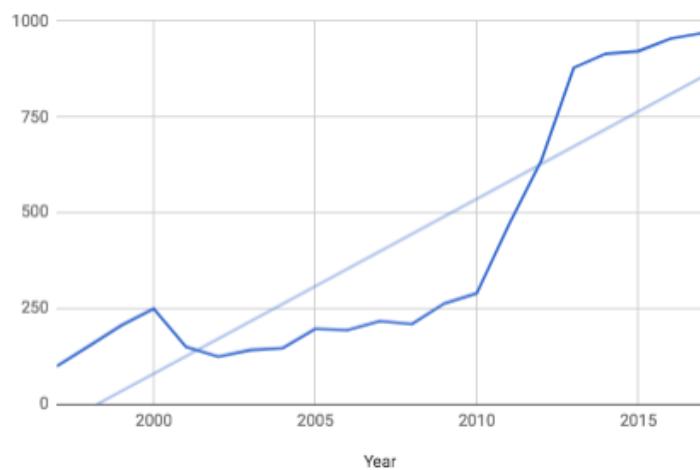


Figure 6.47. Volkswagen—Patent Applications
(Base Year (1997) = 100)—1997 to 2017 (Source: *VW Annual Reports, 1997-2017*)

Investment decisions are normally arrived at in November after the five months long yearly “planning rounds” which happen from June to October (Jürgens, 2010). During these rounds, the investment plans of the various business lines and plants are put together. The central finance together with the different business lines and plants cater to the investment requirements. Upon allocating the finance, the performance of the business lines or plants to which finance is allocated is monitored.

VW Works council is actively involved during these planning rounds and take part in the assessments of investments projects. For instance, Works Council—as part of their “location protection” policy which relieve some of the pressures on relocation (*cf.* Watt, Keune, & Galgoczi,

2008)—is keenly interested to keep innovation projects to be developed in-house rather than outsourcing the process required for the new product or vice versa. This indirectly requires the project teams to better co-ordinate and take into account the existing as well as new process engineering capabilities required for the new product while designing the new R&D project. Although from the perspective of new product development and its R&D, it would seem irrelevant if the processes required for the new product are developed in-house or are sourced from other sources, while, it is always better from the perspective of employment protection that innovation projects are so directed that there are development and utilisation of the enterprises productive resources.

The adoption of shareholder value orientation has required the central finance to decide investments in the innovation projects that meet the criterion of 40 percent return on investment and amortisation with 2.5 years. There is no (evident) policy that imposed sanctions on failing to meet these scores. But, operating within the budget and meeting the targets was a criterion for bonuses since different business lines set their own individual performance indicators and targets which is reflected in their annual bonus.

Moreover, VW has allocated special funds for projects—in most cases, such projects are related to the development of the core competencies that entails insourcing and innovative investments, and human-capital development orientation—that do not require to meet the return on investment or amortisation criterion. These funds were also used in the innovation-related overheads such as developing the capabilities of the human capital. For projects that do not come under the special funds and face conflict meeting the 40% return on investments, issues related to training always received support from the Supervisory Board and the human-capital development was never curtailed.

During the 1980s, there prevailed a tendency among customers to move towards the more expensive part of the product range and VW benefitted from this trend. VW statistics show that the increase in sales was more than the increase in output increasing the per unit value (per price). This tendency of growth by value but not by volume is often cited as the “German Model” or “Diversified Quality Production (DQP)” strategy. Countries that have adopted a similar model have fared well for its ability to provide per unit value and adopt to offer higher quality products (Sorge & Streeck, 1987); in contrast to low-cost strategies adopted by U.S. for instance while catching up with the Japanese (Lazonick, 2007). Altogether, the effectiveness of co-determination-based corporate governance at VW can be seen in the decisions of the leadership to endorse the development of core competencies and human-capital along with the projects and not to only pursue financial targets alone.

Incentives, Salary and Bonus

The Supervisory Board decides the total remuneration to be paid for each individual member of VW's Board of Management (VW Annual Report, 2017). The remuneration system takes in to account the requirements of the *Aktiengesetz* (or the German Stock Corporation Act) and the German Corporate Governance Code (henceforth GCCC). The *Gesetz zur Angemessenheit der Vorstandsvergütung* (VorstAG or the German Act on the Appropriateness of Executive Board Remuneration) and section 87(1) of the AG also form the premises of the remuneration of the Board of Management at VW; these focus on the long-term notions for sustainable business development (*ibid*).

The remuneration system of the Board of Management comprises of non-performance-related (or fixed) and performance-related (or variable) components. The non-performance-related remuneration comprises fixed remuneration and fringe benefits. The fixed component creates an incentive for the members to perform their duties in the interests of the enterprise and to fulfil their obligation to act with proper business prudence without needing to focus on merely short-term performance targets (VW Annual Report, 2017). The variable component or the performance-related remuneration consists of an annual (yearly) bonus—evaluated based on the performance of the member during the fiscal year—and a long-term incentive (LTI). The latter, since is associated with the (financial) performance of VW after three years, captures the long-term impact of today's actions or decisions.

The annual bonus is based on the operating profits—not stock price—achieved by VW. The annual bonus will only be paid if the set targets are achieved. Bonuses will not be paid if VW's operating profit is below €9 billion (\$9.5 billion) and return on sales remain at 4% (VW Annual Report, 2017). Based on the extent of achievement of individual targets agreed between the respective member of the Board of Management and Supervisory Board, the individual payment amount is either reduced (by 20 percent) or increased (by 20 percent).

The LTI is given to the Board members via a system of performance share plan. The performance is evaluated or is based on a three-year term. At the beginning of the fiscal year (January 1), each member is allocated some performance shares (which they hold for one-third of the three-year period) for calculation purposes. This is calculated by dividing the annual target LTI by the average (closing) share price of the last 30 trading days. The year-end target for EPS is also set during the beginning of the fiscal year. The extent to which this target is achieved at the end of the year determines the annual target LTI for the next year which affects the number of performance shares, and so on. In the same vein as the annual bonus, LTI will be paid only if a certain threshold is reached. The remuneration for the Chairman of the Board of Management is capped (for one fiscal year) at €10,000,000 (\$11,621,490) and €5,500,000 (\$6,391,819) for each member of the Board of

Management. “If the total amount is exceeded, the variable components will be reduced proportionately” (VW Annual Report, 2017).

The remuneration of the members of the Supervisory Board of VW does not contain any variable components but consists only of fixed components which are in line with normalcy of DAX-listed companies. In the fiscal year 2017, the members received €3,786,839 (\$4,400,871), of which €2,000,000 (\$2,324,298) was paid for their work in the Board and €836,389 (\$972,008) was paid for their work in the committees (VW Annual Report, 2017). Major decisions, including stock repurchases and approval of the recommendation of the Board of Management related to (annual) dividend payouts, have to be approved by the Supervisory Board. Since they received a fixed salary, there is no reason to anticipate that the Supervisory Board would endorse stock repurchases and dividend payouts to increase the share prices. Moreover, the approval required a two-thirds majority in the Board where 50 percent of its members are employee and trade union representations (Jürgens, 2010).

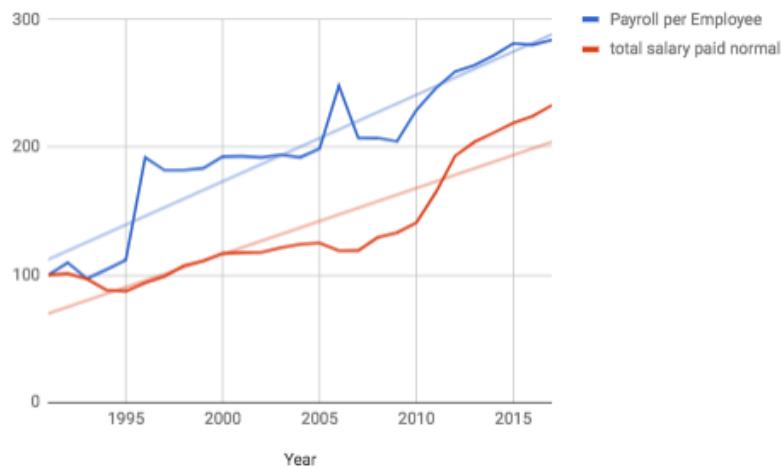


Figure 6.48. Volkswagen—Salary (or Payroll) per Employee and Total Salary Paid (Base Year (1991) = 100)—1991 to 2017 (Source: VW Annual Reports, 1991-2017)

For the other employees, the stock-option programme was introduced in 1997 and it is available to all employees (Grub, 1999). Individual performance is evaluated across the group based on the entrepreneurial, functional, and social competencies however different business lines set their own individual performance indicators and targets; stock-option programme is weakly associated with the performance of the business lines. Common bonuses such as the holiday, overtime, and enterprise’s performance-based bonuses are determined through collective bargaining processes. Therefore, implementation of stock-option can be seen as a process to increase employee stock ownership rather than a shift to capital-market orientation (Goutas & Lane, 2009). Moreover, stock-option programme was endorsed to motivate early retirement since they were given stock-options only after opening a time account to which overtime could be saved and accumulated which can be

reduced from the intended tenure, for early retirement. This account also carried interest on the accumulated overtime.

Over the years, between 1991 and 2017, the salary paid to the employee and the salary (payroll) per employee have increased over time (*Figure 6.48*). There is also an increase in the labour employed over the years (see *Figure 6.50*) highlighting an increase in the wage-share of the total value-added.

6.2.3 Organisational Integration

The co-management at VW has played a crucial role in shaping the organisational integration processes. We have already seen its involvement in the planning rounds has channelled efforts to cultivate capabilities in-house and the development of human capital. Traditionally, the VW's governance structure played a contributing role during the crisis of the late 1960s that reinforced future strategies based on co-determination. During this period there was an overall decrease in demand for passenger cars in Germany. VW realised the weakness of its product strategy as the enterprise incurred significant costs when product differentiation was introduced since it required a separate process and work organisation. Beetle still remained their hallmark product; although the model was criticised as an unsafe car in the U.S., there existed strong vested interests within VW's governance structure to open a plant in the U.S. for other models.

The co-determination in the ownership played a crucial role in preventing the opening of the plant in the U.S. which otherwise could have had perverse impacts on the performance of VW since the other models released during the crisis period were failures. In retrospect, “[t]he company fared well in most of its major markets (except North America) during much of this period from the late 1970s to the 1980s” (Jürgens, 2010, p. 12). As a result of the co-management, right assessments during the decision-making process were sustained and therefore the relationship between the management and the union was further reinforced.

Training and Learning

The key specialisation of the German education system—in Science, Technology, Engineering, and Mathematics (STEM)—is due to the dominant role of manufacturing in the German economy. In 2016, the value-added from manufacturing was 23% of the GDP and the sector exported 84% of its manufactured products. The proportion of total employment in industries related to manufacturing, mining, and construction was about 28% (Naudé & Nagler, 2017). The German economy, therefore, views the development of a skilled workforce as a critical element to the growth and reinforcement of the manufacturing industrial base (Gehrke *et al.*, 2015); and, many skills that the students cultivate are enterprise-specific indicative of the typical German manufacturing enterprises.

In order to cultivate the STEM skills in the young populace, the German Education System has launched several initiatives, such as the “MINT Schule” and “MINT EC” programmes, which promote STEM education in schools by organising STEM days and camps, and by providing funding for students as well as training teachers and school administrators (MINT EC, 2018). These initiatives aid and stimulate adjustments in the school curricula so as to reorient it to the rising demands in the employment market which is largely in manufacturing (BMBF, 2018).

VW leaders occasionally interacted with teachers who taught in primary and secondary education to inform them of the importance of STEM education, the various apprenticeship programmes at VW, and educated them about the skills gap between current education and what would be required in the future manufacturing industry (C. Morrison, 2015). Furthermore, VW endorses and promotes STEM education to boost the local workforce’s future employability in the manufacturing industry. This initiative is not only observed in Germany alone but has been followed in other locations worldwide. For instance, at the newly opened plant in Chattanooga, Tennessee, there were many open days held to make students aware of the requirement of STEM education. Moreover, VW’s human resource advisor (U.S.), Sebastian Patta, claims that the students should be aware of the functions and operations that happen in VW’s manufacturing plant and they should know “[w]hat it takes to be employed at a company like Volkswagen; they need to imagine what it might be like to work with robots or cars. They need to do internships, seek out mentors and know how to solve problems without immediately Googling the answer” (C. Morrison, 2015).

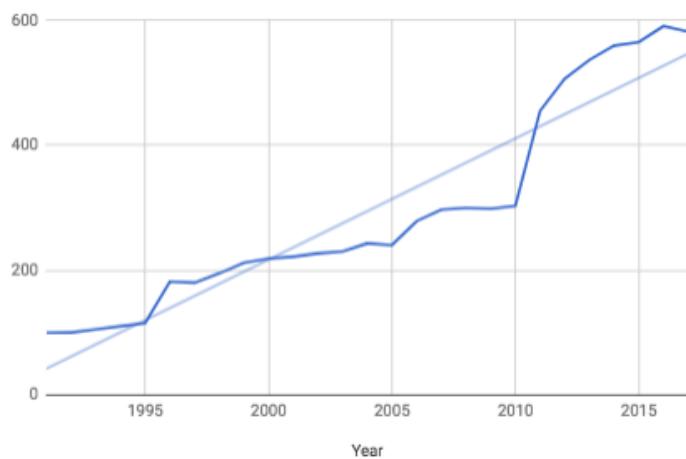


Figure 6.49. Volkswagen—Number of Apprenticeship Absorbed
(Base Year (1991) = 100)—1991 to 2017 (Source: *VW Annual Reports, 1991-2017*)

At VW, Vocational Education and Training (VET) is in line with the dual system (of German Education) and the apprentices are trained within a professional “family” or *Berufsfamilie* and they alternate between different families performing assignments while at the same time attending their school. VW, echoing the intentions of the dual system, argues that this ensures the best possible

preparation and training for the students for their future employment most likely to be absorbed as junior specialists or skilled workers. In 2014, open days were held at VW locations in Wolfsburg, Hanover, Braunschweig, Kassel, Emden, and Salzgitter. Such hands-on experience open days were also held at VW subsidiaries such as Audi, Porsche, and MAN. In the year 2014, VW trained 18,459 apprentices and students worldwide in 60 professions and dual apprenticeships (Volkswagen, 2014).

VW sees that the provision of initial and in-service training is crucial to ensure the development of the productive capabilities of its employees and is an imperative that underpins enduring success. The provision—of systematic training and development of its employees—is based, as mentioned before, on the concept of professional family or *Berufsfamilie*. A family constitutes all employees with shared expertise with related skills thereby rendering the family to be a “specialist home” for an employee with a particular vocational and/or professional skill. The members of each family include from apprentice up to senior experts (Volkswagen, 2014).

Top performers from the apprenticeship are absorbed into the “Talent Group” which is a two-year training and development programme. Upon conclusion, top 10% of the trainees each year are hired within VW. Furthermore, VW recruits and fosters young graduates through their two programmes—the Student Talent Bank and the Academic Talent Pool—with an aim to enhance their commitment towards the enterprise and provide them with the best possible preparation and apt grounding to cultivate a career with VW. The candidates perform functions as interns. Upon their graduation, interested candidates are moved to the Academic Talent Pool securing their plausibility to be hired into one of the specialist areas within VW (Volkswagen, 2014, 2018f). Furthermore, upon employment, the newly hired employees undergo additional skills development courses over a period of two-years. In 2015, VW hired 346 candidates in the young graduates’ programme. All these programmes are subsidised by the German government and/or VW.

“The Volkswagen Group offers its employees a wide range of qualification programmes. In 2015, employees benefited from more than 83,000 qualification programmes across the Volkswagen Group, representing over 10.7 million participant hours. The range of programmes is constantly updated to ensure it continues to reflect the VW’s current training needs. More than 520 new training initiatives and programmes were introduced across the Volkswagen brand alone during the reporting year...In 2015, [VW] expanded [their] cross-site and cross-brand qualification of trainers responsible for delivering [their] programmes for leaders, group leaders and managers, as well as of assessment centre moderators.” (Volkswagen, 2018f).

Decentralised control of the subsidiaries or business could have prompted them to reduce the use of services from the VW’s fully owned independent subsidiary, Coaching GmbH, that provide vocational and further training (Jürgens, 2010). But, VW did not decentralise the control over the aspects pertaining to human-capital development and funds were allocated centrally (by the group)

for the vocational and further training of the VW employees. Moreover, there is no evidence which shows that the group is cutting from the budget allocated for training.

Works council saw no logic for the enterprise to cut the budget from training even if the system is (financial) result oriented. Moreover, should the management started to save on vocational and further training expenses, the Works council would make sure that the funds are allocated for training through their representatives in the Supervisory Board. Furthermore, they have always been proactive in reforming and streamlining the apprenticeship (within VW) by making the training process and content more cost-efficient and effective. They had agreed with VW's Board of Management that sufficient investments in the development of human capital are ensured at any cost together with investment or development of new technology or innovation. During the planning rounds, the cost for human capital development was factored in by the planners. This agreement emerges from the "jointness" between the Board of Management and the Works councils and dates back to the 1980s (Jürgens, 2010).

These arrangements were in line with the "location protection" which provides incentives to take into accounts the views of the process engineering changes required for the implementation of the new product or technology or investment project and provide sufficient training following the agreement between VW and the works council (Jürgens, 2010, p. 32):

"Project plans have to include a detailed account of impacts on personnel in terms of headcount, qualification, training requirements. After the investment project has been approved, the money for further training is part of the budget and "Coaching", the VW training subsidiary, can use this as a planning basis for designing its training activities."

The results of the development of the productive capabilities embodied in the human capital rather than pursuing an outsourcing strategy can be seen in the statistics of outsourcing itself—there are no major cases—and the establishment of separate business units for automotive supply since no major units were opened beside engines and transmissions. VW still produces its components such as axles, steering gear, and brakes (Jürgens, 1998). This is also consistent with the patent applications filed for employees' inventions. VW also maintains the production of the seating components as well as instrument panels. VW displays a production-ist approach and vertical integration. Furthermore, VW has begun insourcing in core high-tech areas such as electronics and software via their "electronics strategy".

Downsizing

In 1993, during the crisis period, when VW was about to make 30,000 jobs redundant, an agreement was arrived at with IG Metall to reduce the working hours by 20% and therefore securing 20,000 jobs (Jürgens, 2010). The below plot highlights the employment growth in VW between the

years 1991 and 2017. The base year is taken as 1991, at which the employment is 100. Clearly, VW has not been downsizing its labour force during this period aside from the crisis period and economic cyclical, therefore, not undermining “collective and cumulative careers” (*Figure 6.50*). Moreover, there is an increasing number of union membership of VW employees (*Figure 6.51*).

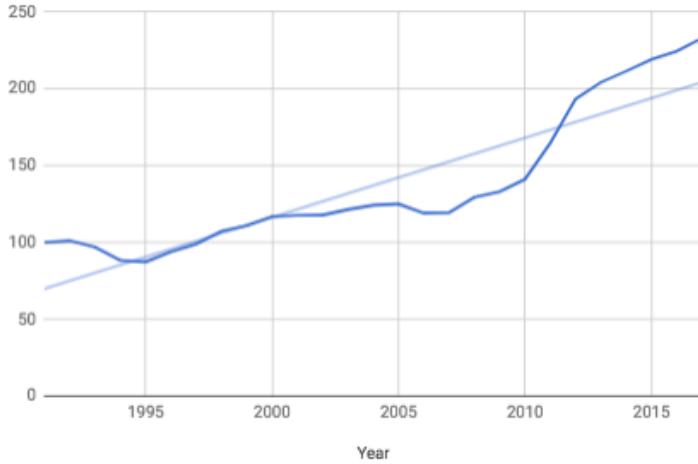


Figure 6.50. Volkswagen—Employment Worldwide
(Base Year (1991) = 100)—1991 to 2017 (*Source: VW Annual Reports, 1991-2017*)

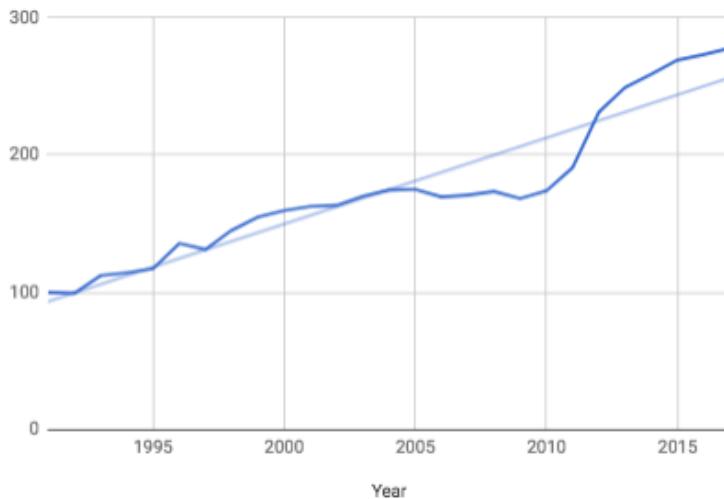


Figure 6.51. Volkswagen—Union Members as a percent of Total Employment Worldwide
(Base Year (1991) = 100)—1991 to 2017 (*Source: VW Annual Reports, 1991-2017*)

6.2.4 Financial Commitment

The normal strategic challenges to short-termism can undermine innovation potential which works through the channel of underinvestment in the development of the productive capabilities embodied in the human and physical capital of an enterprise. The adoption of MSV has induced greater stress on the financial indicators which may lead to changes in investment patterns and levels. Besides, there is the notion of outsourcing and downsizing to meet the financial performance targets. There could also be a reduction in real investments and enterprises may direct funds to areas where

faster and higher returns are expected. Nonetheless, adoption of MSV alone cannot explain the shifting patterns in productive investments. At VW, as we have seen, there is no major disinvestments or downsizing following the adoption of MSV perspective and the expansion of financial service division.

Buybacks and Dividend

During the 2000s, a number of initiatives were undertaken reminiscent of the MSV perspective and to regain investors' confidence. VW issued preferred stocks—which enjoys a preference of receiving dividends prior to any other shares but will have (at least) one right less, mostly voting power, than common stock—to raise capital yet maintain the existing ownership structure. By 2000, preferred stocks accounted up to one-fourth of the total stocks. Piëch, who stepped down as the Chairman of the board in 2015, issued new shares almost every second year; between 1995 and 2000 there was a 20 percent increase in equity (Volkswagen, 2000). This was mainly however to improve investor relations which were damaged after Piëch refused to disclose information to the shareholders, in 1997. As of 31 December 2017, the outstanding preferred stocks and common stocks are respectively 206,205,445 and 295,089,818 (Volkswagen, 2018c).

In the Annual Meeting of Shareholders held on 23 May 2000, the shareholders authorised a buyback of 10% of share capital and VW acquired stocks amounting to 9.8% worth DM4.5 million (\$2.7 million) (VW Annual Report, 2000). This was reported in the Annual Report of 2000. In the Annual Report of 2001, it was reported that the shareholders once again permitted VW to acquire stocks worth 10% of the share capital. No additional remarks on, or the word, buyback(s) appears in the Annual Reports until now.

The role of the stock market for financing investments was not a notion prominent with the VW management; the group, on the other hand, viewed the market as a source of so-called "acquisition money". Although permitted to acquire 10% stocks buyback in 2001, VW was not allowed to hold its own shares and hence it exchanged the shares acquired in 2000 with "friendly" enterprises. This is in line with the notion of cross-shareholding in Germany (Casper, 2001; P. A. Hall & Soskice, 2001). They have not repurchased stocks in 2001. The process of cross-shareholding, together with block ownership of Lower Saxony, aided VW to efficiently block off any treat or potential hostile takeover by institutional investors. Figure 6.52 shows the total payouts (dividends on ordinary and preference shares plus stock repurchases) as a percentage of VW's net income over the period 1991 to 2017. In almost all cases, the payouts have remained below the net income level besides 2000, which corresponds to the authorised stock buybacks. Stock buybacks are not a policy endorsed at VW; during the period between 1991 and 2017, it was only in 2000 they engaged in buying back stocks.

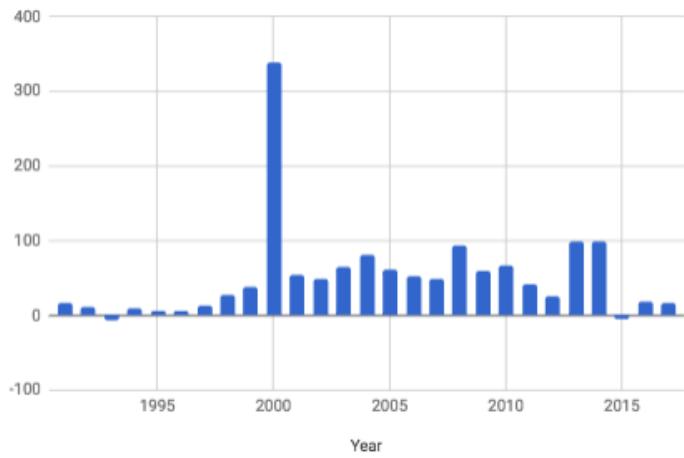


Figure 6.52. Volkswagen—Payouts as a percent of Net Income
—1991 to 2017 (*Source: VW Annual Reports, 1991-2017*)

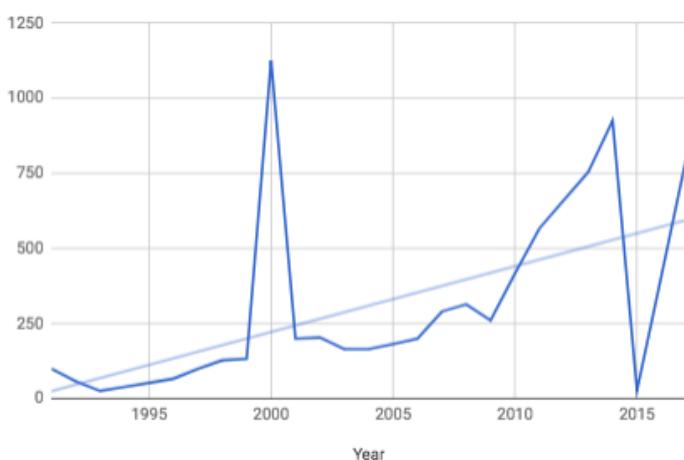


Figure 6.53. Volkswagen—Payouts Over the Years
(Base Year (1991) = 100)—1991 to 2017 (*Source: VW Annual Reports, 1991-2017*)

The Board of Management appreciates the fact that shareholders should participate in the enterprise's success and innovation process and have been consistent in paying out dividends. Figure 6.53 plots the payouts by VW over the years. A simple trend shows that over the years the amount used in payouts have been increasing. Nevertheless, the increasing payouts have not corresponded to any reduction in productive investments (see *Figure 6.46*). The dip in 2015 corresponds to the loss suffered following the emission scandal. The highlight is that VW has not resorted to increasing the dividend payout or have engaged in stock repurchases to manipulate shareholder's confidence during this period.

In the case of VW shareholders are indeed the residual claimant and VW has achieved an increase of shareholder's value. Over the same period (1991 to 2017), the cumulative dividends received by the shareholders are not higher than share capital invested in 1991. From Figure 6.54, it could be read that had the shareholders participated in VW's financing activities since 1991 until 2017, for every \$1 invested in 1991, the shareholders' cumulative residual claims, over this period, amount to

less than \$1 while at the same time their shares are worth 5.54 times more (see *Figure 6.77*), in 2017, than the value in 1991.

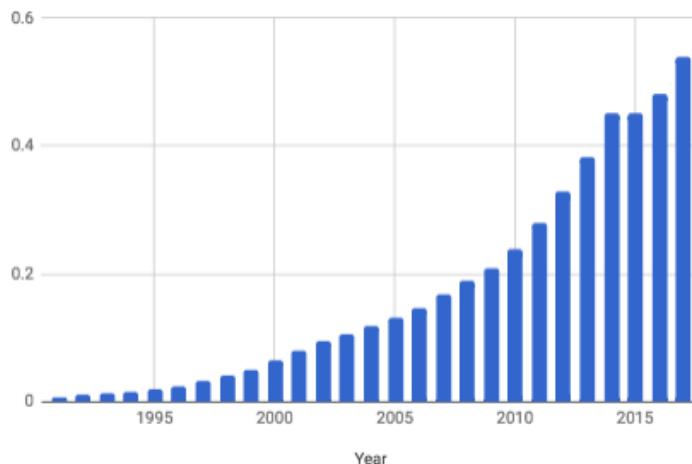


Figure 6.54. Volkswagen—Ratio of Cumulative Dividends to Shareholder's Funds Invested in 1991—1991 to 2017 (*Source: VW Annual Reports, 1991-2017*)

Capital Structure

As stated before, it is VW's policy to finance investments and business-as-usual using cash flow; while keeping the stock market as a source of "acquisition money" (Goutas & Lane, 2009; Jürgens *et al.*, 2002). Figure 6.55 shows the ratio of cash flow to investments in tangible fixed assets between 1991 and 2017. The group did not face any problem financing investments in tangible assets and was able to remain committed to the enterprise's policy of financing investments from cash flow. The major portion of the investments in tangible assets was for expanding product range and modernisation of plant facilities.

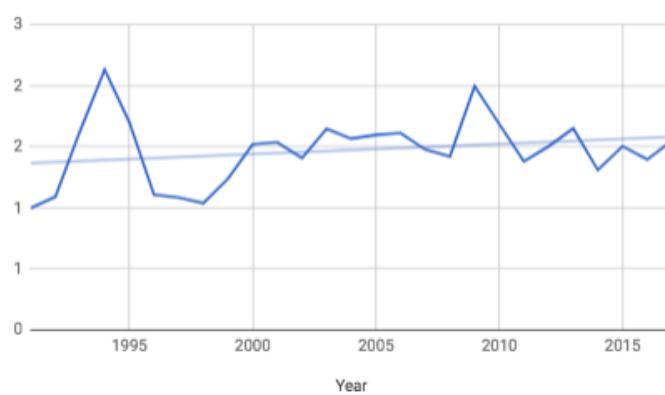


Figure 6.55. Volkswagen—Ratio of Cash Flow to Investment in Tangible Assets (Base Year (1991) = 1)—1991 to 2017 (*Source: VW Annual Reports, 1991-2017*)

Since 1995, with the expansion of the Financial Services Division, there was a growing interaction between VW and the financial markets which led to the development of the other sources

(see *Figure 6.56*) of (re)financing (Jürgens, 2010). This is evident from the decreasing cash flow to debt ratio since 1995 (to 1998) (see *Figure 6.58*) and correspondingly there is an increase in the total debt of VW (see *Figure 6.59*); the operating cash flow has been showing a slightly declining trend (see *Figure 6.60*).

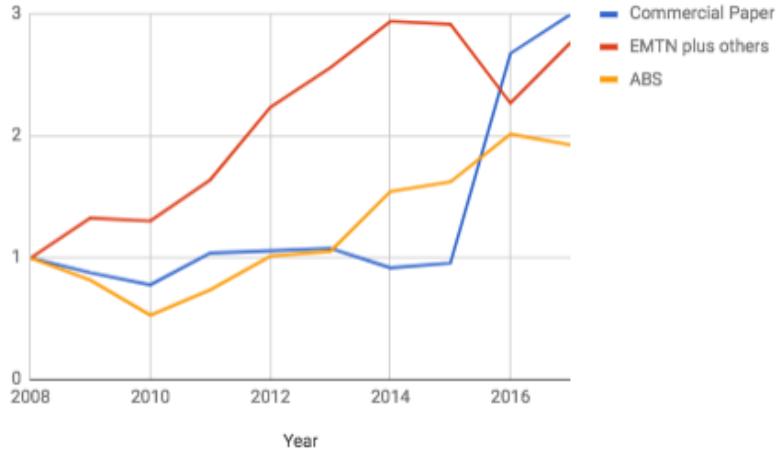


Figure 6.56. Volkswagen—Sources of Finance
(Base Year (2008) = 1)—2008 to 2017 (*Source: VW Annual Reports, 2008-2017*)

In the Annual Report of 2000, it was reported the enterprise would make use of the capital markets to source refinancing making use of primary financial sources—such as bonds and credits from the bank—as well as asset-backed derivatives or securities (ABS). However, it has been observed that most of the refinancing has happened via commercial paper and EMTN programme. Between 1995 and 2007, there has been an increase of 73% in the issuance of bonds and an increase of 35% using credits from banks (VW Annual Reports, 1995-2007). Refinancing using bank credits posed a problem to enterprises worldwide for the banks were consolidating and were reluctant in issuing additional lending. Both financial and non-financial enterprises, therefore, increased their reliance on medium-term notes and commercial papers and VW was not an exception. Figure 6.56 plots the increase on the reliance on commercial paper, EMTN, and ABS of VW for a decade, between (base year) 2008 and 2017.

Figure 6.57 plots the capitalisation ratio (total debt divided by the capital structure—the sum of total debt and total equity) of VW during the period between 1991 and 2017. The period between 1991 and 1995 shows a steep increase in debt financing and the years after 1991 until 2017 can be categorised into a region with an increase of around 10 points. During this period, on an average, VW's operations during this period was debt financed by \$75 for every \$100 of capital structure and indicates that the dependence on the stock market was for \$25.

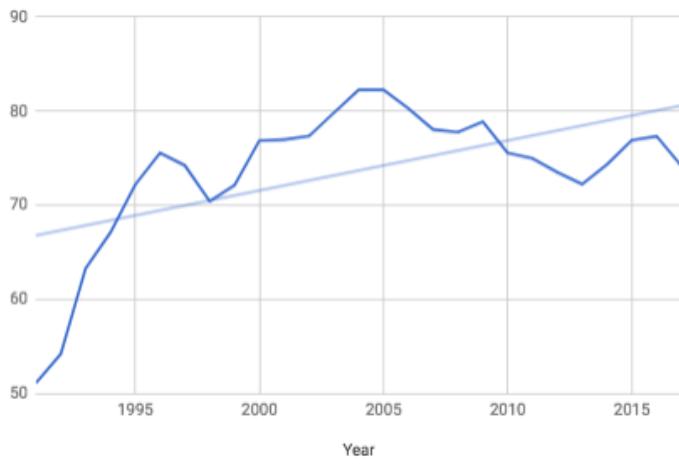


Figure 6.57. Volkswagen—Capitalisation Ratio—1991 to 2017
(Source: VW Annual Reports, 1991-2017)

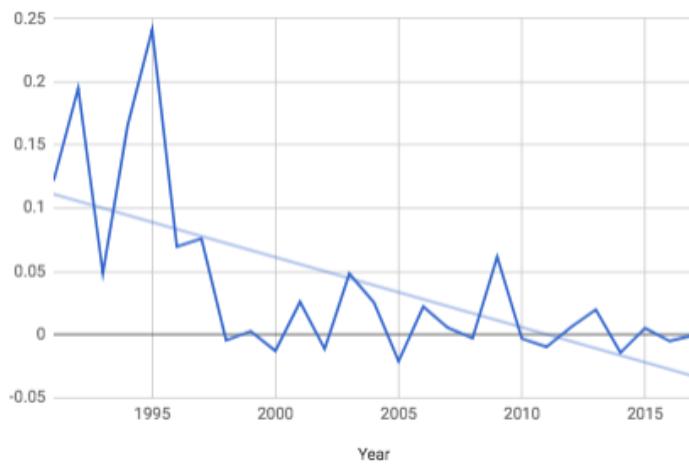


Figure 6.58. Volkswagen—Cash Flow to Debt Ratio—1991 to 2017
(Source: VW Annual Reports, 1991-2017)

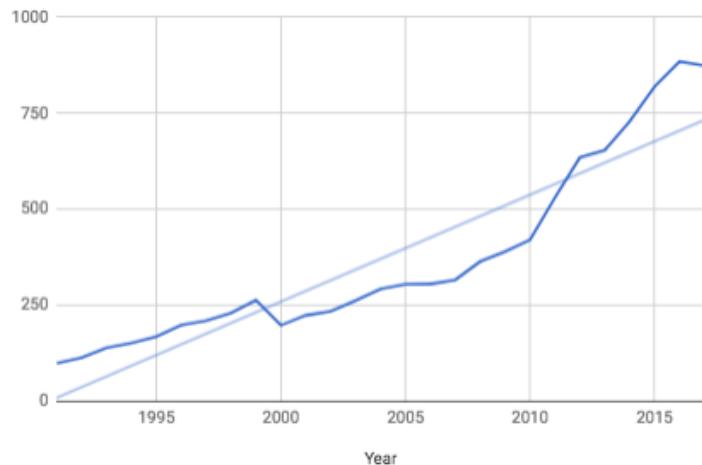


Figure 6.59. Volkswagen—Total Debt
(Base Year (1991) Debt = 100)—1991 to 2017 (Source: VW Annual Reports, 1991-2017)

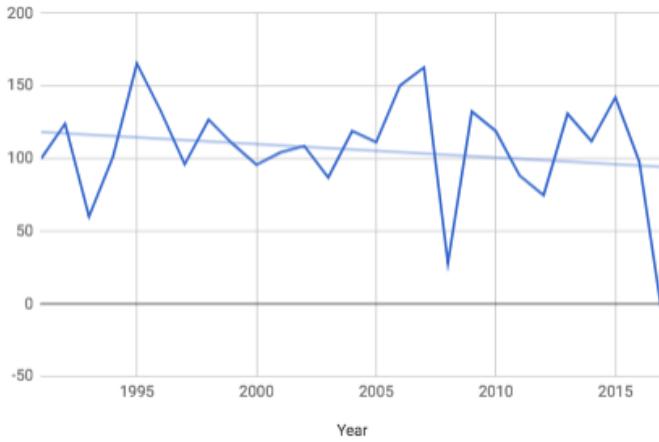


Figure 6.60. Volkswagen—Operating Cash Flow
(Base Year (1991) Cash Flow = 100)—1991 to 2017 (*Source: VW Annual Reports, 1991-2017*)

Figure 6.58 plots the cash flow to debt ratio of VW over the years between 1997 and 2017. Although the general trend is declining, between the years 1998 and 2017, the ratio has remained generally consistent. This indicates that, although there is an increase in total debt (*Figure 6.59*), cash inflow from operations was sufficient to service the debt safely; the operating cash flow is only slightly decreasing (*Figure 6.60*).

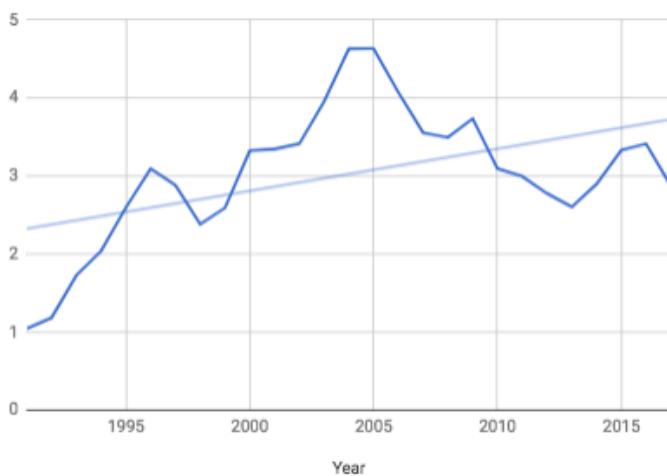


Figure 6.61. Volkswagen—Debt to Equity Ratio—1991 to 2017
(*Source: VW Annual Reports, 1991-2017*)

Figure 6.61 plots the debt to equity ratio of VW during the indicated years. The period can be subdivided into two sub-periods—1991 to 1997 and 1997 to 2017. A higher ratio indicates aggressive debt financing of its growth and leveraging practises; higher debt is associated with higher levels of risk. The year 1991, as mentioned before, was the onset of the expansion of the Financial Service Division of VW. During the former period, the average ratio is around 2.1 which can be compared to the ratio of U.S. commercial banks (2.2, as of January 2015). However, the later period

corresponds to an average value of 3.4 which is more than the average ratio (of 3.1, as of January 2015) for investment banks in the U.S. The expansion of Financial Services Divisions thereby the increase in the total debt and the debt to equity ratio indicate that VM has been aggressive in financing the Financial Services Divisions' growth with debt—VW's Financial Services Division is financialised like an average American investment bank. This is due to the increased reliance on the capital markets (see *Figure 6.56*).

6.2.5 Value-Added and Corporate Performance

Value-Added and Economic Performance

Figure 6.62 to Figure 6.67 plot the amounts appropriated in the form of (total) value-added, profits, retained earnings, wages, taxes (to the State), creditors, and shareholders.

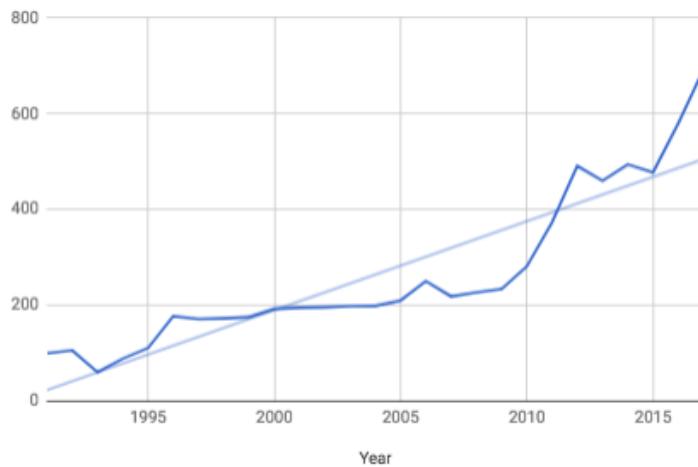


Figure 6.62. Volkswagen—Value-Added
(Base Year (1991) = 100)—1991 to 2017 (*Source: VW Annual Reports, 1991-2017*)

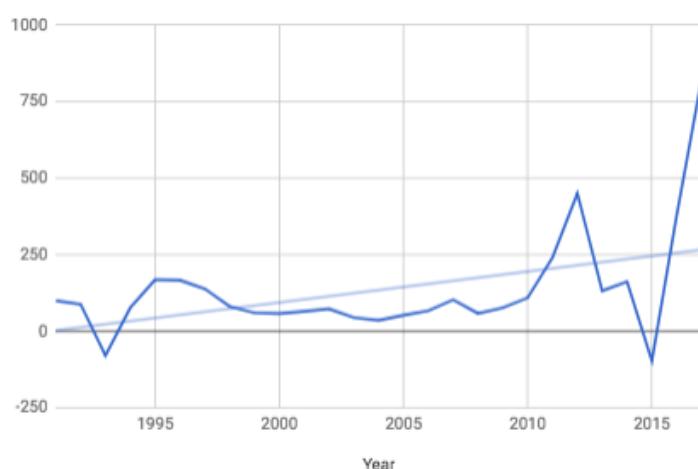


Figure 6.63. Volkswagen—Profits
(Base Year (1991) = 100)—1991 to 2017 (*Source: VW Annual Reports, 1991-2017*)

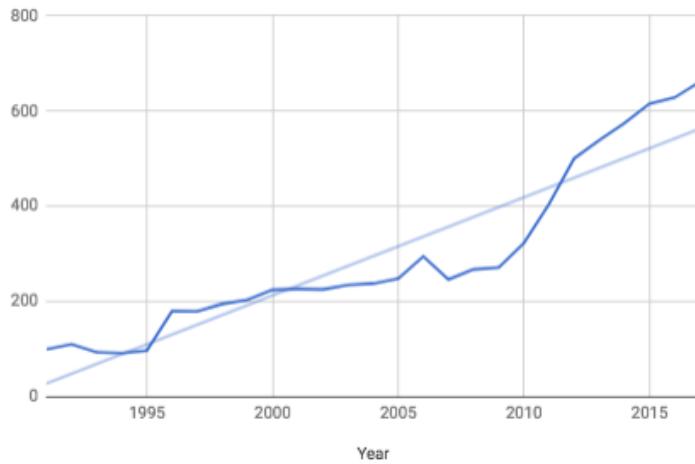


Figure 6.64. Volkswagen—Wages
 (Base Year (1991) = 100)—1991 to 2017 (*Source: VW Annual Reports, 1991-2017*)

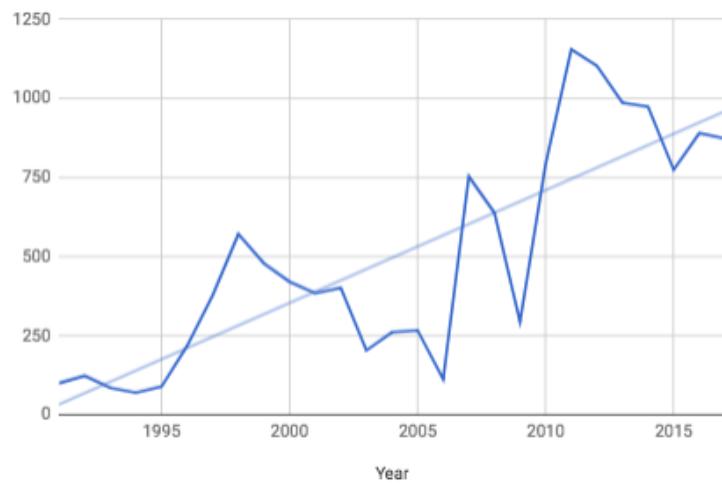


Figure 6.65. Volkswagen—Appropriation to the State (in the form of taxes)
 (Base Year (1991) = 100)—1991 to 2017 (*Source: VW Annual Reports, 1991-2017*)

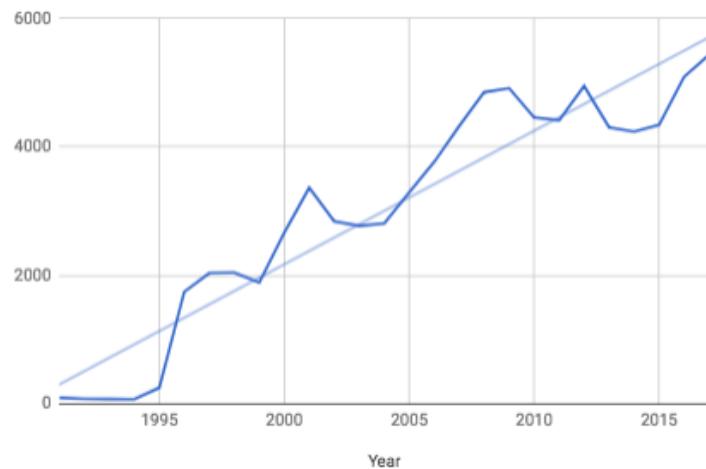


Figure 6.66. Volkswagen—Appropriation to the Creditors
 (Base Year (1991) = 100)—1991 to 2017 (*Source: VW Annual Reports, 1991-2017*)

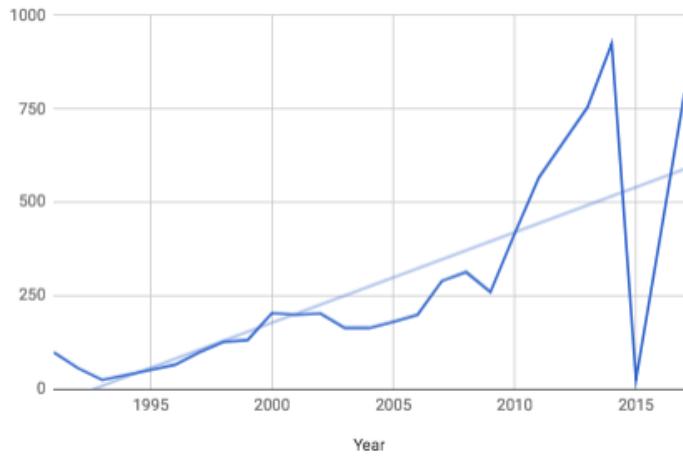


Figure 6.67. Volkswagen—Appropriation to the Shareholders (in the form of dividends)
(Base Year (1991) = 100)—1991 to 2017 (*Source: VW Annual Reports, 1991-2017*)

It can be seen that increase in trend of the appropriations by the shareholders is less steep than the increasing trends of value-added, profits, appropriations to the State and the creditors. The steepness of the increasing trends of shareholder appropriations and wages is similar. Figure 6.68 plots the ratio of dividend payouts (to shareholders) to wages (received by GM employees). From the graph, it can be seen that the ratio of dividends to wages paid have increased less than 25% over the years. It can be seen that, since the early 1990s, there has been no major change towards shareholders in the appropriations but other economic actors such as the State, creditors, together with the shareholders have been gaining from the value-added which is reminiscent to stable and equitable distribution of the value-added as the theory of innovative enterprise posits.

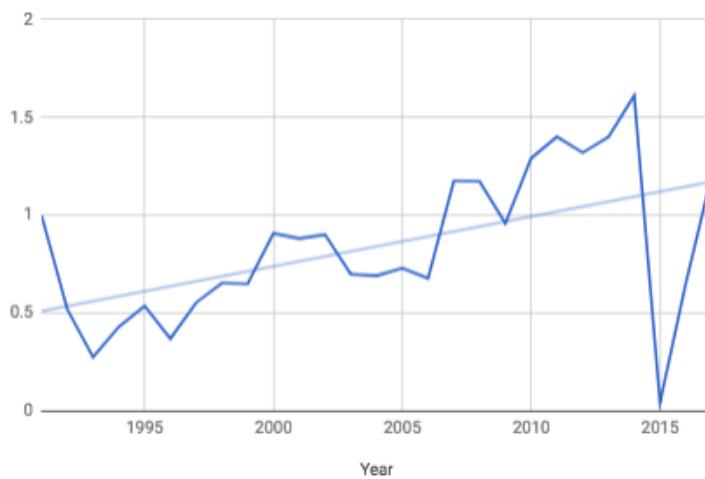


Figure 6.68. Volkswagen—Ratio of Dividends to Wages Paid
(Base Year (1991) = 1)—1991 to 2017 (*Source: VW Annual Reports, 1991-2017*)

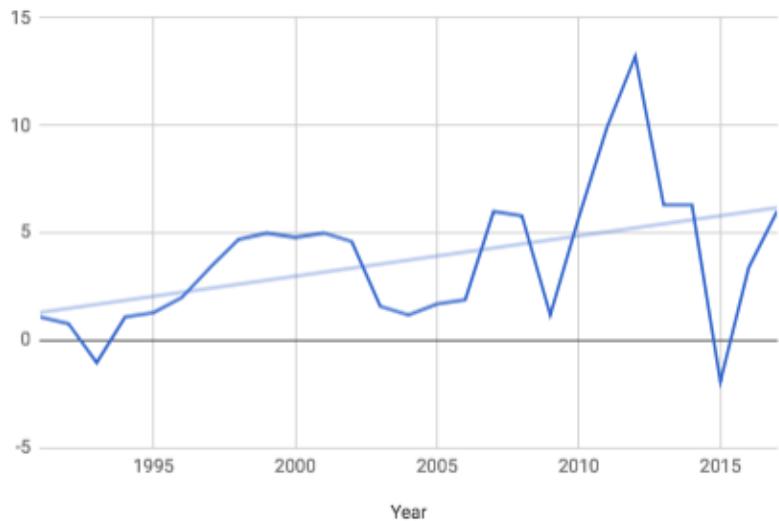


Figure 6.69. Volkswagen—Development of Gross Profit Margin
—1991 to 2017 (Source: GM Annual Reports, 1991-2017)

In terms of economic performance, for employment growth, see Figure 6.50. Overall, the trend of employment growth and growth of gross profit margin (*Figure 6.69*) is increasing.

Corporate Performance

Turning to corporate performance, our analysis begins in line with the analysis of GM looking at VW's (physical) output of cars and commercial vehicles (worldwide) over the period 1991-2017. The below graphs plot VW's output (*Figure 6.70*) and VW's productivity (vehicles per employee) (*Figure 6.71*).

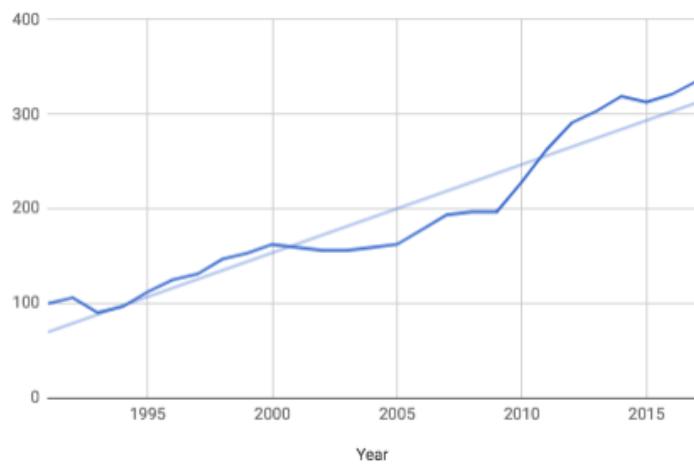


Figure 6.70. Volkswagen—Vehicles Output Worldwide
(Base Year (1991) = 100)—1991 to 2017 (Source: VW Annual Reports, 1991-2017)

VW owns 12 major subsidiaries and they have been expanding their operations worldwide and especially in China (DW, 2018). All subsidiaries besides VW Passenger Cars and Audi experienced an increase in their output during the years from 2016 to 2017.

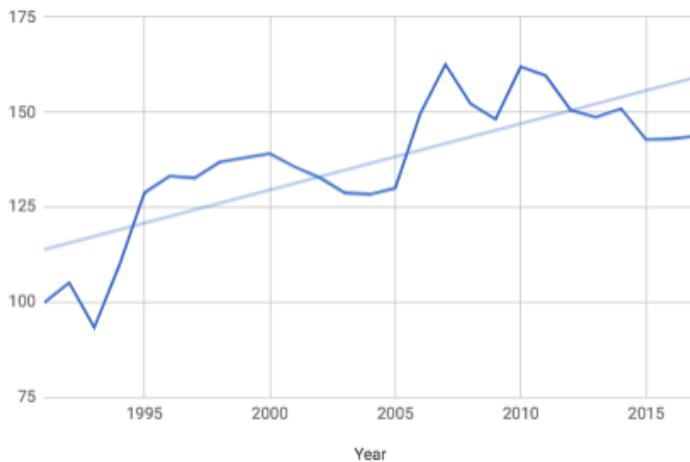


Figure 6.71. Volkswagen—Productivity (Output per Employee)
(Base Year (1991) = 100)—1991 to 2017 (*Source: VW Annual Reports, 1991-2017*)

The increase in productivity (*Figure 6.71*) relate one-to-one with its financial correlate, that is value-added per employee (*Figure 6.72*). Although the simple trend is increasing, in terms of the steepness, the value-added per employee seems to outgrow the productivity growth. Nevertheless, the productivity has translated to relatively better profit- and wage-shares compared to GM.

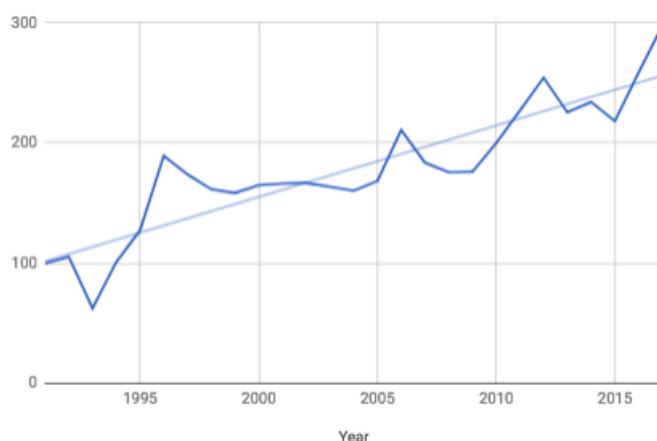


Figure 6.72. Volkswagen—Value-added per Employee
(Base Year (1991) = 100) —1991 to 2017 (*Source: VW Annual Reports, 1991-2017*)

Figure 6.73 plots VW's cost structure as a percentage of sales. It can be seen that the general trend (of value-added to sales ratio) is increasing which reveals that VW had succeeded to capture more of the total (financial) value within its own reporting boundaries indicative of vertical integration. Nevertheless, the increasing trend of capturing value have not reflected in higher operating (or cash) margins (net income to sales ratio) as it appears to remain untransformed suggestive of payments made towards external suppliers, to service its debts (or vertical disintegration).

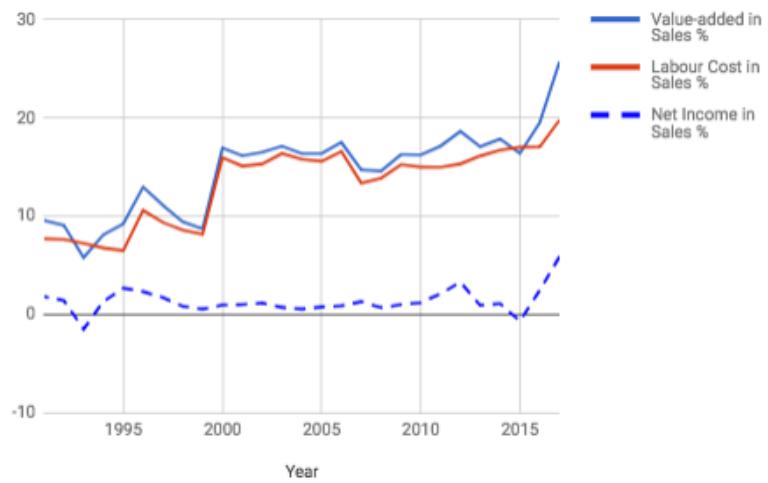


Figure 6.73. Volkswagen—Cost Structure as percentage of Sales
—1991 to 2017 (Source: VW Annual Reports, 1991-2017)

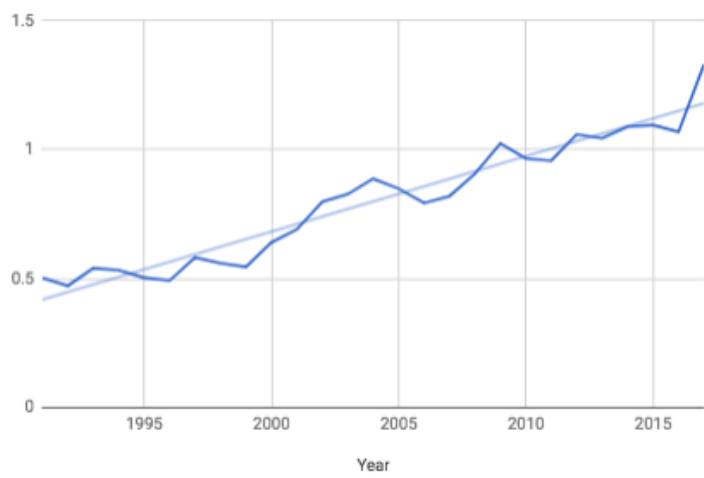


Figure 6.74. Volkswagen—Capital Intensity
—1991 to 2017 (Source: VW Annual Reports, 1991-2017)

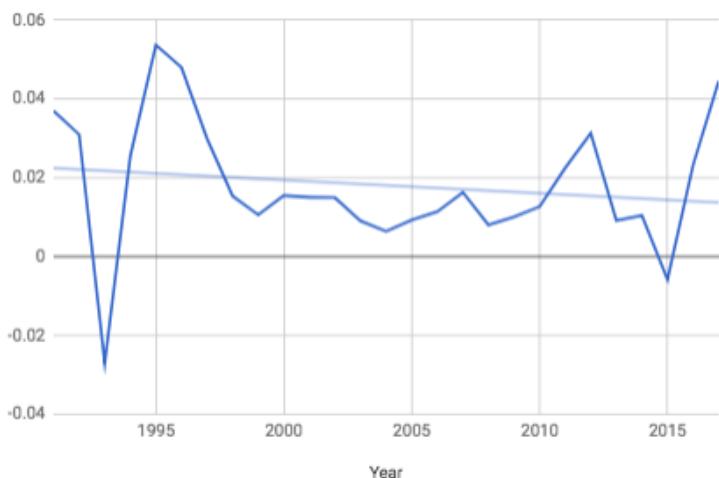


Figure 6.75. Volkswagen —ROCE
—1991 to 2017 (Source: VW Annual Reports, 1991-2006)

Since the cash margin is observed to be untransformed, a decrease in capital intensity can increase ROCE³⁶ indicative of superior capital allocation. Figure 6.74 plots the capital intensity of VW over the years between 1991 and 2017. The capital intensity is increasing (also, note the increasing sales) indicating that the capital employed per unit sale has been increasing over the years. Figure 6.75 plots the ROCE of VW during the period between 1991 and 2017. It can be seen that the ROCE is showing a slightly declining trend indicating a slightly less economical use of VW's cash over the years.

A relatively untransformed cash margin, over the years, combined with an increasing capital intensity induced a gradually declining trend of its ROCE. Reviewing the annual reports, it is observed that the expenditures of VW have been increasing over the years. In the same fashion, the income has also been increasing nevertheless below the expenditure (*Figure 6.76*). ROCE can be increased by increasing the cash margin which can be achieved if the increase in sales revenue is greater than that expenditure or by reducing the expenditures. The highlight is the fact VW has not resorted to reducing the expenditures at the cost of employment or payroll (sum of salaries paid to all of its employees) (*Figure 6.48* to *Figure 6.50*).

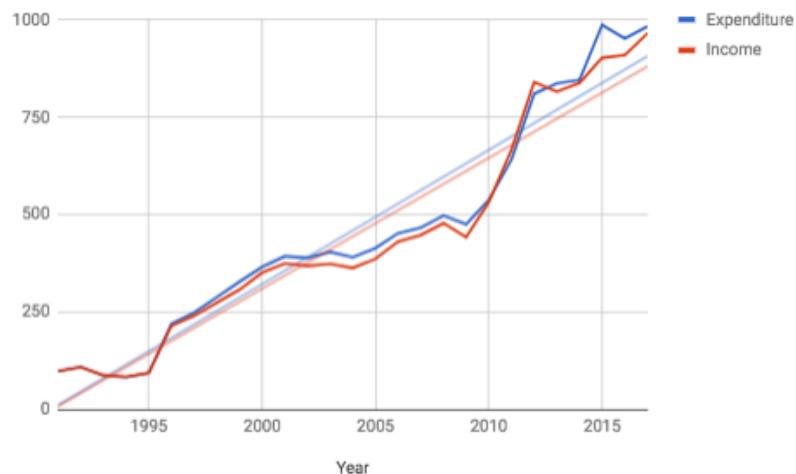


Figure 6.76. Volkswagen —Income and Expenditures
(Base Year (1991) = 100)—1991 to 2017 (*Source: VW Annual Reports, 1991-2006*)

Finally, turning to the stock price of VW shares over the years, between 1991 and 2017, the period between 2000 and 2010 shows a major variation in the stock price. This could be for the following facts. In May 2000, VW increased the equity by issuing more shares to convert Škoda Auto into a fully owned subsidiary (Vojtěch, 2011). Between 2002 and 2007, the automotive division was restructured into two major brand groups—the Audi Brand Group and the VW Brand Group

³⁶ ROCE is the ratio of capital margin (cash/sales) to capital intensity (capital employed/sales). ROCE tells us the efficiency of capital employed. A higher ROCE implies a more economical use of capital.

(Weernink, 2007). In October 2009 VW acquired Wilhelm Karmann GmbH (a German niche automaker) and helped them out of bankruptcy. Also, in the same year, VW acquired Karmann and started production at their Osnabrück plant. By end of the year, VW acquired 49.9 percent of Porsche AG's ownership (Jürgens, 2010). All these events and deals were facilitated with an increase in the equity base, since VW sees stock market as a source of acquisition money, which might have affected the stock price.

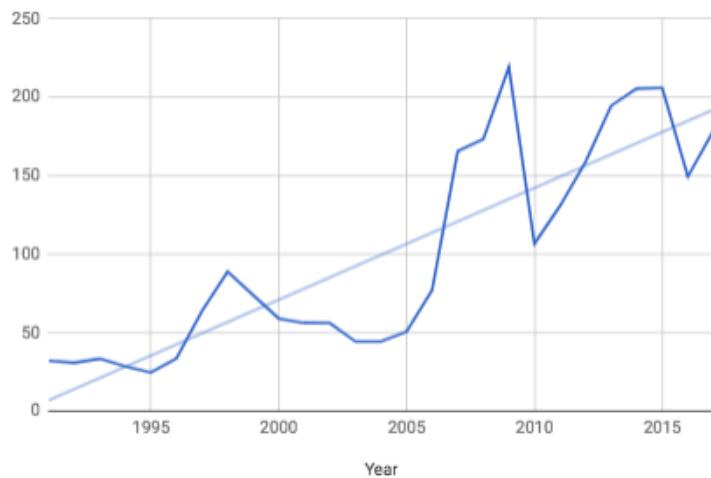


Figure 6.77. Volkswagen—Stock Price (in \$)
—1991 to 2017 (*Source: VW Annual Reports, 1991-2017*)

6.2.6 Summary

The premises which shaped the activities at VW are rooted in the abilities and incentives of the leadership, the co-determination in corporate governance, and the commitment towards sustaining long-term competitiveness. The co-determination required labour representations are in the Board and that all major decisions required a two-thirds majority in the Supervisory Board. The people who have aided the enterprise to depart from crises and to secure lucrative performances have been technocrats and have been associated with the enterprise for more than two decades. They had the ability to identify the market and technological constraints and built on them so that the enterprise prospered. The main focus was on growth by value rather than growth by volume. The organisation—cultured through culminating corporate policy and the co-management traits—ensured that the productive capabilities are developed throughout. Committed finance was ensured in education and innovation persistently for the observed years and the innovation output also shows an upward trend. The innovation was mainly within the core capabilities of the enterprise, rather than venturing other cores, thereby ensuring long-term competence development.

Despite the co-determination, adoption of MSV perspectives was a norm during the early 1990s. Nevertheless, a major shift towards corporate policies supportive of MSV perspective was not

evident. The major trait of financialisation (a by-product of adopting shareholder supremacy) has become mainly evident in the high rate of returns set for the whole Group which was targeted to be achieved by the expansion of the Financial Services Division; this division is financialised. This change is witnessed in the increasing ratio of the financial asset to tangible assets and the increase in the accumulation of financial assets over the years. Another notion observed was in the source of refinancing at VW. It is observed that there has been an increasing reliance on EMTN and the bond market. However, it was observed throughout in the automotive industry. Meanwhile, there is an increase in the investments made towards tangible assets and R&D.

The incentive system of the top executives is consistent with the German Stock Corporation Act, Act on the Appropriateness of Executive Board Remuneration, and GCCC, and performance shares were part of the remuneration for calculation purposes alone. There is also a component which is a function of EPS; there is no direct equity share in remuneration. The system is not totally failproof against share repurchases. Nevertheless, a share repurchase scheme is not a key policy at VW and even though endorsed, it required the approval of the Supervisory Board. The total payouts as a ratio of R&D investments were untransformed over the years. Also, the wage-share in VW's value-added increased over the years.

The co-determination (and/or co-management) acts as a disciplining device against the pursuit only towards achieving financial targets or short-termism. They ensured that investments are made that led to the development of core competencies and capabilities—which contributed 80 percent of the profits of the group—and contributed to long-term development such as new product programmes, component strategy, and modernisation of manufacturing techniques. They were involved in the planning rounds and also made sure that the complementary processes and expertise related to new innovation project are developed in-house. Projects that entailed development of core competence were decoupled from any financial targets and the Supervisory Board supported it. No major downsizing of the labour force was observed apart from the crisis period during the early 1990s and due to economic cyclical. Moreover, the percentage of labour in unions and apprentices included in training was also increasing.

In terms of training and education, the main focus is on STEM education for the German economy as a whole and especially at VW. The skill development is associated with enterprise-specific skills.

VW seems to have captured more of its value-chain within its financial reporting boundaries. But, there could be vertical disintegration, since, the cash margins are relatively untransformed.

The debt ratios indicate that there is increasing reliance on external debt financing. It was during the expansion of the Financial Services Divisions, in the early 1990s, the cash flow to debt ratio increased sharply. However, the increase declined to remain flat indicating sufficient cash flow to service debt. Nevertheless, the debt to equity ratio indicates an extent of financialisation, of the

Financial Services Division, comparable to that of an American Investment Bank. But altogether, the debt ratios indicate less aggressive financing of the automotive division since operating cash flow is able to service the debts.

In terms of value-added, there is no increase in shareholder primacy although MSV perspectives were adopted as is evident from the increased in appropriations to all other economic actors over the shareholders. The productivity growth does seem to relate one-to-one with its financial correlate, *i.e.* the value-added per employee. The stock price and gross profit margin have also increased over the years indicating an increase in shareholder's value.

7 Cross-case Analysis

This chapter will compare and analyse the elements under the social conditions framework for GM and VW in such a way that it contributes to validating (or refuting) the hypotheses (see *Data Analyses and Reporting* in *Chapter 5*) and propositions (see *The Social Conditions of Innovative Enterprise* in *Chapter 4*). This will enable us to answer the main research question. Additionally, value-added and corporate performance of these enterprises are also compared.

7.1 Strategic Control

The proposition under this social condition, as Lazonick (2015) postulates, is related to the strategic decisions made by senior executives regarding productive investments and payouts.

The compensation of executives is increasingly stock-based in the case of GM; it is evident from the nearly 8 times increase of equity in compensation over the years between 1991 and 2017 (see *Figure 6.9*). In 2017, more than 50 percent of the total compensation received by the top five earners came from the equity they held (GM Annual Report, 2017). These evidences are supportive for validating *Hypothesis 4*³⁷. Additionally, their compensation is also aligned with the scores of ROCE. This ratio, assuming the other elements in the formula to remain constant, is negatively associated with shareholder's equity of the outstanding shares. GM has a target ROCE of 20 percent or greater (Foley *et al.*, 2017). GM has high shareholders' primacy in its governance. Moreover, in the U.S., the SEC permits stock repurchases (Lazonick, 2015). Taken together, and also for the fact that a ROCE of 20 percent or more was never achieved (see *Figure 6.35* and *Figure 6.36*), it can be argued that there are all motives in place for the executives to engage in stock repurchases (and massive dividend payouts). Figure 7.1 plots the amount spent on share repurchases over the years between 1991 and 2017; in the case of GM, it shows an upward increasing trend. The blue dot in the plot represents VW's only repurchase and is taken as 100.

To see how it affect productive investments, the ratio of total payouts to R&D investments is observed. While, the trend of the ratio remains flat over the years for VW (see *Figure 6.46*), the trend is increasing for GM (see *Figure 6.7*). This is consistent with *Hypothesis 2*³⁸. Figure 7.11 plots the

³⁷ *Hypothesis 4*—As a result of MSV perspective in corporate governance, an increasing trend of equity in compensation can be observed and the main component of executives' pay will be from equity.

³⁸ *Hypothesis 2*—Extreme practises following the adoption of MSV perspective in corporate governance can be observed in an increasing trend in the ratio of total payouts to investments in R&D.

patent output for both GM and VW. Clearly, consistent with *Hypothesis 3*³⁹ the patent output is higher for VW when compared to GM.

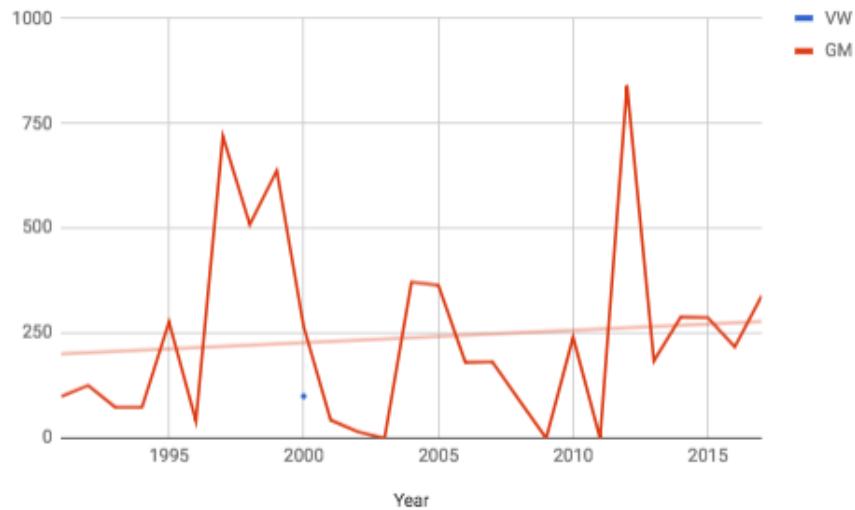


Figure 7.1. Volkswagen and General Motors—Amount Spent in Share Repurchases (Base Year (1991) = 100)—1991 to 2017 (*Source: GM, VW Annual Reports, 1991-2017*)

The evidence from GM's Annual Reports (1991 to 2017) support the argument that total payouts (inclusive of both dividends and repurchases) are performed more than the investment in tangible assets and finance is channelled away from tangible assets (over the years) to financial assets. This is noted by the increasing ratio of total payouts to investments in tangible assets, yearly, and the ratio of financial assets to tangible assets. The major and only component, except in the year 2000, of VW's total payouts are dividends. Increase in investments in financial assets over tangible assets are supposed not to contribute to innovation following the logic of Heirman and Clarysse (2007). The evidence also indicates that, following the logic of Krippner (2005), GM is more financialised than VW. This also underscores the notion of Palley (2003) that adoption of MSV perspective leads to financialisation. These evidences are consistent with *Hypothesis 1*⁴⁰.

³⁹ *Hypothesis 3*—The patent output of an enterprise will be lower in an enterprise that performs payouts over productive investments compared to an enterprise that doesn't.

⁴⁰ *Hypothesis 1*— The ratio of financial to tangible assets will be higher in an enterprise that has adopted the (extreme) routines rationalised by MSV indicating higher financialisation when compared to that of an enterprise that has not adopted such routines.

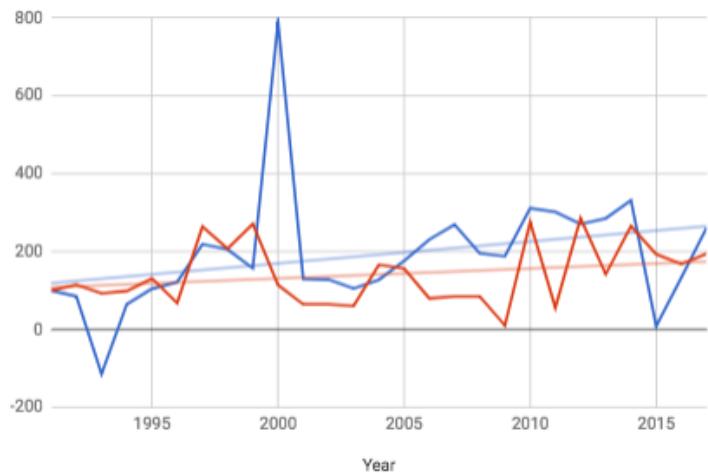


Figure 7.2. Volkswagen and General Motors—Total Payouts as a percent of Investment in Tangible Assets
(Base Year (1991) = 100)—1991 to 2017 (*Source: GM, VW Annual Reports, 1991-2017*)

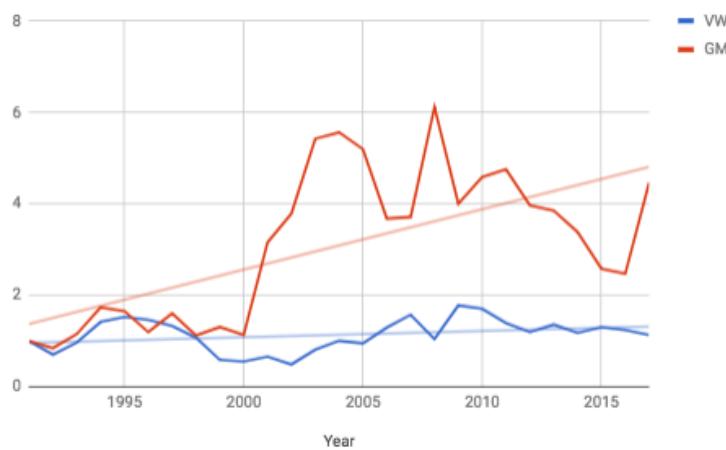


Figure 7.3. Volkswagen and General Motors—Ratio of Financial Assets to Tangible Assets
(Base Year (1991) = 1)—1991 to 2017 (*Source: GM, VW Annual Reports, 1991-2017*)

The compensation of the Board of Management, in the case of VW, consists of a fixed non-performance-related component and a variable performance-related component (VW Annual Report, 2017). It is intended that the fixed component incentivises the Board to perform in the best interests of the enterprise with appropriate business farsightedness without necessitating to focus merely on short-termist goals. The variable performance-related remuneration consists of an annual (yearly) bonus—evaluated based on the performance of the respective board member—and a long-term incentive (LTI) which is calculated based on the performance shares allocated at the beginning—and EPS achieved by the end—of every fiscal year. The annual bonus is based on the operating profits achieved by VW. The assessment period for LTI is a forward-looking three-year period. The performance shares are allocated to the respective member purely for calculation purposes. The number of performance shares is estimated based on the extent to which the target annual earnings per outstanding preferred share is achieved. The remuneration for the Chairman of

the Board of Management is capped (for one fiscal year) at €10,000,000 (\$11,621,490) and €5,500,000 (\$6,391,819) for each member of the Board of Management. “If the total amount is exceeded, the variable components will be reduced proportionately” (VW Annual Report, 2017). Clearly, there is no (direct) equity in top executives’ compensation and is consistent with *Hypothesis 4*.

Although, this does not completely remove the incentive of the Board of Management to engage in repurchases, a major decision such as this should receive a two-thirds majority of the Supervisory Board whose 50 percent of the members are representatives of the employees and trade unions. This failproof and stable decision-making structure has prevented any channelling of funds away from tangible assets (or employees’ wages) to buybacks which may affect the labour force. The evidence (*Figure 7.1* to *Figure 7.3*) from VW’s Annual Reports support this argument. The steeper trend (than GM) of VW (in *Figure 7.2*) is due to the increase in dividend payouts.

The increase in stock price of VW compared to GM is consistent with *Hypothesis 8*⁴¹. In the case of VW, we have seen that for every unit invested share capital in 1991, the dividends paid are not more than the share capital invested while the shares are worth more than 5 times (see *Figure 6.54* and *Figure 6.77*). In the case of GM, the cumulative dividends received by shareholders are more than their unit invested capital in the base year (see *Figure 6.14*), while at the same time the shares are worth the same (see *Figure 6.37*). The dividend payouts, in the case of VW, truly represents the residual claims for the shareholders and is consistent with *Hypothesis 9*⁴².

In 1993 following the increasing pressure from the shareholders, VW had set financial targets (such as an achievement of 8 percent rate of returns on investments) and pursued the expansion of its Financial Services Division (Jürgens, 2010). The expansion of the financial assets (in terms of investments in financial securities) at VW (*Figure 6.40*), when compared to the investment in tangible assets (*Figure 6.42*) and the ratio of financial assets to tangible assets (*Figure 7.3*), however, indicate that the leaders have not lost their judgemental capacity. Achieving profits were endeavoured by continuously developing the its core—automotive—value-chains which contributed up to 80% of its profits (see *Table 6.4*).

⁴¹ *Hypothesis 8*—A true increase in the performance thereby the shareholders’ value can be observed in the increase in the stock price of an enterprise.

⁴² *Hypothesis 9*—Given the increased stock price, the cumulative dividends paid will be lower in an enterprise that has not followed extreme measures (of excessive dividend payout) than an enterprise that has followed extreme measures in the name of MSV.

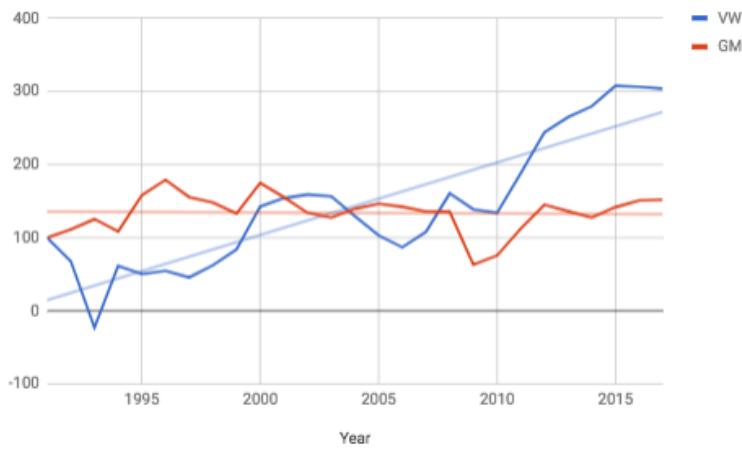


Figure 7.4. Volkswagen and General Motors—Investments in Tangible Assets
(Base Year (1991) = 100)—1991 to 2017 (*Source: GM, VW Annual Reports, 1991-2017*)

At VW, the strategic intent of the leadership is in the long-term competence development of the enterprise. Extreme measures that may follow from MSV and profit-orientation is moderated by the co-management. The leadership mainly targeted to embody the notions of quality and technical excellence in their products and sought a production-ist approach by increasing the output while at the same time reducing the costs (Jürgens, 2010). Workers were given liberal benefits and high wages (compared to other automakers) even during the initial days. The top executives also possessed the ability to identify the market and technological constraints as is evident from several cases when they have abandoned new product development and continued enhancing their common platform strategy—a core strength of VW—and rolling out water-cooled front-wheel-drive engines in their cars. The major acquisitions performed were within the core operation of VW, *i.e.* within automotive (the acquisition of Triumph-Adler was an exception).

During early 2010s, while the market and technological competition of developing alternative-fuel cars prompted automakers to engage in partnerships that shared cost in innovation—such as Toyota and BWM, and GM and Peugeot-Citroën—under Piëch’s leadership and extending their capability, VW had been successful in reducing their manufacturing cost by reducing the common platforms upon which cars were built and did not require partnerships (for alternative-fuel innovation). In 2012, VW’s platform, MQB, served as the basis of four car models—including the ones that sold well in the mass market—and all their variations (Economist, 2012). The Supervisory Board comprising of the State, as well as union representatives, usually resisted VW’s short-term urge to pull out of foreign markets succumbing to pressures. GM who suffered massive losses left several foreign markets.

In the case of GM, the expansion of financial assets was following the massive loans issued to finance GM’s customers’ purchases. This is in line with GM’s corporate (Sloan’s) strategy of financing car sales to generate higher profit from quantity sold (Maielli & Haslam, 2016). This,

however, was coupled with a decrease in investments in tangible assets and hence, is a short-termist view. Over the years, at GM, we have seen that the Chief Executives who helmed GM were normally outsiders, unlike VW, and they did not have career with one company. They have failed to address the main issues at stake as well as to recognise the capabilities of GM. The core capabilities at GM—which had also helped them to succeed in the earlier years (GM, 2017)—were the notions of semi-autonomous division, its leadership's autonomy, and GM's capabilities in the core automotive sector.

The main issue which prevailed was related to the labour relations; GM had an unhappy labour force as GM pursued wage cuts while at the same time executives reaped benefits, there was lack of investments in equipment while at the same time exerting high production demand and outsourcing of certain functions coupled with plant closures and downsizing. The Chief Executives revamped the already well-functioning organisational structure and attempted to diversify into business-lines other than automotive; certain decisions to improve the production process (such as automation of the production assembly line while the labour relations were already bad) or new product development (such as Wagoner's investments in electric vehicles while GM had low operating margins) were well ahead of time as it did not address the issues at stake then and weren't received positively as it only worsened the labour conditions. These attempts resulted in major losses. Moreover, the attempts in new product development to withstand market competition were killed by the CEOs who were hired from outside the firm.

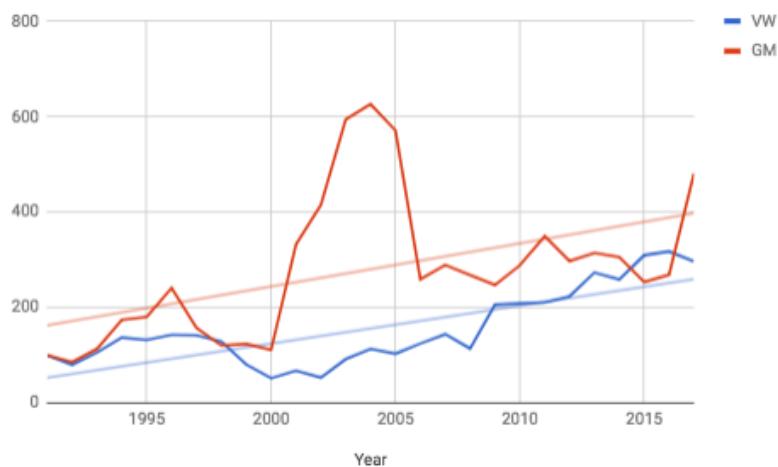


Figure 7.5. Volkswagen and General Motors—Accumulation of Financial Assets
(Base Year (1991) Investments = 100)—1991 to 2017 (*Source: GM, VW Annual Reports, 1991-2017*)

However, the current CEO—who spent all her career with GM—seems to have restored the autonomy that the divisional leaders enjoyed once and promoted the stewardship of her employees improving their responsibility towards the enterprise. She has also exited operations from loss-making regions to direct investments in prospect regions such as the U.S. and China (which increased

the output by 40 million units) and reduced the common platforms required (which can reduce costs). Investments were also made in capabilities required to compete in a “high-tech” future.

Implication to Strategic Control Proposition

The evidence from the business cases of GM and VW underscore the notion in the proposition that top-executives, should their incentives be based on financial targets and/or stock-based, lose the ability to develop the innovative capabilities of an enterprise by channelling their focus towards “short-termist” achievement of targets (such as by giving out excessive loans to credit finance GM’s customers purchases), increasing share valuations and increasing the variable component of their compensation (by share repurchases). This is also to say that the enterprise becomes financialised. From the case of VW, we see that even if the executives (of VW) have performance related components in their compensation, they haven’t resorted to short-termism (or have engaged in share repurchases) whereas they continued enhancing the factors required for long-term competence development. One of the reasons could be that they were career managers and were passionate about the work they did; another reason is the presence of the dual system of corporate governance and extended involvement of labour representations in the stable decision-making process/structure. In the case of GM, aside from the current CEO, the executives are not career managers and at many occasions have failed to identify the requirement of the enterprise to stay competitive. Being a career manager, the current CEO seems to develop the productive capabilities.

Therefore, the judgemental capacity of the executives is not related only to their incentive to engage in repurchases alone but may also depend on where they come from within the enterprise, their commitment and passion towards work as well as the set of relations, such as co-determination or focus on MSV, that prevails which may prompt or prevent them from engaging in processes that undermine productive investments.

7.2 Organisational Integration

The proposition under this social condition, as Lazonick (2015) postulates, is related to collective and cumulative learning and careers.

We have seen an increase in total payouts (see *Figure 6.13*) at GM. While at the same time it has been observed that during the same period, there have been massive layoffs (see *Figure 6.11*). Moreover, we have also observed that at GM the number of interns and/or apprentice trainees was reducing over the years, such as from 1500 (in 1990s) to 350 (in 2000s) (J. Morrison, 2009). However, there were many programmes that GM started to train students and prepare them for the automotive industry but they were not subsidised and placements after the programme were not guaranteed. It could be argued that the amounts used in (total) payouts could have been redirected to either retain

employees or subsidise the training of the interns or hire more interns. Furthermore, there was only the notion of developing “general” skills (hatched by the UAW-GM association to ensure future employability as their careers became uncertain) as opposed to developing enterprise-specific or job-related skills (JAS, 2017). Although a direct correlation cannot be established that payouts are done at the expense of employment, the ratio of total payouts per retained employee will give some indication (*Figure 7.7*). It would make sense to think that had the disgorging of cash was restricted, the enterprise could have retained some cash at least to retain some of the employees and train them so that they become valuable assets to the enterprise.

In the U.S., in terms of employment and employee-relations, the top executives exercise unilateral control over the enterprise and they can hire and fire workers without significant costs (Lazonick, 2017c). The relationship and conflict resolution between the employee and employer happens in the labour market via flexible price-wage adjustment mechanism and there is no obligation to establish labour unions—although the labour law does not prohibit its formation—for the workers such as Works council as in Germany; even if present, the unions are less powerful as opposed to the ones in Germany (Speidel, 2000). This is because there is no economy-wide wage co-ordination (McGaughey, 2015). The flexible price-wage adjustment mechanism as well as the regulatory contexts that permits costless firing (and hiring) resulting in a highly flexible labour market makes it easier for the enterprises to downsize and hire more skilled labour in response to competition rather than investing in labour force cultivating their capabilities for the sake of long-term skill development and competence (P. A. Hall & Soskice, 2001).

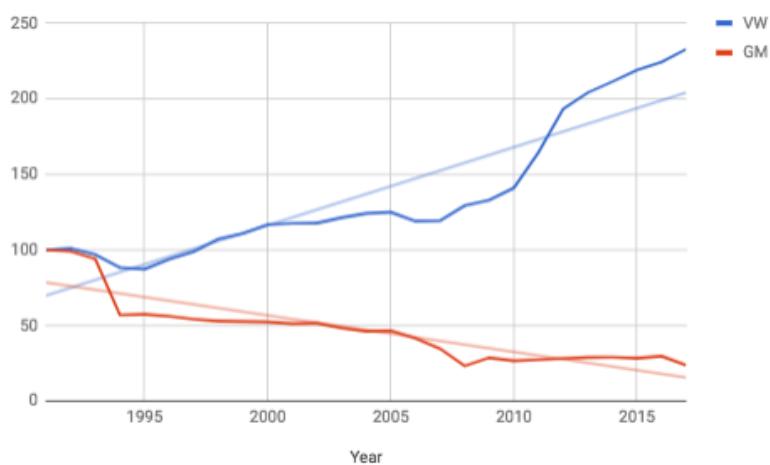


Figure 7.6. Volkswagen and General Motors—Employment Growth Development (Base Year (1991) Level = 100)—1991 to 2017 (*Source: GM, VW Annual Reports, 1991-2017*)

In the case of VW, VW endorses STEM education and contribute to the German VET education system. At VW, VET is in line with the dual system (of German Education) and the apprentices are trained within a professional “family” or *Berufsfamilie*. The numbers of apprentices absorbed are

increasing over the years (see *Figure 6.49*). Furthermore, Works council always ensured that funds are allocated for training through their representatives in the Supervisory Board. Additionally, they have always been proactive in reforming and streamlining the apprenticeship (within VW) by making the training process more cost-efficient and the content, effective (Jürgens, 2010). In line with the “location protection”, which takes into account the views of the process engineering changes required for the implementation of a new product or technology or investment project, budget for sufficient training following the agreement between VW and the Works council was always allocated by the Supervisory Board. Clearly, VW has not been downsizing its labour force (*Figure 7.6*) during this period aside from the crisis period and economic cyclicity, therefore, and taken together with the extent of labour training, VW has not been undermining “collective and cumulative careers”. While comparing with the employment growth in GM, the evidence is consistent with *Hypothesis 5*⁴³. Furthermore, in the case GM, the total salary paid has remained almost constant over the years, while the salary per employee has increased (see *Figure 6.10*). This is due to a decline in the employed labour force. But for VW, both the total salary paid and salary per employee have been increasing (also, the employment growth) (see *Figure 6.48*). This is consistent with *Hypothesis 6*⁴⁴. It can be argued that VW has a more motivated labour force than GM (see *Value-Added and Corporate Performance*).

In Germany, under the labour and employment law, normally most employment contracts are permanent contracts and it is only at rare occasions that limited term employment contracts are written; such contracts are subject to restrictions under the law and are permissible normally in the case of limitations that may hamper business-as-usual or project work and workers are hired in the limited term to overcome the limitation (WilmerHale, 2018). In terms of termination of an employee, the employer must adhere to the application notice period—normally determined by the law—which can range between four weeks and seven months depending on the length of the tenure served by the employee. According to the German Termination Protection Act, any enterprise that employs more than five employees cannot terminate any of its employees who has worked more than six months unless there are particular and critical situations such as display of fraudulence or enterprise’s decision to restructure the business. Moreover, in the case of mass downsizing, prior approval of the employment office is mandatory (*ibid*).

These strong labour rules have clearly prevented VW from downsizing their labour force; in addition to this there are strong labour representations in the Supervisory Board which could

⁴³ *Hypothesis 5*—A decline in employment growth can be observed in enterprises that follow the less fundamental ways (of downsizing) embracing the MSV perspective.

⁴⁴ *Hypothesis 6*—A decline in total salary paid can be observed in an enterprise that follows downsizing while an increase in salary per employee can be observed in an enterprise that rewards its employees to foster organisational integration.

definitely guard against downsizing. VW's corporate governance policy specifies prodigious and reciprocal "jointness" between the members of the Board and Works councils, which have been developing over the years with the long reigns held by the Chairman of the Board and the Chairman of union such as IG Metall as well as the participation of Works Council in streamlining the training processes (Jürgens, 2010). The number of employees in trade unions has also increased over the years (see *Figure 6.51*).

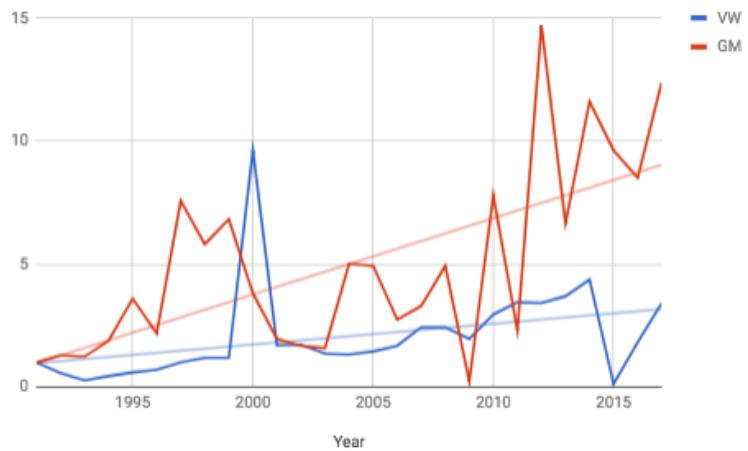


Figure 7.7. Volkswagen and General Motors—Total Payouts per Retained Employee (Base Year (1991) Level = 1)—1991 to 2017 (*Source: GM, VW Annual Reports, 1991-2017*)

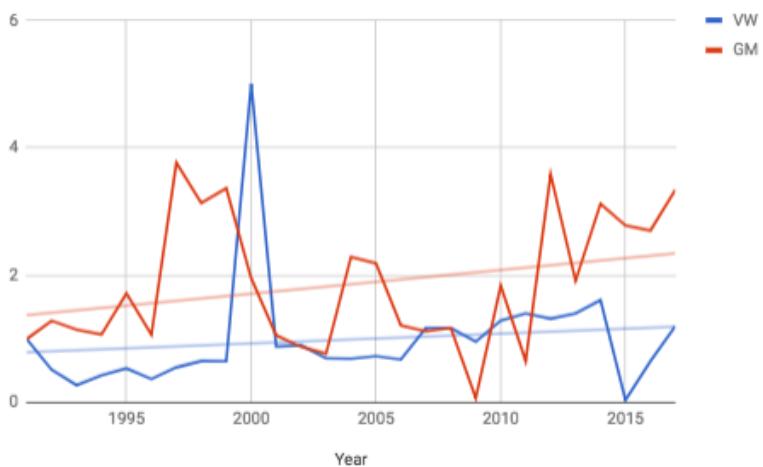


Figure 7.8. Volkswagen and General Motors—Total Payouts to Wages Paid (Base Year (1991) Level = 1)—1991 to 2017 (*Source: GM, VW Annual Reports, 1991-2017*)

Figure 7.7 plots the ratio of total yearly payouts to total employee base and Figure 7.8 plots the ratio of total payouts to wages paid. It is clear that the payouts per employee have been increasing in the case of GM more than in the case of VW. Over the same period, it should be noted that the employee base has been decreasing for GM and increasing for VW (see *Figure 7.6*). This indicates a considerable increase of total payouts per a retained employee in GM. Moreover, the total payouts have increased more than the wages paid for both enterprises. While for VW, the increase has been

steady and for most the times, the ratio has remained less than unity. In the case of GM, the increase has been steeper than VW and the ratio has remained greater than one. This also tells us that the shareholders are not really “residual claimants” in the case of GM. These evidences support the proposition of the organisational integration by Lazonick (2015).

Implication to Organisational Integration Proposition

The evidence from the business cases of GM and VW underscore the notion in the proposition that buybacks are performed at the expense of retaining the employees. The retention of workers, in the presence of total payouts, could be in part dependent on the enterprise’s policy and the involvement of trade or labour unions and in part could be due to the larger economic and regulatory constructs (which are very different as we have seen in the case of Germany and U.S.). A deregulated labour market which enables costless hiring or firing is a short-cut to short-termism; executives tend to use this channel to generate “free” cash flow that can be used in share repurchases.

It can also be argued that, there is no incentive for GM to develop enterprise-specific skills and motivate its labour force since there is high reliance on the flexible labour market. This is in contrast to the mechanism at VW. As will be shown later, at VW, hiring more labour force has translated into higher productivity probably due to the development of enterprise-specific skills as well as the boost in their motivation that the employees get due to stable employment.

7.3 Financial Commitment

The proposition under this social condition, as Lazonick (2015) postulates, is related to a withdrawal of internally controlled finance or “inside capital” that could be used to support investment in the company’s productive capabilities.

The withdrawal of funds from productive investments can be observed in the ratio of total payouts to R&D investments (*Figure 7.9*) and the ratio of total payouts to tangible investments (see *Figure 7.2*). The extent of withdrawal of the “inside capital” can be seen by looking at the total payout as a percentage of the net income since it will an indication of from where the funds for total payouts come from (*Figure 7.12*). In the case of GM, it can be seen that the payouts have remained mostly more than the net income. The negative ratios indicate that payouts have been performed even when the net income was negative. At the same time, the R&D investments (in isolation) have been increasing over time (see *Figure 6.6*). But, there are other operations (besides R&D) that have to be sustained in the enterprise. This indicates that GM has been financing its operations via debt which is evident from the debt to equity ratio (see *Figure 6.19*).

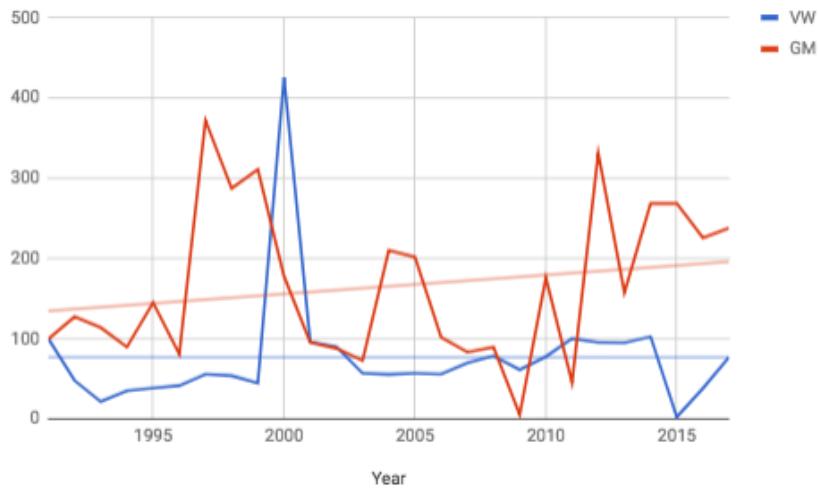


Figure 7.9. Volkswagen and General Motors—Total Payouts as a percent of R&D Investments
(Base Year (1991) = 100)—1991 to 2017 (*Source: GM, VW Annual Reports, 1991-2017*)

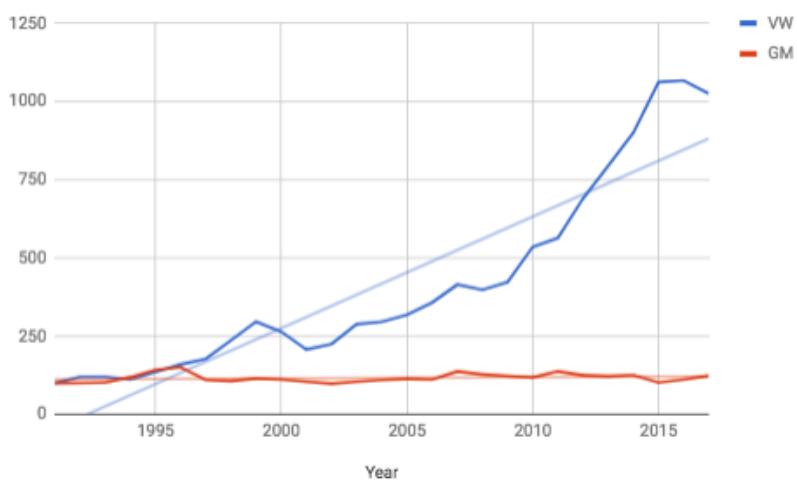


Figure 7.10. Volkswagen and General Motors—Total R&D Investments
(Base Year (1991) = 100)—1991 to 2017 (*Source: GM, VW Annual Reports, 1991-2017*)

In the case of VW, consistent with *Hypothesis 7*⁴⁵, the total payouts have mostly remained under the total net income (but for GM, the ratio in most cases is more than 100%) (see *Figure 6.12* and *Figure 6.52*). The ratio of total payouts to R&D investments has also remained consistent while at the same time the R&D investments have increased nearly 10 times (see *Figure 6.45*). It should be noted that VW has more subsidiaries than GM but the R&D investments reported are the investments made in the automotive sector. This implies that VW has been expanding while acquiring subsidiaries within its core capability of automotive. In terms of the debt to equity ratio, it has remained untransformed over the years (*Figure 7.13*).

⁴⁵ *Hypothesis 7*—Total payouts (dividends and buybacks) as a percentage of net income can be observed to be more than 100 % in enterprises that follows extreme measures in the name of MSV.

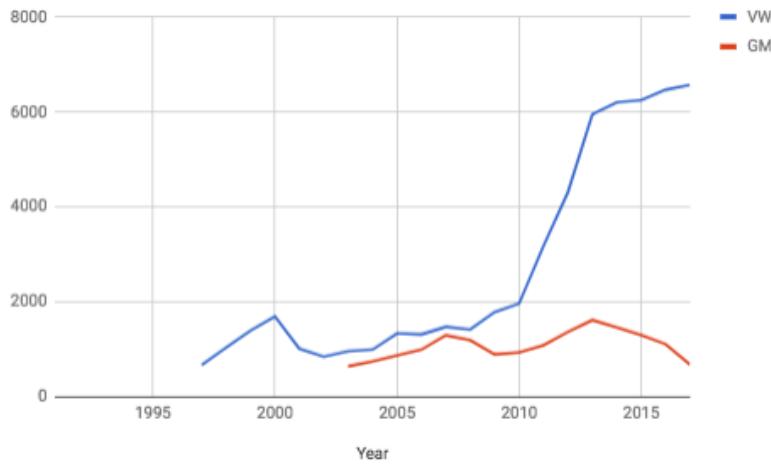


Figure 7.11. Volkswagen and General Motors—Patent Output
—1997 to 2017 (Source: *VW Annual Reports, 1997-2017, Justia, 2003-2017*)

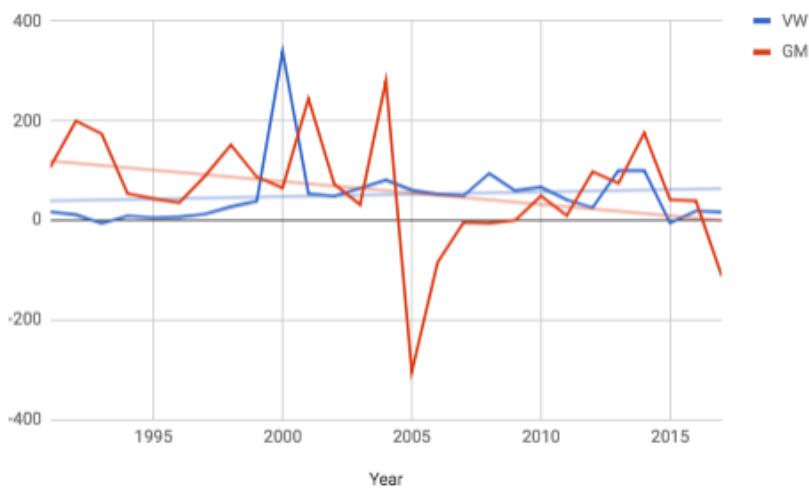


Figure 7.12. Volkswagen and General Motors—Payouts as a percent of Net Income
—1991 to 2017 (Source: *GM, VW Annual Reports, 1991-2017*)

Pertaining to *Hypothesis 10*⁴⁶, the debt to equity ratio was higher for GM between the years 1991 and 2009, afterwards the ratio is similar to that of VW (*Figure 7.13*). Interestingly, the cash flow to debt ratio is decreasing steeper for VW than GM indicating higher leverage for VW (*Figure 7.15*). The capitalisation ratio is also increasing for VW (*Figure 7.16*). These, supposedly, indicate higher financialisation of VW inconsistent with *Hypothesis 10*.

⁴⁶ *Hypothesis 10*—A declining capitalisation ratio and cash flow to debt ratio, and a high debt to equity ratio can be observed for a financialised enterprise.

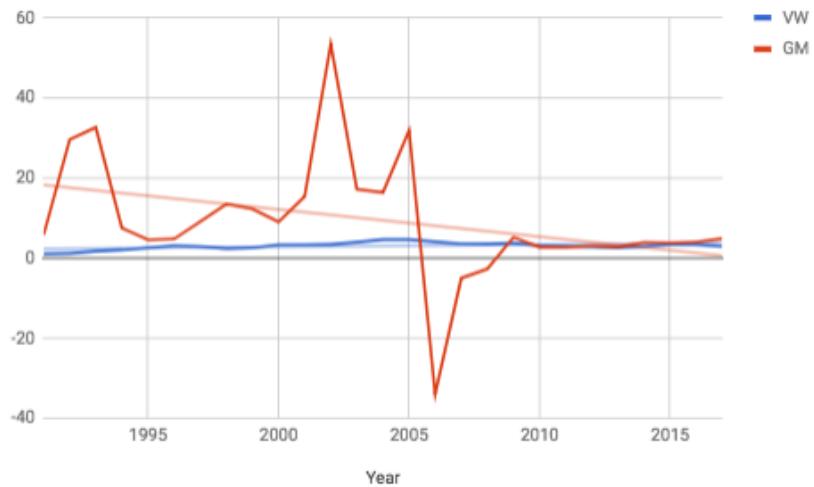


Figure 7.13. Volkswagen and General Motors—Debt to Equity Ratio
—1991 to 2017 (Source: GM, VW Annual Reports, 1991-2017)

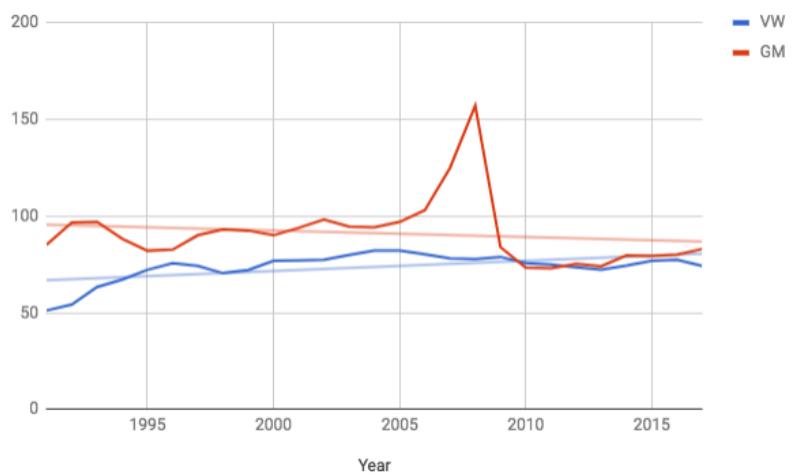


Figure 7.14. Volkswagen and General Motors—Capitalisation Ratio
—1991 to 2017 (Source: GM, VW Annual Reports, 1991-2017)

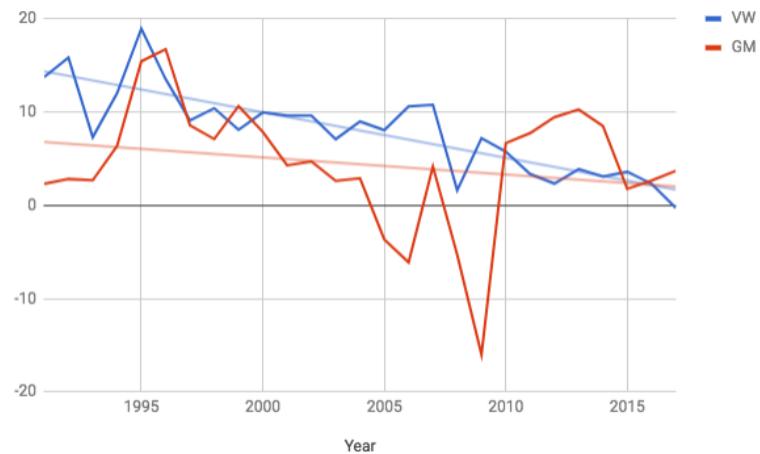


Figure 7.15. Volkswagen and General Motors—Cash Flow to Debt Ratio
—1991 to 2017 (Source: GM, VW Annual Reports, 1991-2017)

As mentioned before (see *Investment in Tangible Assets and Financial Assets* of VW in *Chapter 6*), this is due to the higher targets set on the rate of returns on investments and the corresponding expansion

of VW's Financial Services Division. Moreover, VW had increased its reliance on the capital markets as a source of refinancing (see *Figure 6.56*). However, analysis of VW's operating cash flow indicates sufficient cash inflow to service the debts posing lower risks (see *Figure 6.58* and *Figure 6.60*).

Implication to Financial Commitment Proposition

The evidence from the business cases of GM and VW underscore the notion in the proposition that buybacks represent a withdrawal of funds from R&D. One basis of Jensen and Meckling in promoting MSV perspective was the fact that by distributing "free" cash flow to shareholders, they would be better able to invest in value-adding projects (via other managers of another enterprise or project) after monitoring the stock price. Beyond this intended notion, the index on stock-prices as monitor and distribution of "free" cash flow seems to operate rather perversely.

Jensen and Meckling's "free" "cash flow is [the] cash flow in excess" after investing in projects with a positive net present value after discounting the cost of capital of investment (Lazonick, 2015, p. 13). The funds for the projects are either financed by the retained profits or can be debt-financed. Managers (of GM) have resorted to excessive stock repurchases, many times the payouts were well above the net income or even when the profits were negative. Moreover, at the same time GM has been increasing their reliability on debt financing to sustain day-to-day operations and R&D investment projects. The distributed cash at GM, in the form of dividends or buybacks, is clearly not the cash flow in excess.

Increasing debt and higher leverage, are not undesirable, but could pose problems when an enterprise is unable to service its debts—as is the case observed from the debt ratios of GM (see *Figure 6.16* to *Figure 6.19*)—which may eventually lead to its close-down leading to losses to many actors of the economy. For instance, the households as they become employed, the creditors as enterprises become unable to repay the borrowed money, the government as the taxes paid to the State will be affected, and the enterprise itself who will suffer losses of its sunk and non-recoupable costs. GM had faced this; when the enterprise filed for bankruptcy, it reported \$172.81 billion in debt and only \$82.29 billion in assets.

While in the case of VW, the payouts have remained less than the net income and R&D investments were increasing consistently more than in the case of GM. Although VW relied on debt financing, the operating cash flow could service their debt (see *Figure 6.58*). Moreover, the R&D output of VW has remained more than that of GM during the years, which suggests that the endorsement of MSV perspective results in following less fundamental measures and negatively affects R&D output.

7.4 Value-Added and Corporate Performance

Value-added is the total appropriated values in the form of wages paid to the employees, taxes paid to the State, dividend paid to the shareholders, retained profits, and interests (and principal) paid to the creditors (*Figure 7.16*). As per Jürgens *et al.* (2002), the employment growth (see *Figure 7.6*) and the development of gross profit margins (*Figure 7.17*) could reasonably be seen as indicators of economic performance since they cover the interests of both the employees as well as that of the shareholders (p. 79). Corporate performance can be analysed by looking at the total output (*Figure 7.18*) and stock prices (as EMH hypothesis contends) (*Figure 7.19*).

The value-added by both GM and VW have remained similar until the year 2003-04, and then they diverged with VW notching more than GM. The gross profit margins (ratio of earnings before tax to total revenue) are also similar for both the enterprises, but in 2017 they are polarised (VW has positive gross profit margin). VW notches high in terms of output growth and employment growth. The stock prices have also remained similar until around 2005 and VW's stock prices increased considerably. In almost all the cases, VW delivered similar or perhaps superior performance compared to that of GM. The year 2005 seems to be the year of divergence.

Looking closely at what might have happened at VW (and GM), it is observed that the output per employee or productivity has increased for VW while the productivity was low for GM (see *Figure 6.31* and *Figure 6.71*). The increase in productivity (output per employee) can either be because of an increase in actual output or decrease in labour employed. Given that the output is growing in the case of VW and also that the labour force is not downsized, it leads to the argument that VW hiring (or retaining) (more) labour have translated into higher productivity and confirms our earlier argument that VW has a more motivated labour force due to its organisational integration. Investments in tangible assets were low for both VW and GM during this time.

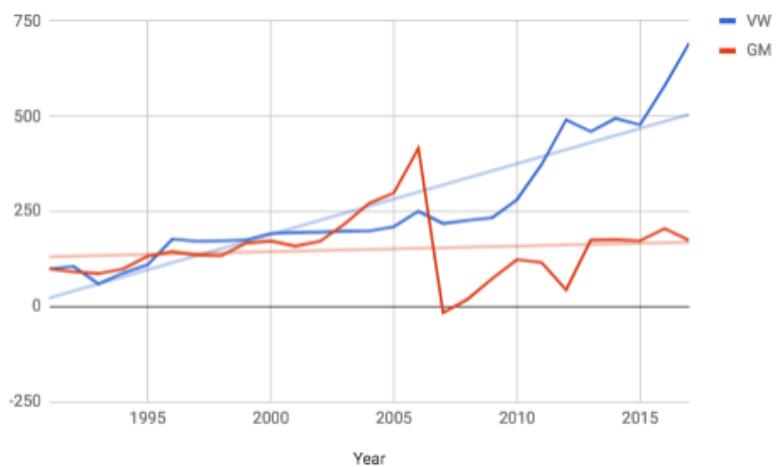


Figure 7.16. Volkswagen and General Motors—Value-Added
(Base Year (1991) = 100)—1991 to 2017 (Source: GM, VW Annual Reports, 1991-2017)

Pertaining to *Hypothesis 11*⁴⁷, clearly in the case of GM, there is an increasing shareholder primacy which is evident from the higher appropriations received by the shareholders over other economic actors (see *Figure 6.22* to *Figure 6.25*). In the case of VW, it can be seen that increase in trend of the appropriations by the shareholders is less steep than the increasing trends of value-added, profits, appropriations to the State and the creditors (see *Figure 6.64* to *Figure 6.67*). These are consistent with *Hypothesis 11*.

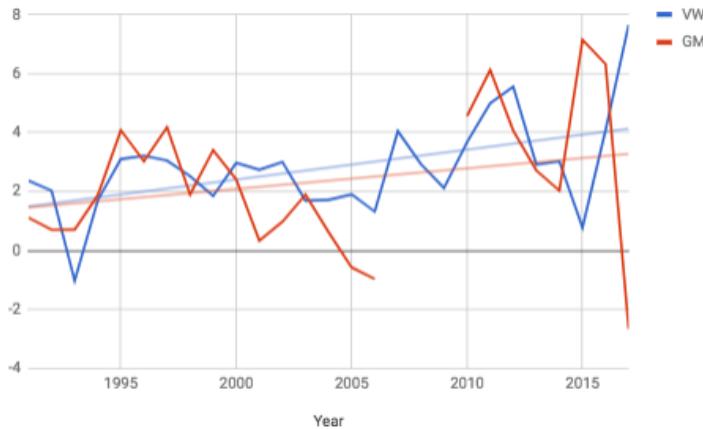


Figure 7.17. Volkswagen and General Motors—Gross Profit Margin
—1991 to 2017

For GM, profit margins for the years 2007, 08, and 09 are not reported for the sake of visualisation
(Source: GM, VW Annual Reports, 1991-2017)

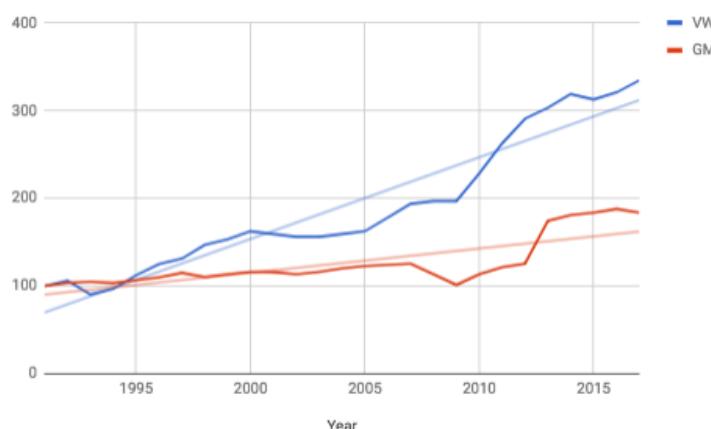


Figure 7.18. Volkswagen and General Motors—Output Growth
(Base Year (1991) = 100)—1991 to 2017 (Source: GM, VW Annual Reports, 1991-2017)

⁴⁷ *Hypothesis 11*—An increasing shareholder primacy following the MSV perspectives in corporate governance can be observed in the increasing rewards received by shareholders (in the form of dividends) over the rewards received by other actors (in the form wages, taxes, interests, retained profits).

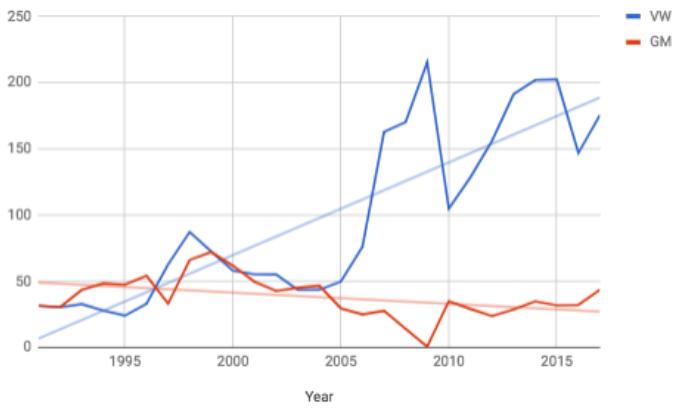


Figure 7.19. Volkswagen and General Motors—Stock Price (in \$)
—1991 to 2017 (*Source: GM, VW Annual Reports, 1991-2017*)

Despite adopting the rules and routines of MSV, GM can be considered an underperformer compared to VW which is mainly governed by a co-ordinated mechanism or co-management. This leads us to the conclusion that MSV may not yield superior performance. The social conditions that GM was exposed to which shaped the corporate governance can be narrowed down to the following. In terms of strategy, MSV is the norm and there is no stable decision-making structure. The structure is bound to change with annual elections. Stock buybacks is a strategy employed annually; it is also permitted by the regulatory regime. In terms of organisation, the labour market is deregulated which has translated into costless hiring and firing and hence there is a focus on developing “general” skills and reliance on capabilities of the mobile labour force. There is also the notion of downsizing, deindustrialisation, and offshoring of capabilities. In terms of finance, there is increasing reliance on debt financing which can induce more pressure for quicker rate of returns and short-termism.

In the case of VW, the social conditions are different from that of GM. In terms of strategy, there is stable decision-making structure—due to the dual-board and regular spots for labour representations and representatives of the State—and MSV is not the norm. The importance is towards “workholder value”—and long-term competence development—more than shareholder value. In terms of organisation, there is hierarchical integration at two levels—top executives are people from within the enterprise and there are labour representations in the Board via co-determination. Stable employment is ensured via the regulatory contexts as well as policies of Works council. Therefore, there is the notion of developing enterprise-specific skills and hence, there is a tendency of developing capabilities in-house. In terms of finance, it is the policy of VW to finance operations using its cash flow. Stock market is relied upon for acquisition money while operations are sustained using funds via EMTN and commercial paper. Nevertheless, the debt structure is expanding due to the expansion of VW’s Financial Services Division which also provides internal loans to sustain VW’s automotive operations.

8 Conclusions

The origins of maximisation of shareholders' value (MSV) can be traced back to the time when agency theorists argued that managerialism or corporate governance was inefficient since the managers or executives (or the agents) allegedly made unproductive investments of the owners' or shareholders' (or the principals) savings and engaged in maximising their self-regarding interests. Managers (and/or the enterprises they work for) are important since they preside over the resource allocation of a major part of an economy's resources. Shareholders are important since they accumulate capital in the form of saving deposits and cash-pools that the managers can use to make productive investments as the shareholders invest. Agency theorists pointed out that there exists a principal-agent problem that entailed a misalignment of the interests of the shareholders and the managers and it affects the resource allocation in an economy. The interest of the shareholders is that their value is maximised which, the agency theorists and proponents of MSV hypothesis reasoned, can be achieved by the efficient resource allocation based on the Efficient Market Hypothesis (EMH). Besides the notion of (selfish) utility maximisation by the managers, the unproductive investments and the inefficient resource allocations that they allegedly made were partly seen as the reason for emerging economies to surpass the U.S. economy in the late 1970s in terms of innovation.

In addition, shareholders were considered as the most risk-bearing participant in an enterprise without guaranteed returns. All other economic actors that participate are given their marginal product since they are bound by a contract. Shareholders, for their large numbers and since shares are traded in the secondary market, entering a contract with them becomes either too costly or impossible. Hence, there emerged a reason for disciplining the managers and to align their interests to that of shareholders and to ensure efficient resource allocation in an economy in aggregate.

The solutions devised by the agency theorists to address the aforementioned issues, with an aim to ensure efficient resource allocation, were twofold—a “market for corporate control” and “stock-based pay in executive remuneration”. These are based on the importance and functions of the stock markets. Stock markets are important since it aid enterprises to finance its new investments and provide investment opportunities to many economic actors. Enterprises can finance new projects by issuing IPO, initially, in the primary stock market. As the stock price increases following the superior performance of an enterprise, the demand for its stocks also increases—as (existing and new) investors would like to hold more of its stocks—and they are traded in the secondary market at a higher price. Enterprises can take advantage of this higher price to fund new investments by issuing more equity which could be bought (and sold) at the prevailing higher trading price in the secondary market.

In terms of the stock market as a disciplining device, under the premises that stock prices are “efficient” monitor of an enterprise’s true value of assets and decisions the managers make (whether unproductive or productive) get reflected in the stock price of the enterprise, the agency theorists argued that putting a “price” on managerialism will discipline them since if the managers engage in unproductive investments, it will show up in a deterioration of enterprise performance thereby depressing the stock price making the enterprise vulnerable for hostile take-over as the shareholders exit. Nevertheless, the principal-agent problem can still persist, even after a hostile take-over, because of the presence of asymmetric information. The new management can still make unproductive investment decisions and pursue actions that maximise their (selfish) interests, given the information disadvantage of (outside) shareholders. Therefore, as a complete solution to the agency problem, agency theorists proposed that the remuneration of the executives should have a component that is based on the performance of the enterprise (which is reflected in the stock price) and introduced the stock-based pay. This way managers are incentivised to increase share valuations by making productive investments and efficient resource allocation.

These proposed solutions, premised on neoclassical economics, were accepted and practised—to many extents—for the predominance this school of thought gained as it could explain the crisis the U.S. economy suffered, post-1970s, which the prevailing schools that then governed economic policies couldn’t. These perspectives or solutions, however, do not take into account certain (real-life) mechanisms inherent in the stock market, the labour market, or the functioning of an enterprise (in an economy). The stock price cannot be an efficient monitor of the enterprise’s performance. In deregulated stock markets, top executives who exercise power over corporate resource allocation can engage in stock buybacks which will increase the earnings per outstanding shares which is indicative (at least in the short-run) of superior performance. This apparent indication will increase shareholders’ expectations and increase the stock prices since more investors will now be interested in investing in the enterprise. Shareholders’ future expectations regarding dividend payouts can also be influenced by paying higher dividends today. This will also increase the demand for an enterprise’s stocks thereby its price.

The process of stock repurchases and dividend payouts has to be financed and for the increasing pressure from large investors on the enterprise for a higher rate of returns or share valuations, the executives look for a quicker source of finance instead of distributing the gains from the returns on new investments since it takes time. In a deregulated labour market, where hiring and firing of labour can be executed without significant costs, top executives engage in downsizing their labour force and their allocated wages are channelled towards stock repurchases and dividend payouts. In

addition, top executives also close down loss-making operations⁴⁸ as well as outsource capabilities to inexpensive emerging economies which will reduce the operating cost which gets reflected in the operating margins. Achieving this apparent superior performance or operating cost efficiency in this way only contributes to the static efficiency of an enterprise.

This is the point where the role of an enterprise in a larger economic context and its functioning gain importance. Following Schumpeter (1934), enterprises are considered engines of growth of modern capitalist economies since they disrupt the “circular flow” and in order to stay competitive for such dynamic and evolving economic contexts, it is argued that enterprises should focus on the development of their long-term competitiveness and innovation. These contribute to the dynamic efficiency of the enterprise which in turn contributes to a superior performance of the enterprise and thereby larger share valuations as well as to overall economic performance and welfare.

The MSV perspective (theoretically) contends that indexing corporate decision-making and its performance to stock price will incentivise efficient resource allocation and productive transformations but has not purported how these outcomes can be achieved. The theories of the firm in neoclassical economics that have tried to explain the operations of an enterprise and its prominent role in economic development direct either towards constrained optimisation which is inherently unable to address how the idiosyncratic enterprise can confront the (characteristics of the) innovation process and hence leads to outcomes which contribute to static efficiency or towards resolving co-ordination issues (between owners and managers) in market relations which leads back to square one of the agency problem.

The translation of the solutions premised on MSV, EMH, or principal-agent theories into practice has not resulted in a pure application of the purported rules, routines, and outcomes but has resulted in rather perverse practises and effects. While embracing these perspectives, mediated by the regulatory contexts, top executives have resorted to actions that can affect the long-term competence development (achieved, in principle, via productive investments) of an enterprise. They use MSV perspective to rationalise their extreme behaviours, such as, of downsizing, deindustrialising, massive buybacks and payouts, and the like. Theoretically, the application these theories, via these extreme behaviours, can manifest in the financialisation of corporates and corporate behaviour and lead to short-termism—a focus on higher and faster returns or profits—which drastically affect the set of relations that can foster the activities—of strategy, organisation, and finance—required to confront the—uncertain, collective, and cumulative—characteristics of the innovation process.

⁴⁸ Strategic consultants advise that enterprises should become leaner to grow stronger but not to reduce production costs alone. They argue that closing-down loss-making operations should enable efficient and strategic allocation of corporate resources to operations that can put the enterprise at a competitive advantage (PwC, 2017).

Mainly it operates through the following conduits. There will be an increasing adjustment of financial assets over tangible assets in the balance sheet of an enterprise. Considering the antecedents of innovation and its rate, development of tangible assets is imperative. In addition, there will be an increase in the adoption of debt financing to sustain day-to-day operations and to engage in stock repurchases and dividend payouts. Increasing debt glut, although beneficial as agency theorists contend, runs the risk of debt being unable to be serviced if the cash flow from operations is low. Disinvestments in tangible assets, which lead only to static efficiency, can, in turn, lead to decreased cost efficiency affecting the cash flow from operations which in turn can affect the service of debts. Moreover, debt has to be repaid quickly hence it induces further short-termism. Aggressive debt financing also runs the risk of bankruptcy and close-down affecting many economic actors and organisations such as employees (or households), creditors (as repayment of borrowed cash stops), the State (as payment of taxes is discontinued), and the enterprise itself.

Other factors are embedded in the “downsize and distribute” regime the enterprises adopt. In the process, the labour force is downsized, certain operations are discontinued, and the cash retrieved from these processes is distributed rather than retaining and reinvesting in developing the productive capabilities. All the above affects the set of relations that enables innovation in an enterprise.

Empirically, the theoretical conduits have been analysed in this thesis via three propositions (associated with the set of relations or the social conditions) and certain hypotheses that emerge from the financialisation literature. Looking at an enterprise—General Motors Corporation from the U.S.—where the MSV perspective (features of which are observed in a “Liberal Market Economy” (LME) such as the U.S.) was argued to be the dominant perspective governing corporate governance, the conduits of financialisation were observed and our findings, consistent with the hypotheses, lead to the conclusion that shareholder primacy and short-term orientation was predominant; financialised behaviour was also observed. The top executives of GM in most cases neither were able to identify the core competence or capabilities which needed to be developed nor did they address the prominent issues at stake such as fixing the tarnished labour relations. Pertaining to the propositions of the social conditions, we could accept all of them underscoring the following notions—GM’s top executives were willing to disgorge cash annually on buybacks and in the process, they have not been able to identify the investments in organisation and technology that were needed to remain competitive in the industry it operated in; they undermined “collective and cumulative careers”; and buybacks represented a withdrawal from productive investments.

In order to evaluate the effectiveness of MSV perspective as its proponents claim, a different enterprise—Volkswagen AG from Germany—whose corporate governance was argued to be shaped by a different perspective was compared with GM’s. The starting point of its selection was premised on the notion of a “Co-ordinated Market Economy” (CME) (such as Germany) where the

corporate governance systems display a notion termed as “co-determination” or “co-management”. In rudimentary terms, it implies that labour representatives are involved in corporate decision-making through their representations in the Supervisory Board which is one part of the dual-system of corporate governance. The other part is the Board of Management. All major decisions by the Board require the approval (with a two-thirds majority) of the Supervisory Board.

The financialisation conduits/hypotheses, as well as the social conditions propositions, were evaluated also for VW. It has been observed that adopting MSV perspective and setting (financial) targets were norms adopted by VW since the early 1990s. Following this, there was an expansion in the Financial Services Divisions of the enterprise and financialised behaviour was observed in the investments and accumulation of financial assets over the years and the debt ratios. This led to inconsistency in terms of *Hypothesis 10* while all other hypotheses were consistent. Nevertheless, these were not performed compromising productive investments and organisational integration. VW pursues “workholder value” which was hatched by the labour relations in 1999 which required the personnel policy to take into account two sets of goals or targets. On one hand, it took into account those related to workholder value such as knowledge management, social responsibility, employability, and flexibility, and on the other, it took into account the traits of shareholder value with an aim to increase company value among investors by increasing profitability and return on capital. The term “shareholder value” is seldom mentioned in their Annual Reports.

VW’s strategy purported long-term competence development and growth by value (but not by volume). Share repurchase schemes were not a policy endorsed at VW. The other important factor lies in the extent of co-determination or co-management in corporate governance. It appeared that the co-management served as a “guardian angel” against disinvestments and tunnel vision of achieving financial targets alone. Their active involvement is evident in all aspects pertaining to strategic control, organisational integration, and financial commitment. Moreover, (most of) the top executives joined the enterprise in junior positions and found their up to the Board and were technocrats who were passionate about engineering.

Comparing and contrasting these traits and operation of VW with GM the following points are worth highlighting. In terms of stock repurchases, during the observed period, GM engaged in repurchases annually, whereas VW has repurchased only once. Moreover, in VW Annual Reports, the term “buybacks” or “repurchases” has appeared only once, in 2001, during the years between 1991 and 2017. The total payouts as a percentage of tangible assets are more for VW than GM; but the major and only component of VW’s payout (except in the year 2000) were dividends. The cumulative dividends paid over the years (until 2017) have remained less than the shareholders’ capital invested in 1991, while at the same time their value is worth 5 times more. In the case of GM, the cumulative dividends exceed the shareholder’s capital invested (in 1991) and the shares are worth the same. Moreover, the capitalisation ratio indicates that GM depends more on debt financing (on

an average, \$92 for the period before its bankruptcy, in 2009, and \$86 afterwards for every \$100; for VW, it is \$25 for every \$100) than the stock market as a source of finance; yet payouts (in the form dividends to shareholders) are high for GM. The ratio of total payouts per retained employee is also higher for GM. Investments in tangible assets, R&D investments, patent output, and employment growth are better for VW. Just like GM, VW was also closing down loss-making plants but there was also a corresponding increase in investment in tangible assets (such as land, plants, and equipment) and its output (productivity as well as value-added per employee) was also increasing as opposed to GM. While education and training at VW aimed at developing enterprise-specific skills, in GM the focus was on the development of “general” skills. In terms of value-added, gross profit margin, output growth, and stock price, VW outperform GM. The major appropriations to economic actors, in the case of VW, were its employees, the State, the creditors and last, truly being the residual claimants, the shareholders. The major appropriators in the case of GM were the shareholders and the creditors, with the employees and the State being the last.

Taking together these observations, we come to answer the main research question—to what extent have the diverse corporate governance systems of General Motors and Volkswagen contributed to (dis)investments in innovation? The answer lies in the idiosyncrasies of the corporate governance system of these two enterprises.

GM is a profit-oriented and short-termist enterprise that had adopted the notions of MSV; this is high shareholder primacy. The enterprise is governed (mostly) by outsiders elected by the shareholders. There is no stable shareholding and decision-making structure. The strategy for growth is “growth by volume sold” and the skill development (of its employees) is more focussed on “general” skills rather than firm-specific knowledge. The short-termist orientation and the lack of development of firm-specific knowledge exacerbated outsourcing of capabilities and downsizing (hiring) of the labour force (when required) by the corporate leaders. Practising the (extreme) rules and routines rationalised by the MSV perspective has resulted in disinvestments in innovation and has affected corporate performance and larger economic welfare in terms of employment growth, appropriations to the State, and disinvestments leading to underdevelopment of the innovative capabilities. Stock-based remunerations (for top executives) are present similar to other stock-listed U.S. enterprises and there is aggressive debt financing. Stock buybacks is a strategy—most of the times more than the net income and sometimes even when the net income was negative—followed yearly. The regulatory contexts have also contributed to this since the Securities and Exchange Commissions (SEC), in the U.S., permits stock buybacks and the labour market is flexible (compared to that of Germany) which enables costless hiring and firing. Unlike Germany, there is no code which specifies formation of a dual-board of corporate governance, inclusion of labour representations in the Board, or formation of labour union.

VW, on the other hand, aims at long-term competence development, which is also the interest of its managers in the dual-board (of Supervisory Board and Board of Management), co-determination or co-management is consistently exercised in corporate governance (*i.e.* there is labour participation in corporate governance via their representatives in the Supervisory Board), and they aim at achieving shareholder value by endorsing “workholder value”. There is stable ownership and decision-making structure. Focus is on enterprise-specific skill development and cultivating capabilities in-house. VW consolidates product and (its production) process planning and ensures that sufficient training and equipment (pertaining to processes required for new product(s)) are provided or developed in-house. The strategy, at VW, is to finance operations using its cash flow (and internal company loans) and aims at “growth by value”. Stock buybacks is not a norm and VW targets high scores in sustainability indices. MSV perspective in corporate governance has reflected in the higher rate of returns on investments and certain financial targets; there was corresponding expansion of its Financial Services Division to achieve such high targets. This division also grants the internal loans. These traits together with the larger economic and regulatory contexts (such as the strong labour rules of Germany, German Code of Corporate Governance, VW Articles of Association) have safeguarded VW from the perverse effects, such as disinvestments in innovation, downsizing, *etc.*, that may have occurred after adopting the MSV perspective.

This leads us to the conclusion that MSV is not the only game in town, that it can be argued to be not conducive to innovation, efficient resource allocation, and superior (corporate and economic performance), and that there are reasons to further develop a theory—and policies for an innovative enterprise in parallel to the currently dominant concept of MSV (and its perverse applications in corporate governance). This will be addressed in the next chapter.

9 Implications and Discussions

This thesis has contributed to a better theoretical and analytical understanding of the MSV perspective and its association with the long-run performance or dynamic efficiency of an enterprise and its larger economic contribution. Moreover, the findings serve as the basis for certain implications for policy and corporate governance.

Proponents of agency theory argue that the shareholders are the ultimate risk-bearing participants who invests in an enterprise without a guaranteed return. The argument which follows is that the shareholders are the “residual claimants” of the net income after the marginal products of all other participants for their contribution are paid (see *Chapter 2*). This shareholders’ primacy, partly, has prepared the way for the agency approach and has become the dominant perspective that informs corporate governance and resource allocation in an economy (such as the U.S). In the words of Palley (2013), “[t]he agency approach promot[ed] a legal view whereby the sole purpose of corporations—which are a societal construction—is to maximise shareholder returns within the confines of the law and has played a crucial role in promoting financialisation” (p. 4). We have seen both theoretically and empirically the ill-effects of following extreme rules and routines in the name of the MSV perspective (see *Chapter 2* and *Chapter 7*).

In contrast, the theory of innovative enterprise confronts this fundamental assumption of neoclassical economics (or agency theory in particular) and contends that the risk-bearing participants are not shareholders alone since all economic actors make risk-bearing investments in an enterprise. The argument emerges from the organisational character of the innovation process—that it is both collective and cumulative and hence, involves many economic actors and their contribution (e.g. in 2017, 6244 patent applications filed by VW worldwide were for *employee invention*)—and the necessary conditions or set of relations that must prevail in an enterprise to aid the confrontation of the characteristics of the innovation process. For instance, as observed in the case of VW, there is support of the Supervisory Board and the involvement of Works council in the planning meeting prior to investment in new innovative projects which ensures that the complementary capabilities are developed in-house, and the endorsement of “workholder value” which entailed knowledge management, social responsibility, employability, and flexibility of its labour force. These actors contribute to the “social conditions of an innovative enterprise” since it depend on the relations among economic actors and their contribution to innovation process would depend on their likelihood for securing returns from the enterprise. For instance, unlike at GM, the stock-option programme is decoupled from the bonuses received by the employee at VW since the bonuses are decided via collective bargaining process and depend on the performance of the employee. Conversely, the stock-based programme is linked to a time account to which overtime

could be saved and accumulated which can facilitate early retirement. The LTI component (evaluated for a term of 3 years) in VW's executives' package incentivises them to adopt a long-term perspective over short-termism.

During the case studies, we have seen that shareholders appear not to be the residual claimant anymore⁴⁹—in the case GM—but are the main claimants since they are paid more than the appropriations by any other economic actors while at the same their value (stock price) has not increased considerably between the years 1991 and 2017. In this process, the productive investment in an enterprise is undermined since the “social conditions of an innovative enterprise”, as we have seen in Chapter 7, are affected thereby affecting the (antecedents or necessary preconditions for) innovation process in an enterprise such as increasing payouts over R&D investments and increasing adjustment in the composition of financial and tangible assets. In this way the MSV perspective—pivoted on share valuations alone—lacks a theory of innovation and leads only to static efficiency of an enterprise and in turn of the economy by failing to “comprehend the implications of the collective and cumulative character of the innovation process” (Lazonick & Mazzucato, 2013, p. 1102).

To prepare economic actors and organisations for tomorrow's challenges and for economic development, the focus must not be directed towards shareholders as the only “residual claimant” but on the other hand the focus must be directed towards the equitable distribution of the gains from innovation to all the participants such that they are incentivised to contribute to innovation and result in the development of the productive capabilities of an economy (Lazonick, 2004). The policy implications are also motivated by the fact that the regulatory contexts (discussed in *Chapter 8*) have also contributed to the adoption of less fundamental ways by enterprises embracing the MSV perspective.

The *first* policy implication is regarding the regulation of stock repurchases. By regulating the massive stock repurchases, it can be argued that more “cash” will now be available at the disposal of the enterprise or top executives to make productive investments as well as rewarding other economic actors or to create the enabling contexts for innovation. If executives would see that stock prices cannot be manipulated, then it may return to the state that the agency theorists intended that the enterprise will maximise share valuations by making productive investments and efficient resource allocation. In order to achieve this, it must ensure the productive contributions of economic actors participating in an enterprise; hence, to do so, top executives should create the environment

⁴⁹ Figure 6.14 indicates that for \$1 of investments, at GM, the shareholder would receive more than \$1 in dividends—which is more than the invested amount, so much for a residual claim. At the same time, the share valuations are worth the same, between 1991 and 2017.

and incentives for the workers by distributing or rewarding the gains in the process (see *second* and *third* policy implications below).

But still, the problem of the executives maximising their own benefits using the free “cash” flow retained from not engaging in repurchase schemes prevails. However, if they were to do so at the expense of productive investments and in the context that stock prices cannot be manipulated via repurchases, the lack of performance will truly reflect in the stock prices and shareholders may exit. The managers will lose control of the enterprise following hostile take-over of their enterprise. This would form the incentive of the top executives to work in the best interest of the enterprise as well as the shareholders by making productive investments to boost share valuations since the shareholders can exit in the premises of lower stock price and absence of dividend (from revenues) payout.

It can, however, be argued that enterprises or managers can make productive investments through debt financing even if all their profits or cash are used for buybacks to attain higher share valuations. Debt is not undesirable as long as it can be serviced (*cf.* Modigliani & Miller, 1963) but they have to be repaid quickly. The sources of funds to service the debts are normally (higher) revenue streams and cash margins (net income per sales) which can be achieved by increased sales and/or by reducing operating costs. Increased sales depend on the extent to which (more) customers are willing to purchase the enterprise’s products at a price they are willing to pay. Normally, at higher prices, lower quantities are demanded. The exceptions are the eager innovators or early adopters who are curious about the technology (Moore, 1991). In either case, the product should embody product innovation so that it can perform better than its predecessor. The product should also embody process innovation since it can reduce the production cost which, in principle, can result in higher cash margin and lower price of the product (Capron & Hulland, 1999). This can boost sales as well as net income and the debt can be serviced without much risks.

In the case of GM, we have seen that the ratio of payouts over R&D investments had increased during the observed period and there is a corresponding increase in the total debt and the debt ratios also indicate aggressive debt financing. Hence, the increasing R&D investments would probably be funded by debt. From the capitalisation ratio of GM, it is noted that to finance every \$100 investment, the reliance on debt is \$92 (see *Figure 6.15*) and the remaining \$8 is funded by the stock market (it was the case before 2009, post-2010 it was \$14); yet GM adopts massive payouts in the form of buybacks and dividends. Despite productive or R&D investments, the patent output, as well as cash margins, are lower compared to VW; VW also offers superior performance (in terms, output, productivity, and value-added per employee). Moreover, the cash flow to debt ratio (in the case of GM) indicates insufficient cash flow to service the debts while for VW, the ratio indicates that it can service its debt.

It can be argued that VW's superior performance and cash margin followed from the productive investments it made in cultivating process and product innovation. These, in turn, follow from VW's long-term committed finance to sustain the innovation process which is both collective and cumulative. There is evidence that there was significant new product development and as part of "location protection" policy and involvement of Works council, the capabilities and processes relevant for new product development were developed in-house, all along. Moreover, employees are retained for long periods within the enterprise ensuring stable employment and investments are made to develop their enterprise-specific skills. It can also be argued that stable employment as well as the upward mobility opportunities motivate employees to invest their time and effort to gain enterprise-specific knowledge. Therefore, in the long-run, these processes tend to be structural enhancing the productive capabilities and putting the enterprise (VW) at superior innovation and productivity levels than GM. At VW, we have seen that hiring (or retaining) more labour has translated into higher productivity. At the same time, committed finance (in productive investments) was mobilised to sustain this process. GM is in need of other sources of (committed) finance, besides debt, to service debts itself and arguably to engage in (more) innovation—which is uncertain, collective, cumulative, and takes time—so that the revenue streams can be made better via more innovation. One such source can be the funds retrieved from not engaging in, yearly, stock repurchases.

Moreover, for VW, although the reliance on debt is high—which followed from the expansion of its Financial Services Division—the trends of R&D investments, investments in tangible assets, patent output, cash flow to debt ratio, finance to sustain and promote "workholder value", and performance are better than GM. VW has not engaged in stock buybacks (except in the year 2000) or massive dividend payouts although its reliance on the stock market is higher (\$25 for every \$100 of invested capital) than that of GM. It can be thought that had VW engaged in stock repurchases (at a rate that GM did), it would have shown in the above indicators and affected its innovative capacity and output. Taken together, therefore, stock buybacks can affect productive investments (and superior performance) and regulating stock buybacks would be an effective solution.

The *second* implication is to impose higher taxation on the retained (unused) profits. Using the higher tax collected, the State can engage in investing in education (by subsidising it) and national innovation labs together with the enterprise. Moreover, enterprises may refrain from keeping their cash idle (see *third* policy implication below in association with this implication). In this way, they are able to distribute the gains of innovation to households, indirectly.

President Trump's argument for the recent corporate tax reforms in the U.S was that it may prevent U.S. enterprises from moving profits overseas; it would prevent outsourcing of capabilities. Nevertheless, as long as the stock market is deregulated these executives can use the tax exempted money in stock repurchases. This argument has already been confirmed in a very recent (published

on 5 June 2018) *CNN Money* article “*Tax cut fuels record \$200 billion stock buyback bonanza*” (Visram, 2018). It is reported that Apple had spent \$1.4 million lobbying for this tax reform and saved \$49 billion following the reform. At the same time, Apple has also tripled the amount spent on stock buybacks reaching \$1 trillion evaluation (at \$207.39 per share) (see “*By Tripling Its Stock Buybacks, Apple Robs Workers And The Economy*” in *Forbes*) (Hansen, 2018). Hence, the counteracting effects of insourcing (expected following tax reforms) while at the same time engaging in stock repurchases at the expense of productive investment have to be investigated.

Additionally, the income from dividends paid has to be (highly) taxed which are to be shouldered by the shareholders. The main source of their income would be then via the higher share evaluation of the held stocks which the shareholders can hold or sell. The effects of such a policy can be anticipated as follows. On one hand, enterprises would not be pressured for higher dividend payouts by the shareholders but for higher share valuations. Once again in the extant of a regulated stock market, this will further incentivise managers to make productive investments. On the other hand, investors will only seek stocks that have higher share valuations but not higher dividend payouts. This will again follow the aforementioned cycle.

It should, however, be noted that the thesis is not implying any paternalistic policy implications that may affect the shareholders adversely. Dividends can be, very much, a source of income for several investors. In order to honour shareholders’ dependence on the stock market as a source of income and also for their welfare, the aim should be, following productive investments and innovation, to increase their value by the increase in the stock price. There will be economic welfare following innovation that the shareholders can enjoy rather than enjoying gains from dividend alone. Shareholders are important and relevant actors in an economy since they accumulate funds in the form of saving deposits and cash-pools which are then channelled to enterprising entrepreneurs via financial intermediation. Moreover, shareholders are also important to promote good ethics and principles. For instance, recently, when SpaceX and Tesla CEO, Elon Musk, referred the English cave diver who had helped to rescue the 12 boys and their coach, in Thailand, as a “pedo guy” (which also means paedophile in urban vocabulary), shareholders demanded that Musk must apologise and he did (Griffin, 2018).

Enterprises depend on shareholders’ funding through the stock market. Furthermore, optimum dividends (as seen in the case of VW), is desirable since it would motivate the shareholders to take part in the innovation process (Lazonick, 2004). Excessive dividends paid today (as seen in the case of GM) can raise the shareholders’ expectation for higher dividend payouts tomorrow. This can impose additional pressure on enterprises and they may resort to short-termism. Additionally, the growth of institutional investors, the increased velocity and trading volumes, and the rise of asset managers have also put more pressure on enterprises. These changes were, in part, enabled by the regulatory contexts such as the legal reforms that permitted equity-based institutional investing and

life insurance companies and pension funds to invest in corporate equities, cf. Lazonick & O’Sullivan, 2000 and Palley, 2012. The role of shareholders in an economy, thus, has evolved from providers of capital (as intended in theory) to aggressive demanders of a higher rate of returns (as is seen in practise). A policy implication, therefore, would be to check these regulatory reforms.

The *third* policy implication would be to identify and reward the contributors of innovation. This can be linked to the *second* policy implication that if idle cash, following the policy, is subjected to higher tax then following the *third* policy, tax exception can be received for productive investments. Moreover, tax exemption can also be given to cash that the enterprise announces to invest in innovation in the future and should be monitored. Hence, it may incentivise enterprises to make productive investments following the *first* policy implication. The collective and cumulative character of innovation process would mean that it is necessary to identify the actual contributors of the innovation process and make policies to enable and enhance their contributions rather than endorsing policies that encourage private funding of enterprises which would only add to more shareholder primacy. Higher taxation would also mean that the State would have the means to invest in new ventures over making it easy for Venture Capitalists (VC). VCs are good to promote high-tech start-ups, but it may also put increasing pressure due to its association with the capital markets. Tax exemption and benefits should be directed towards the actors who are involved and are making productive contributions such as higher tax exemption (for the enterprise) if their funds are directed towards investments in tangible assets or contribution towards education. This is also important since the risk profile of such enterprises are higher than the ones who do not make such investments due to the uncertain character of the innovation process. Subsidising and enabling STEM education in a concerted effort of both the enterprise and the State—as seen in the case of Germany and VW via VET—would be a channel to distribute the gain from innovation to the economic actors who make risk-bearing investments in terms of time and effort in education without a guaranteed employment. The expectation is that by the time the student reaches the employable age, the enterprise might have expanded tapping into their dynamic capabilities and efficiency (in a highly regulated stock market) and will be ready to hire more labour.

It has been noticed that GM engages in the development of “general” skills while VW invests in developing enterprise-specific skills. Part of the reason for this difference emerges from the variety in the labour market regulations of both U.S. and Germany (see *Organisational Integration* in Chapter 7). On one hand, the U.S. labour market is highly flexible and the educational system is complementary to the flexible labour markets; vocational training is provided by educational institutions that otherwise also offer formal education that focuses on “general” skills. The U.S. enterprises are generally reluctant to invest in developing enterprise-specific skills and they mostly provide in-house training which is limited to providing intensive industry-specific or “general” skill building. Since the skills acquired are general, in terms of knowledge spillover, the enterprises depend

on incoming skilled mobile labour from other enterprises to ensure transfer of technology and knowledge across enterprises (P. A. Hall & Soskice, 2001).

On the other hand, in Germany, the role of automotive industry is widely recognised and the enterprises identify a need for high-skilled personnel to cater to the growing demand of the automotive industry (Naudé & Nagler, 2017). Having identified the need for high-skilled workers, the employer association and trade unions invest in subsidising training in the form of dual apprenticeship or vocational educational training. The unions ensure that the training is provided matching the skill requirement in the industry so that employment post-training is guaranteed. Furthermore, the employment contracts are long-term and the German enterprises, therefore, cannot rely on mobile skilled personnel across enterprises. It follows that the workers are retained and employed to extract maximum utilisation⁵⁰.

Therefore, a *fourth* policy implication will be to regulate the labour market which may constrain co-ordinated downsizing akin to the German economy, and enable *Kurzarbeit* or short-time working⁵¹ during crises (see Brenke, Rinne, & Zimmermann, 2013). The effects are two-fold: firstly, it may not be possible for the enterprises engage in large-scale downsizing but may be restricted to reduce the working hours and pay of the employees, and hence, secondly, they would ensure maximum utilisation of the retained workforce. Since inter-firm mobility is now limited, these enterprises may start developing enterprise-specific skills which are also needed for high productive utilisation. Moreover, for the stable employment, employees will be motivated to invest in the learning and innovation process.

Related to the development of skills—and also another way debt financing can affect the innovation in an enterprise—is the extent to which innovation patterns—if the innovations are radical or incremental—are affected by these. “By its nature innovation suggests that unknown and potentially high risk is incurred” (Palmer & Brookes, 2002, p. 71). Debt financing innovation, thus, carries dual risks—one inherent to the innovation process itself and if the innovation is a failure, the enterprise can run the risk of not being able to repay the loans. Hence, there is a tendency that enterprises that rely on debt financing may engage in growing (the sales and profits) of existing

⁵⁰ While at the same time to balance the lack of knowledge that could have brought in by the mobile labour force, enterprises engage in inter-company relationships for technology and knowledge transfer and diffusion. Germany has developed contract law that endorses relational (or incomplete) contracting that ensures technology flow of this sort (Casper, 2001). The Court of Law permits this however under the pre-condition that, since these enterprises are part of the industrial association, they would strictly adhere to principled behaviour.

⁵¹ “[VW] has not followed a policy of “downsize and distribute”: it clearly has not tried to downsize in terms of workforce reduction and plant closures. (This policy has been explained by VW’s labour directors in various publications, cf. Briam, 1986; Hartz, 1994; 1996.) When the pressure was there, during the crisis years of the early 1990s, it pursued a policy of reducing weekly working hours [or *Kurzarbeit*]” (Jürgens et al., 2002, p. 96).

products and services, sustain current models or create new models without cannibalising the existing ones (Tushman, 1997). Moreover, since debts have to be repaid quickly, it will induce further short-termism affecting the innovation process. In the long-term, this will affect the development of capabilities and the innovation pattern; and, more relevance to incremental over radical innovations can be observed.

This explanation can render the findings of Akkermans, *et. al.* (2009) that LMEs specialise in incremental innovations in contrast to the assertions in the VoC debate (by Hall and Soskice) that LMEs specialise in radical innovations. Hall and Soskice's argument follows from the labour mobility enabled by the deregulated labour market. They argue that the mobile labour force brings in new knowledge to the enterprise which can promote radical innovations. Moreover, it is argued by Naudé and Nagler (2017) that “[t]he location of Venture Capital (VC) investments also gives an indication of the location of innovative firms producing radical innovations...since it is generally employed to finance high-tech start-ups, particularly in the ICT industry” (p. 22). In the late 1970s, VC market grew significantly in the U.S (Fohlin, 2016). Hence, LMEs, according to VoC debate, are more equipped for radical innovations. Incremental innovations are more associated with enterprise-specific knowledge. Hence, CMEs, where predominance is for enterprise-specific knowledge, specialise in incremental innovations⁵².

Incremental innovations, which are built on existing capabilities, can arguably lead to vertical integration since complementary technologies and production processes would already be existing within the enterprise, or would only need modest modifications. But, we have observed that the untransformed cash margin of GM (see *Figure 6.33*) indicates vertical disintegration and increasing reliance on external suppliers since the value-added in sales has not translated into net income being captured within GM's financial reporting boundaries. This could be due to the outsourcing of capabilities and downsizing of its employees. At the same time, the current CEO is known for transforming GM into a tech-company by acquiring radical innovations and technology related to autonomous and electric vehicles technology. Our findings seem to be supportive of the VoC debate, in the case of GM.

Also, at VW, where importance is given to enterprise-specific knowledge and development of capabilities in-house, innovation process can be suggestive of incremental innovations. Nevertheless, there are signs of vertical disintegration at VW (see *Figure 6.73*) even if other evidence of vertical integration are noted (such as even in the face of intense competition, the Wolfsburg and Brunswick component producing plants were not closed down and continued its processes)—could it mean that VW (a CME enterprise), underscoring Akkermans, *et. al.*'s (2009) findings, is shifting more towards radical innovations? Could the reason that its related processes are not present in-house be

⁵² See p. 38—40 of “*Varieties of Capitalism*” by P. A. Hall & Soskice (2001).

the cause of vertical disintegration? The patent applications by VW were related to autonomous driving systems, conventional and alternative drive systems, and lightweight construction. They are a mix of both radical and incremental innovations. There could be a possibility that radical innovations—as demanded by the future of “high-tech” automotive industry—may be dominating. More exploration will be required to clearly carve out the innovation patterns of these two enterprises and the extent of vertical (dis)integration; this can potentially be an orientation for future research.

Notwithstanding the aforementioned, in sum, development of skills and debt financing may affect the innovation patterns of an enterprise which in turn may affect the generation of cash margin in an enterprise. Regulating stock buybacks could minimise debt financing and together with labour market regulation may contribute to higher cash margins.

Turning now to the implications and discussions pertaining to corporate governance and its operations, the (neoclassical) theories of the firm, as we have seen, result in constrained optimisation of their production processes and leads only to static efficiency (see *Chapter 3*). In addition, rationalised by neoclassical economics, more specifically the agency theory that informs corporate governance, they have resorted to undertaking less fundamental actions in practise—but unintended by the theory—that are hurting the dynamic capabilities and efficiency of an enterprise. Hence, such an enterprise in which MSV theory predominates or uses it to rationalise corporate behaviour, may discontinue the operations in a new strategic venture (if the investment fails) and create an apparent superior performance in the short-run via the manipulation of its stock price and expectations of future dividend payouts of its shareholders. In addition, higher operating margins are obtained by making the enterprise leaner by outsourcing and downsizing not via process innovation. In other words, this enterprise chooses strategies—of stock repurchases, downsizing, or offshoring—based on the constraints imposed upon it which in this case it is the higher share valuations.

In the theory of innovative enterprise, the constrained optimisation is transformed into a dynamic process by taking into account the characteristics of the innovation process and the necessary social conditions that must prevail in an enterprise to confront the innovation process. We have seen how the social conditions are affected (enhanced) by adopting MSV perspectives (co-determination) during the cross-case analysis of the business cases (see *Chapter 7*). As opposed to neoclassical economics—where the factors of production and the technological and market conditions are given to the neoclassical enterprise and the manager seeks out a particular feasible set to generate output—an innovative enterprise engages in transforming these conditions by creating its own capabilities by the development as well as high productive utilisation of the capabilities embodied in the human and physical capital. Even in the face of uncertainty, an innovative enterprise makes strategic decisions to allocate resources that can generate revenues if successful, or put the enterprise at a cost disadvantage as opposed to its competitors (Lazonick, 2012). An innovative

enterprise, therefore, will further engage in the process of organisational integration of the skills and capabilities of its labour force and ensure financial commitment from the time the investment strategy is formulated until its revenues are being generated. For instance, at VW, the Board has allocated special (committed) funds along with the investment in innovation projects for programmes which are used in the development of core competencies and insourcing of capabilities associated with a new investment project. Additionally, we have also seen the “Volkswagen Way” which creates the enabling context for innovation.

The implications for corporate governance lie in the answer to the question—why is VW’s corporate governance so different from that of GM? The stable decision-making structure, dual-board, State ownership, the target of long-term competence development, the regulatory contexts, and especially the co-determination exercised over the years have shaped VW’s corporate governance. These, as we have seen in the case of VW, have enabled the social conditions conducive to the innovation process (see *Chapter 7*). These can very well be transferrable implications for an innovative enterprise.

Thus, in terms of strategy, the implication should be to fund operations via operating cash flow, should be not to “downsize and distribute”, should focus on long-term competence development, development of (enterprise-specific) capabilities in-house, and innovation. In terms of organisation, it should have a stable decision-making structure, hierarchical integration, and continued investments in learning and innovation processes. In terms of finance, unproductive disgorging should be limited so as to make funds available to finance and sustain productive investments and innovation. It should, however, be noted that every enterprise is unique and the outcomes of the implications will be moderated by idiosyncrasies.

To support of RBV or any theory of an enterprise which looks at the long-term competitiveness an enterprise, the theory of innovative enterprise accepts the cumulative character of the innovation process as well as puts emphasis on the abilities and incentives of the actors who exercise strategic control over the enterprise’s resources to sustain the innovation process and long-term competitiveness (Lazonick, 2013). While the top executives failed to identify, develop, and address the core issues at stake in GM, VW leadership has continuously endorsed—and steered the organisation to achieve—long-term competitiveness. Their actions following their strategy of long-term competence development aided to confront the cumulative character of the innovation process by fostering the learning process.

An implication for corporate governance, therefore, would be that the top executives must identify the social conditions that may prevail in their enterprise currently and continuously develop them to achieve long-term competitiveness—we have seen and compared the social conditions at both GM and VW in Chapter 7. The focus must be to refrain from any actions that may negatively affect these social conditions. In the presence of a policy which would prevent stock price

manipulation, corporate executives must take on board the uncertain and organisational characteristics of the innovation process and devise an innovation strategy, commit finance, and enable the organisation so that there are integration and development of skills and capabilities.

Several studies have applied the theory of innovative enterprise and have used the social condition framework to identify how enterprises or industries or economies have distinguished itself from the rest. For instance, in their paper “*Dynamic Capabilities and Sustained Innovation: Strategic Control and Financial Commitment at Rolls-Royce plc*”, Lazonick and Prencipe (2005) have adduced evidences from information available in the public domain that innovation at Rolls Royce depended in part on who strategic managers were and how they presided over financial resource allocation—*i.e.* strategic control over financial resources ensured financial commitment to innovation. Their paper sought “to contribute to the development of a theory of innovative enterprise by analysing the roles of strategy and finance in sustaining the innovation process at Rolls-Royce over four decades from the mid-1960s” (p. 501). In the review essay, “*Indigenous Innovation and Economic Development: Lessons from China's Leap into the Information Age*”, in which Lazonick (2004) reviews Qiwen Lu's (2000) important book, “*China's Leap into the Information Age: Innovation and Organisation in the Computer Industry*” and present Lu's findings within a “social conditions of innovative enterprise” framework that emphasise the significance of the conditions in the innovation process. Lazonick (2004) argues that “Lu employed a version of [social conditions] framework to understand how four indigenous computer electronics companies that, by the mid-1990s had clearly been successful as innovative enterprises, combined strategy, organisation, and finance in their efforts to accumulate innovative capability” (p. 277). In “*Varieties of Capitalism and Innovative Enterprise*”, Lazonick (2007) contributes to the VoC debate by contrasting the dominant “business models” of advanced economies. The proposition of the essay was “[t]hat, in comparative perspective, the organisation and performance of the U.S. economy, as well as other advanced capitalist economies, must be understood and differentiated from one another in terms of the corporate allocation, not market allocation, of productive resources” (p. 22). (see the example of Japanese example provided in *The Social Conditions of Innovative Enterprise in Chapter 4*).

In the same vein, we had applied the social conditions framework to analyse how adopting MSV perspective affects the strategy, organisation, and finance of an enterprise and if it is conducive to the innovation process. The framework applied on the two business enterprises in this thesis via the e-RIS⁵³ methodology (see *Chapter 5*) has permitted us to analyse the vast amount of data available in the public domain such as the Annual Reports and integrate and compare the theory (of MSV) and

⁵³ Performing more business cases using the e-RIS methodology would generate feedback and thus help to refine the methodology which can be replicated in many industrial and corporate change and strategic management studies.

the theory in practise. By investigating how innovation process was executed and what shaped the corporate governance while confronting its characteristics (in the two enterprises), the theory of innovative enterprise provided a unifying conceptual framework with which operations of these enterprises were analysed in the cross-case analysis. By applying this unifying conceptual framework to analyse the operation of enterprises across industries (and economies), we will be able to get a better understanding of the idiosyncrasies of business enterprises and the main outcome would be a database of such unique business cases and to learn from it. These cases can be referred prior to new policy adoption or implementation by gaining insights into what policies have worked positively or any policies entailed rather perverse outcomes. If the policy-makers are made aware of the perverse outcomes of stock repurchases, a scientific debate concerning policies that permits stock repurchases can be commenced. Moreover, practitioners in corporate governance can also refer back to this database.

To support long-term competence development, top “executives need a theory of innovative enterprise so that they can make decisions to invest in and sustain the innovation process” (Lazonick, 2012, p. 14). This is by gaining insights into the social conditions which should prevail to confront the innovation process (see *Chapter 7*). For example, if corporate executives are aware of the notions of the theory of innovative enterprise which purport achievement of dynamic efficiency and superior performance, it would be difficult for them to endorse a perspective (in corporate governance) that informs that the enterprise’s main goal is to “maximise shareholders’ value” alone. This is evident in the case of VW, where the focus is on “workholder value”. VW endorses the notion of “workholder value” hatched by the labour relations in 1999 which required the personnel policy to take into account two sets of goals or targets. On one hand, it took into account those related to workholder value such as knowledge management, social responsibility, employability, and flexibility, and on the other, it took into account the traits of shareholder value with an aim to increase company value among investors by increasing profitability and return-on-capital. The dual targets were to be accomplished by the “Volkswagen Corporate Concept” which endeavoured to create the shareholder value by cultivating workholder value. These, together with other factors, have shaped the social conditions at VW leading to superior performance over GM.

Elaborating more on the implications for corporate governance—“in many times, places, and industries, [enterprises or] top executives of business enterprises make allocative decisions on the basis of a dominant “business model”” (Lazonick, 2012, p. 16). On one hand, for instance, while comparing the OEBM and NEBM in the U.S., Lazonick (2010)—in “*Innovative Business Models and Varieties of Capitalism: Financialisation of the U.S. Corporation*”—argues that the following prominent features are present in the NEBM: acquisition of young technology firms, outsourcing and offshoring, inter-firm mobility of labour based on general skills, stock-based pay in compensation, absence of strong labour union, and stock repurchases to support stock price (p. 679). We have

observed that these features were clearly evident in the case of GM. In the course of pursuing these, the social conditions at GM were affected which undermined the productive investments and corporate governance at GM. Lazonick (2007) argues that the German model, on the other hand, is characterised by a high degree of hierarchical integration, top executives normally consist of scientists or engineers and they achieve the position through “Career With One Company” (CWOC), there is a labour-union and close-knit relationship with the Board, duality in the Board or corporate governance, “both shop-floor and managerial employees are well-educated and trained”—this skill-formation system is enabled by the collaboration of employer and employee associations—and, cross-shareholding (p. 45-46).

Through our case studies, we have seen that the corporate governance structure of VW is indicative of the aforementioned traits. There is a dual-board and this has ensured that major decisions always took into account the interests of the employees. The leadership of VW were generally engineers or technocrats. The leadership has also recognised what VW needs since they have the ability to identify them, which they have developed being an engineer as well as having associated with VW for most of their career time. Moreover, the labour unions and the management board possessed a long-standing growing relationship.

The shop floor workers are also well-educated and trained. Investments in developing the productive capabilities at VW and the German economy have been primed by the inclination of German economy towards the manufacturing sector. The German education system endorses STEM education and various initiatives are in place. The consistent contribution of VW towards developing the capabilities of the German labour force is also evident such as in the form of the dual apprenticeship offered as well as the frequent interaction with the tutors emphasising the need and importance of STEM education. There was also an increase in the number of students enrolled in the apprenticeship programme at VW. The role of co-determination is worth mentioning that the Works council representatives in the Supervisory Board have always ensured that VW employees are trained and funds are allocated promptly when a new technology is implemented. This is also the case when it comes to outsourcing production processes; the union emphasised that the processes are implemented at VW by training the staff with the necessary capabilities. All these, moderated by the regulatory contexts, have shaped the social conditions through the generic activities of VW; VW is a superior performer than GM.

These are notions that GM or any enterprise can adopt or learn from VW. Nevertheless, the adoption can be highly shaped by the regulatory contexts and the idiosyncrasies of the enterprise.

There has always been a growing interest among academics to study and explore the arrival of MSV perspective in corporate governance in Europe, especially in Germany. The primary area of research was regarding the extent to which co-determination have been affected by the arrival of the MSV perspective and if it has affected productive investment decisions and corporate performance.

Our findings are consistent with the findings of these studies. In “*The Arrival of Shareholders Value in the European Auto Industry: A Case Study Comparison of Four Car Makers*”, Jürgens, et. al. (2002) study the major changes in the “corporate governance systems of four major European flagship companies in the car industry—Fiat, PSA, Renault and VW” (p. 61). They have observed that two automakers (besides VW and PSA) in Europe—Fiat and Renault—that have adopted the MSV perspectives both in quality and quantity underperform compared to the ones that haven’t. They conclude that the adoption of MSV perspective, may not always lead to superior economic welfare. Jürgens performed similar studies on VW alone for the years, 1991 and 2000, while this thesis has extended the time series to 2017 and our findings (during the studied period by Jürgens) are consistent with Jürgens’ findings.

The added value that this thesis offers is that the superior performance VW achieved via the system of co-determination is encapsulated into the strategy, organisation, and finance via the social conditions of an innovative enterprise. In other words, we gave a theoretical meaning to the corporate governance system at VW. The social conditions emerge from an alternative perspective which confronts the dominant neoclassical models, as these models fail to inform how to attain superior performance via innovation leading only to static efficiency, by taking on board the characteristics of innovation process and the set of relations or conditions that must prevail in the enterprise to confront the innovation process and thereby attain dynamic efficiency. Having embodied the idiosyncrasies of the enterprise (VW) into the social conditions, it can facilitate the comparisons of enterprise and its operations by translating their existing operations into the social conditions framework and compare them with other business case studies such as this thesis.

Hence, taking together the implications for corporate governance, the theory of innovative enterprise via its social conditions framework, in our view, after linking it with other corporate governance practises such as the ones exercised at VW presents as a credible theory to be cultivated in parallel to the MSV model of corporate governance, particularly when it concerns the building up of innovative capabilities at the enterprise level.

As an implication for economic analysis, we argue that the analysis of the enterprise should not be limited to shareholders’ valuation *per se* but it should involve the consumer surplus it is able to offer. To further elaborate, consider the notion of perfect competition. It dictates that it is advisable and better to have an infinitely large number of suppliers such that consumer surplus is maximum *i.e.* the consumers are able to consume goods and services for a price below their willingness to pay. If one of the enterprises were to set a higher price, its consumers will exit and go to other suppliers. Moreover, if a supplier reduces cost by lowering the quality of the product, then again customers sensitive to quality will exit. Hence, the goal of an enterprise is to provide high-quality and low-cost products in order to remain viable in a market. If share valuations are the norm, we argue that enterprises’ primary focus would be towards higher stock prices than creating high-quality and/or

low-cost products that the consumers want since the process to achieve this involves investments in either process or product innovation or both, which following Nelson and Winter (1982), increases enterprise's productivity and therefore the production costs.

Indeed, there are sales of products happening in the consensual market but it happens by eating into the consumer surplus. If an enterprise only performs actions that will lead to improvements in static efficiency alone, in the long-run the enterprise would be unsuccessful to reduce its operating costs. This will be reflected in the price markup of the product. Consumers will be unaware since they can only access or have seen only such *markup-ed* products—hence they would not contest or show grievances—until an innovative enterprise enters the market that is able to offer higher-quality or low-cost product and make aware this possibility to the consumers. This is to say, that by undermining productive investments, enterprises are not delivering high-quality and/or low-cost products adding to the consumer surplus or economic welfare as the notion of perfect competition intend. Both the notions of agency theory and perfect competition emerge from neoclassical economics but based on its application in real life, the actual output diverges from the intended output.

Now consider that stock repurchases are regulated. It would mean that in order for higher share valuations, the enterprise must make effective and productive resource allocation. Together with the necessary social conditions which have already been kick-started following the implementation of the policy, the enterprise through its strategy, organisation, and committed finance would now be able to provide more consumer surplus by making low-cost products. Since enterprises have grown very large and hire tens of thousands of economic actors, the focus of the analysis should be about the operations within the enterprise and its performance based on its output of high-quality and low-cost products. The markup and pricing of the products of both GM and VW would be a new research in itself and are not part of this thesis.

Senator Elizabeth Warren is the promotor of the Accountable Capitalism Act (introduced in 2018). Very recently, on 15 August 2018, she received a letter in which a group of lawyers and economists including Robert Hockett and Lazonick endorsed her bill; she has published this letter in her website (see Hockett, *et. al.* 2018). Some of the policy implications and discussion points written during the course of this thesis, such as restricting stock buybacks, appear to have been considered in this very recent federal bill. The bill's relevance can be highlighted and reflected upon by linking it with the findings of this thesis. It also shows the relevance of this thesis.

The enforcement of the Accountable Capitalism Act would require American corporations (with more than \$1 billion in revenue) to obtain a charter from the new Office of United States Corporations within the Department of Commerce (Aiella, 2018). This will obligate enterprises to consider the interests of all stakeholders than shareholders alone. This is in line with the concept of “workholder value” and “Volkswagen Corporate Concept” of achieving shareholder value via

promoting workholder value. This corporate concept also gives importance to customers and employees.

The Act also promotes the need for labour representations in the Board which we have seen, from the case of VW, has served as a “guardian angel” against disinvestments and has contributed to superior performance. The implication for corporate governance of having a stable-decision making structure, with definitive spots for labour as well as State representatives, is in line with this requirement of the Act. Another way the Act aims to prevent short-termism is by requiring the enterprises in the charter to disclose all “political” spending and also that any spending which is political in nature should require at least 75 percent approval of their shareholders and directors.

Disclosing political spending may trigger debates against lobbying efforts. Nevertheless, if the public is deceived by political/public administrators by promulgating promises such as industrialisation or employment covering the hidden agenda, disclosing political spending would not do much. However, with labour representation in the Board, it can be expected that lobbying efforts in favour of a reform that might hurt the firm may not be promoted. Labour representation in the Board would also bring prudence while approving political spending with 75 percent majority. But if the banks can obtain proxy voting rights in the name of shareholders, then the 75 percent requirement may not be effective. In the case of VW, for banks to have proxy voting rights, they are required to have authorisation from each shareholder prior to the assembly increasing the effort for the banks to do so—since many investors do not authorise the bank for proxy voting promptly—thereby decreasing the attainment of sufficient proxy voting power. This notion could be an addition to the current Accountable Capitalism Act.

The charter can be expected to instate discipline among the registered enterprises since any sort of misconduct will be subjected to a withdrawal of the chartered status of the enterprise. This can be argued to be in line with VW’s adoption of practises which are normalcy of DAX-listed companies such as not including variable components in the remuneration of the Supervisory Board and focussing on long-term competitiveness.

Unlike the proponents of reforms such as the Accountable Capitalism Act, there are others, such as the former counsellor to the Treasury secretary in the Obama administration, Mr. Steven Rattner, who argue that American capitalism “[stand] ready to fund pretty much any vaguely promising new idea” and narrows down to stock buybacks as the only manifestation of “America’s short-term thinking” (Rattner, 2018). The lack of other attractive investment opportunities due to the relatively slow-growth of the American economy is the reason, he points out, that enterprises are engaging in stock buybacks or dividend payouts which according to him is good since now the recipients can make better investments. But, we have seen the changing nature of shareholders from being providers of capital to aggressive demanders of a higher rate of returns which will impose further short-termism in enterprises, and they will engage in more buybacks, and so on. The investments

are debt financed which induces further short-termism (Palley, 2012). Hence, based on Rattner's diagnosis, it is unclear then how enterprises, as engines of growth in modern capitalism, can change the nature of the economy from a slow-growth to a high-growth economy.

The intervention(s) highlighted in this chapter is not a “magic bullet” against the arguably perverse effects of MSV perspective in corporate governance. The implications have to be carefully developed, implemented, and monitored by being critically reflective of the context to which they are applied. The main goal is to motivate fellow economists—whose ideas “[b]oth when they are right and when they are wrong, are more powerful than is commonly understood” (Keynes, 1991, p. 383)—to evaluate the theories of corporate governance for its incarnations have not taken its intended form.

10 Limitations and Reflection

The main limitations of this thesis are as follows. *Firstly*, this thesis did not go into the specifics of VW's emission scandal or GM's 2009 bankruptcy and bail-out. These crises have been the principal interest for many academics for some time which is evident in the large number of papers and essays written about it (Google Scholar returns with 532 results for the search “*Volkswagen Scandal*” and 639 results for the search “*General Motors bankruptcy*”). This thesis, however, has focused on longer-term structural changes in the nature of corporate governance of these enterprises, against the backdrop of the rise of the MSV perspective and the alternative model of co-determination. The focus has been on productive investments and innovation. It is possible and interesting to analyse and contextualise the emission scandal and the bankruptcy in the context of the corporate governance system in place (MSV or co-determination⁵⁴). But such an analysis would need to be in-depth and it would add to an already long thesis.

Secondly, the main drawback of case studies method is the lack of the external validity of its findings. For its embeddedness in the social conditions which, in the long-term, shape the entrepreneurial (or corporate) behaviour—which, in turn, are drawn from the larger economic and regulatory regimes of an economy—analysis at an enterprise level has aided us to derive insights into how the innovative capacity of an economy has developed over time (see Lazonick 2007). This is confirmed by the consistency of our findings with the observations by Lazonick (2007) and Lazonick (2010) which highlights the structural traits of corporate governance and the social conditions that shaped them in the U.S. and Germany. In this way, the issue of external validity has been addressed to some extent. Moreover, the social conditions, upon which the thesis is built, in turn, are social and are formed by many economic actors that participate in an enterprise, in general. Through the social conditions, we are tapping into the role of the main economic actors in the innovation process.

In terms of the case study approach, a more relevant concept than generalisability is transferability which entails the extent to which the findings of a case study is applicable to or can be applied in other contexts; this can be achieved by the critical reflection of the findings of the case study and also being reflective of the premises of external contexts where the results will be applied (*cf.* Lincoln & Guba, 1985). We have identified the implications of the findings in the preceding Chapter. In simple terms, we have seen that regulating stock buybacks, involvement of labour relations in corporate decision-making, and orientation towards long-term competence development over short-termist goals may prevent entrepreneurial disinvestments decisions (that may be) induced

⁵⁴ See “*The Bug at Volkswagen: Lessons in Co-Determination, Ownership, and Board Structure?*” by Elson, Ferrere, and Goossen (2015)

by the MSV perspective. While transferring these observations to another enterprise, the premises, such as the regulatory contexts, within which VW operates have to be matched and compared with the premises of another enterprise. The premises of this enterprise may not be as supportive or maybe only some supportive elements are present. For instance, in the new context, the stock market may be regulated while the labour market may not be. Hence, enterprises operating in this context (learning from GM's case) may engage in making the organisation leaner by downsizing to show higher operating profits. Furthermore, there are idiosyncrasies. For instance, even if both stock and labour market is favourable, the enterprise might not have a cohesive organisational structure that can effectuate an innovation strategy. Therefore, while transferring results to a new context, the premises as well as idiosyncrasies have to be accounted for.

Case studies can be introduced to examine a phenomenon observed at the conclusion of a statistical analysis at a subject level. Statistical analysis will provide insights into the extent of a phenomenon but they may not offer explanations for why it occurs. A phenomenon observed in the sample while observed at a subject level may not be consistent with the findings for the idiosyncrasies and other causal factors within the subject. By performing a case study, the findings at the sample level via a statistical analysis can be validated at the subject level. For instance, a statistical analysis may yield the result that enterprises that do buybacks are less innovative than the ones who do not. A case study will be able to offer explanations why is it so as we have seen in the case of GM and VW.

Moreover, it is also worth mentioning that from the perspective of strategic management or corporate governance, it is difficult to formalise findings—even from large macro-data-based studies—into a set of prescriptions or model them such that the managerial team can follow as a check-list to attain competitive advantage or induce innovation. Each business enterprise is unique; hence, translation of the implications into practise and its results will be moderated by the idiosyncrasies of the business enterprise. It is also for this same reason that, from a strategic management point of view, it is desirable to have a library of many unique business cases analysed using a common conceptual framework. Extracting the most commonly observed traits, could be the generalisable implications for strategic management. This thesis adds two business cases to this library.

Thirdly, since most of the data is retrieved from Annual Reports, there can be a bias that the reported data may be in favour of the enterprise—avoiding this bias is inevitable; the author had planned to use multiple sources of information but has realised that even though alternative sources of information can be argued to be used to verify the data, the primary source of information for those alternative sources are also the same Annual Reports. Hence, the working hypothesis was that the data report in these public domains is valid and accurate.

A *fourth* limitation—which is also a fundamental assumption—of this thesis is the premises of the argument that repurchases will increase earnings per outstanding share and subsequently the stock price, smoothly. Theoretically, earnings are calculated using a weighted average of the shares over time; the stock price increases assuming that the Price-Earnings (P/E)—a P/E of 25 would mean that an investor is willing to spend \$25 for current earnings of \$1—ratio remains unchanged while the enterprise engages in buybacks or when stocks are traded. In reality, the stock price would also depend on the velocity of trading and the increase in stock price would result in the enterprise buying less number of shares than the planned outlay.

The world of economics and the vast amount of literature associated with it, and the existence of several stimulating theories have urged the author, at the beginning of the project, to consider the possibility of solving the issues at stake while modelling and integrating several theories. For almost halfway of the research, the literature review and data collection revolved around the notion to integrate these models. For instance, initially, instead of the social conditions framework, the focus was on a social factor framework which entailed the building blocks—social foundation, social conditions, and social policy—of an innovative economy. Although it offered deep insights pertaining to economic development and was stimulating, during the subsequent phase when the analysis of the data began, the difficulty in convergence was faced. Building on the hint that the thesis supervisor offered, the complexity was reduced by reducing the number of points of approach. In terms of research, by far, this is a valuable lesson learnt—analysis involving cross-paradigms has to be carefully approached. Dedicating more time and effort to a single paradigm will add rigour to the work since the focus now would solely remain on this single theory or model.

Further elaboration on the lessons learnt or reflection is related to the direction for future research and reflection on the implications of the thesis for strategic management and innovation such as—who among the selected enterprises is better equipped to face the future challenges that the automotive industry is likely to face?

Mainly this thesis has contributed to the knowledge base by contributing to a better (theoretical and analytical) understanding of the (possible) association between MSV and long-run firm performance (and dynamic efficiency). But, in terms of applied business research—for instance, suppose if an enterprise would like to know if they should continue their current dividend payout or buyback policy or not and if it is affecting its dynamic efficiency, and the like—a more idiosyncratic data-based parametric data analysis may yield more convincing results for recommendations (from the perspective of that enterprise). A key lesson for future research emerging from this thesis is the need to address the aforementioned strategic or management consultancy implications.

In other words, at the current status quo (after 21 weeks of involvement, exposure, and using this inertia), the author would have considered to approach the topic of the thesis by an alternative analysis using dynamic models which can examine the impact of the manifestations of MSV

hypothesis such as stock-based pay in remuneration on an enterprise's investment decisions. In order to increase its external validity, a dynamic heterogeneous agent industry model (*cf.* Dawida, Hartingb, & Hoogb, 2018) could be used which will also tell us the extent to which the different degree of manifestations of MSV in one enterprise would affect the outcome in another enterprise operating in the same industry. In the same vein, a conceptual model comprising of the dimensions or elements in an enterprise that may be conducive for innovation can be developed to form hypotheses and test them using longitudinal firm-level data. For instance, one model could examine if an increase in payout would significantly affect the investments in innovation and enterprise's productivity. Nevertheless, such a conceptual model may be hard to establish since there could be many other factors in an organisation that may lead to disinvestments.

Another approach could be to model the entire cash flow of an enterprise as much as reasonably possible or model the relationship (mathematically) between total payouts and other financial aspects or even innovation. Once modelled, the correlation and direction of the relationship among the various terms or variables in the model can be evaluated (by regression) indicating more robust aspects pertaining to the idiosyncrasies of the enterprise which can form the basis of recommendations. Another approach which may be able to evaluate how rich the shareholders' have become would be to model Economic Value-Added (EVA) as a function of Net Operating Profit After Tax (NOPAT) and the Cost Of Capital Employed (COCE).

This thesis followed the definition of innovation defined by Mazzucato and Lazonick (2013): “[They] define innovation in economic terms as the process that generates higher quality products at lower unit costs so that [this] conception of innovation encompasses all types of productivity gains, whether they derive from “radical” or “incremental” innovation, or some type of innovation in between. [This definition of innovation is prequalified] with the condition that these productivity gains are achieved “at prevailing factor prices” to exclude cases where unit costs are lowered by suppressing returns to particular economic actors, e.g. by pushing down wages” (Lazonick & Mazzucato, 2013, p. 1094). Moreover, not all antecedents or preconditions of innovation were explored in this thesis; certain dimensions which are affected the foremost by the withdrawal of funds are considered such as investment in tangible assets and direct investments in R&D. Furthermore, the notions of innovation in networks—or open innovation—or the notions of frugal innovation are not considered in this thesis.

The main challenges the automotive industry faces are, but are not limited to, the following—
(a) the increasing customers' willingness to pay for Advanced Drive-Assistant Systems (ADAS) (or autonomous driving technology) has challenged automakers to develop and deliver this technology;
(b) connected cars and *Uber-isation* are forcing disruption and innovation; (c) globalisation and emerging markets have posed significant competition; and (d) requirements for new environment friendly powertrains that augment sustainability have posed challenges for the automakers to balance

the demand of technology and regulations (IHS Markit, 2017). In all these spheres, innovation is needed to better confront the challenges and enterprises require new strategies for cost efficiency and growth.

The ability of automakers (or their executives) to identify the needed technologies and strategies for the way-forward would depend on their capabilities and their incentives. These are—in turn, as we have seen via the social conditions that shape the generic activities of an enterprise—shaped by the business model the enterprise had been adhered to over the years. Let us evaluate who among GM and VW will be more equipped to face these challenges.

In the case of GM, two patterns have been observed. During the years between 1990 and 2009, the top executives have not responded to the market conditions in most cases (such as pursuing the development of small cars when American passengers needed SUVs). The succeeding years have seen certain transformations. The current CEO seems to transform GM into a tech-company and she had made acquisitions of companies that make the proprietary technologies related to ADAS, electric cars, connected car systems, and the like. Moreover, GM is hiring evermore software engineers. These may help to develop the capabilities within GM and capture more of its value chain within its reporting boundaries. At the same time, there is also increasing tendency of offshoring of capabilities at GM which will add to vertical disintegration. The effects of these can be counter-acting and if the latter predominates, it can put GM at a cost-disadvantage which can exacerbate the (existing) debt position and risk exposure. The issues pertaining to debt reliance and how it affects innovation have already been addressed in the preceding chapter (see *Chapter 9*). Additionally, GM is in need for alternative sources of finance; ideally a source of fund could be the cash used in unproductive stock buybacks to sustain innovation. But, GM continues its yearly buybacks.

Strategic consultants, such as PwC, in their study of automotive industry's future challenges and the kind of strategies that enterprise should adopt have recommended that automakers should cut cost to grow stronger rather than leaner (PwC, 2017). Their argument is that enterprises which reduce costs to grow stronger can better allocate resources strategically in few capabilities while curbing investments in less-potent investments. GM is an enterprise that has adopted the notion of making the enterprise leaner; it has also engaged in diversification. VW, on the other hand, has achieved cost efficiencies by adopting modular assembly strategy or *Baukastensystem*, and has expanded more within its core, automotive. VW has begun insourcing in core high-tech areas such as electronics and software via their “electronics strategy”. Moreover, the inventions at VW were related to ADAS, conventional and alternative drive systems, and lightweight construction. VW is also at a better position to repay its debts than GM and the ability to sustain its innovation process in terms of committed finance. All taken together, VW appears to be in a path to reduce the cost to

grow stronger, while at the same time developing the needed technology to face the challenges the automotive industry is likely to face in the coming years.

Another recommendation for leadership from PwC's study is that the leaders should refrain from adopting the best practises from the industry by not establishing external benchmarking as a path to success. They have found that innovative enterprises translate strategy into everyday operations to build their own practises that sets them apart. GM has its focus on external benchmarks such as stock indices while VW, together with the stock market as an index, it has its benchmarks in the sustainability indices as well which focuses on long-term growth and innovation. Moreover, we have also seen the example of the "Volkswagen Way" that its leaders have developed which other enterprises are looking upon.

In terms of organisation, the development of the technology would depend on the conditions that these executives create taking into account the organisational character of the innovation process. Clearly, we have seen that VW is more engaging in terms of organisational integration than GM. Moreover, it is widely recognized that, automakers should, firstly, recognise that developing technologies to cater to the aforementioned challenges would be extremely challenging for an enterprise. This is because the automakers are traditionally not equipped with such competencies and hence investments to develop them are risky. Hence there is a need for more collaboration and open innovation strategies as well as acquisitions of enterprises with such capabilities. VW has acquired major subsidiaries worldwide which will contribute to the innovation potential of the whole Group since the acquired enterprises bring with them their advancements and transfer to the other subsidiaries. Casper (2001) has noted that German enterprises engage in inter-company relationships for technology and knowledge transfer and diffusion. GM has also many subsidiaries. Even though, new technologies may be brought-in, the labour force has been declining for the whole group, which results in loss of developed human capital (possessing enterprise-specific knowledge). It is observed that at VW, hiring more labour has translated into higher productivity fermented by the development of enterprise-specific skills and stable employment.

The nature of innovation required related to the technologies (such as ADAS, connected systems) are more ICT oriented and may involve radical innovations. On one hand, Naudé and Nagler (2017) point out to a weakness in the German education system that it is more manufacturing oriented. Additionally, we have seen that German enterprises are specialised in incremental innovations. On the other hand, we have seen that U.S enterprises are equipped for more radical innovations and there is an expansion of the VC market which can promote high-tech start-ups which large enterprises, such as GM, can acquire. For instance, GM had acquired the ride-sharing technology start-up firm Maven. Nevertheless, increasing debt reliance can constrain the innovation pattern.

In sum, with respect to addressing the future challenges the automotive industry may face, it is not clear-cut which enterprise is better equipped to confront them. Since the needed innovations are more related to ICT and are radical, it may put VW at a disadvantage. VW, with its strong long-term competence development motive and organisational integration, can be expected to sustain its (radical) innovation projects and if successful can aid VW to emerge from any cost-disadvantage. Presently, VW is not exposed to high credit-risk and the debt ratios indicate that debt can be serviced. Hence, they can also borrow to fund their new (radical) projects. Moreover, we have seen that while most of the automakers joined hands to share the costs of the development of alternative-fuels, VW was able to run the project alone due its financial stability. GM may possess superior proprietary technologies and innovations or could be in a path of acquiring them. But, it is likely that, with its current low cash margins and riskier credit-risk exposure, if the innovations fail or fail to appropriate gains, it may put GM at a cost disadvantage. A future research in this direction can be employed in order study the corporate governance and strategic management decisions these enterprises may take in the upcoming years and the extent to which the MSV (or co-determination), debt structures, and innovation patterns affected the governance and vice versa.

Three other future research scopes have been highlighted in the preceding chapter. *Firstly*, the counteracting effect of (expected) insourcing of capabilities in the extant of tax reforms (such as the one recently implemented in the U.S.) and disinvestments that may still continue in the extant of a deregulated market can be worth exploring. The findings would have significant policy implications and answer the question—what policies does the U.S. need—stock market regulation or more liberal corporate tax benefits? *Secondly*, another research can be commenced to answer the question—to what extent is MSV perspective affecting consumer surplus? The (expected) results of this study would also have compelling policy implications and may be able to question the existing policies such as anti-trust policies which are premised on the notions of neoclassical economics (more specifically, perfect competition). *Thirdly*, the extent to which innovation patterns (in an enterprise) are affected by the sources of finance, its mechanism, and its output, in terms of cash margins or vertical (dis)integration, can be explored.

Lastly but not the least, looking from the perspective of the managers, one could explore if the MSV perspective and its manifestations constitute the main reasons for which they engage in short-termist activities, or are there any other psychological constructs—affected by their manipulative functions—which may underscore Kabir Sehgal's (2015) averment in his book “*Coined*” that the “pleasure centres” in the brain stimulated during making money are the same as during intensive substance abuse!

References

- Aghion, P., Jones, B. F., Jones Stanford GSB, C. I., Auclert, A., Di Tella, S., Klenow, P., ... Jones, C. (2017). Artificial Intelligence and Economic Growth (No. w23928). *National Bureau of Economic Research*. Retrieved from https://scholar.harvard.edu/files/aghion/files/artificial_intelligence.pdf
- Agrawal, A., & Knoeber, C. R. (1996). Firm Performance and Mechanisms to Control Agency Problems between Managers and Shareholders. *The Journal of Financial and Quantitative Analysis*, 31(3), 377–397. <https://doi.org/10.2307/2331397>
- Aiella, C. (2018, August 16). Economist: Warren's Accountable Capitalism Act "seriously misguided." *CNBC*.
- Akkermans, D., Castaldi, C., & Los, B. (2009). Do 'liberal market economies' really innovate more radically than 'coordinated market economies'? Hall and Soskice reconsidered. *Research Policy*, 38(1), 181–191. <https://doi.org/10.1016/J.RESPOL.2008.10.002>
- Alchian, H., & Demsetz. (1972). Production, Information Costs, and Economic Organization. *The American Economic Review*, 62(5), 777–795. Retrieved from <http://www.jstor.org/stable/1815199>
- Allen, J. (2013, June). 10 things to know about historic 1998 UAW strike against General Motors in Flint (with photo gallery from strike) | MLive.com. *Michigan Business*.
- Anderson, R. (2009). End of the road for Rick Wagoner. *BBC News*. Retrieved from <http://news.bbc.co.uk/2/hi/business/7972010.stm>
- ASEP. (2018). GM ASEP (Automotive Service Educational Program) | GM Training. Retrieved June 26, 2018, from <https://gmasep.org/>
- Aylor, B. (2014). A Mechanistic GM An Analysis of the Functional and Organizational Structure of Management at General Motors. <https://doi.org/10.13140/RG.2.1.1657.7443>
- Barnard, C. I. (1968). *The functions of the executive*. Harvard University Press.
- Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17(1), 99–120. <https://doi.org/10.1177/014920639101700108>
- Baysinger, B. D., & Butler, H. N. (1985). Corporate Governance and the Board of Directors: Performance Effects of Changes in Board Composition. *Journal of Law, Economics, & Organization*. Oxford University Press. <https://doi.org/10.2307/764908>
- BBC. (2007, October 23). "Volkswagen law" is ruled illegal. *BBC News*. Retrieved from <http://news.bbc.co.uk/2/hi/business/7057815.stm>
- Bensinger, K. (2009). GM proposes painful downsizing in bid for survival - latimes. Retrieved June 6, 2018, from <http://articles.latimes.com/2009/apr/28/business/fi-gm28>
- Bergemann, D., & Hege, U. (2005). The Financing of Innovation: Learning and Stopping. *The RAND Journal of Economics*. WileyRAND Corporation. <https://doi.org/10.2307/4135254>
- Bernanke, B. S. (2003). Friedman's monetary framework: Some lessons. In *Proceedings, Federal Reserve Bank of Dallas* (pp. 207–214).
- Biffignandi, S. (Ed. . (2013). *Micro-and Macrodata of Firms: Statistical Analysis and International Comparison*. Springer Science & Business Media.
- Blair, M. M. (1995). *Ownership and control : rethinking corporate governance for the twenty-first century*. Brookings Institute. Retrieved from <https://search.proquest.com/docview/213206792>
- Block, F. L., & Keller, M. R. (2009). Where do innovations come from? Transformations in the US economy, 1970–2006. *Socio-Economic Review*, 7(3), 459–483. <https://doi.org/10.1093/ser/mwp013>
- BMBF. (2018). Education and Research in Figures 2017 Selected Information from the BMBF's Data Portal. Retrieved from https://www.bmbf.de/pub/Education_and_Research_in_Figures_2017.pdf
- Bomey, N. (2017, January). Volkswagen passes Toyota as world's largest automaker despite

- scandal. *USA Today*. Retrieved from <https://www.usatoday.com/story/money/cars/2017/01/30/volkswagen-toyota-world-largest-automaker/97234320/>
- Bowler, T. (2015, October). Volkswagen: From the Third Reich to emissions scandal - BBC News. *BBC World News*. Retrieved from <http://www.bbc.com/news/business-34358783>
- Brenke, K., Rinne, U., & Zimmermann, K. F. (2013). Short-time work: The German answer to the Great Recession. *International Labour Review*, 152(2), 287–305. <https://doi.org/10.1111/j.1564-913X.2013.00181.x>
- Brien, M. O. (2009). Obama rejects GM plan, forces out CEO | TheHill. *The Hill*. Retrieved from <http://thehill.com/homenews/news/18980-obama-rejects-gm-plan-forces-out-ceo>
- Britannica, E. (2018). Interest group - Factors shaping interest group systems | Britannica.com. Retrieved from <https://www.britannica.com/topic/interest-group/Factors-shaping-interest-group-systems#ref913791>
- Brodie, C. (2017). These companies invest the most in research | World Economic Forum. Retrieved May 4, 2018, from <https://www.weforum.org/agenda/2017/05/companies-investing-most-in-research-and-development/>
- Bronars, S. G., & Deere, D. R. (1991). The Threat of Unionization, the Use of Debt, and the Preservation of Shareholder Wealth. *The Quarterly Journal of Economics*, 106(1), 231–254. <https://doi.org/10.2307/2937914>
- Büchelhofer, R. (2002). Markenführung im Volkswagen-Konzern im Rahmen der Mehrmarkenstrategie. In *Markenmanagement* (pp. 525–541). Wiesbaden: Gabler Verlag. https://doi.org/10.1007/978-3-322-92976-1_22
- Burden, M. (2015). GM donates \$4 million to Kettering University. *The Detroit News*. Retrieved from <https://eu.detroitnews.com/story/business/autos/general-motors/2015/04/28/gm-donates-million-kettering-university/26504139/>
- Burkstr, B. (1998, July 29). GM, UAW Reach Tentative Accord. *The Washington Post*.
- Capron, L., & Hulland, J. (1999). Redeployment of Brands, Sales Forces, and General Marketing Management Expertise Following Horizontal Acquisitions: A Resource-Based View. *Journal of Marketing*, 63(2), 41. <https://doi.org/10.2307/1251944>
- Carpenter, M., Lazonick, W., & O'Sullivan, M. (2003). The stock market and innovative capability in the New Economy: the optical networking industry. *Industrial and Corporate Change*, 12(5), 963–1034. <https://doi.org/10.1093/icc/12.5.963>
- Casper, S. (2001). The Legal Framework for Corporate Governance: The Influence of Contract Law on Company Strategies in Germany and the United States. In *Varieties of Capitalism* (pp. 387–416). Oxford University Press. <https://doi.org/10.1093/0199247757.003.0012>
- Chandler, A. D. (Alfred D. (1962). *Strategy and structure: chapters in the history of the industrial enterprise*. M.I.T. Press.
- Chandler, A. D. (Alfred D. (1990). *Scale and Scope : the dynamics of industrial capitalism*. Belknap Press of Harvard University Press.
- Chandler, A. D. (Alfred D. (1993). *The Visible Hand*. Harvard University Press.
- Clarke, T., & Chanlat, J. (2009). *European corporate governance: readings and perspectives*.
- CNBC. (2005). Portfolio's Worst American CEOs of All Time. Retrieved June 25, 2018, from <https://www.cnbc.com/2009/04/30/Portfolios-Worst-American-CEOs-of-All-Time.html>
- CNN. (2017). GM sells 10 million cars for first time thanks to China. CNN Money. Retrieved from <http://money.cnn.com/2017/02/07/news/companies/gm-record-sales-profits/index.html>
- CNN Money. (1998a). GM strike hits production. *CNN Money*. Retrieved from <https://money.cnn.com/1998/06/08/companies/gm/>
- CNN Money. (1998b). UAW strikes GM plant - Jun. 5, 1998. CNN Money. Retrieved from <http://money.cnn.com/1998/06/05/companies/gm/>

- Coase, R. H. (1937). The Nature of the Firm. *Economica*, 4(16), 386–405.
<https://doi.org/10.1111/j.1468-0335.1937.tb00002.x>
- Cruz, F. (2016). GM And Stanford Partner To Refine Leadership | GM Authority. Retrieved June 26, 2018, from <http://gmauthority.com/blog/2016/03/gm-partners-with-stanford-university-for-transformational-leadership-program/>
- CTEA. (2005). Convergence Transportation Electronics Association Conference. Retrieved June 27, 2018, from http://www.ctea.org/2006/event/banquet_speaker.htm
- Dawida, H., Hartingb, P., & Hoogb, S. van der. (2018). Manager Remuneration, Share Buybacks and Firm Performance★. Retrieved from http://www.isigrowth.eu/wp-content/uploads/2018/01/working_paper_2018_02.pdf
- Demsetz, H. (1997). The Firm in Economic Theory: A Quiet Revolution. *The American Economic Review*. American Economic Association. <https://doi.org/10.2307/2950959>
- Denning, S. (2015, February). Why U.S. Firms Are Dying: Failure To Innovate. *Forbes*.
- Dougherty, D. (1992). Interpretive Barriers to Successful Product Innovation in Large Firms. *Organization Science*. INFORMS. <https://doi.org/10.2307/2635258>
- Doward, J. (2002). Effect of 9/11 on US recession | Business | The Guardian. *The Guardian*. Retrieved from <https://www.theguardian.com/business/2002/sep/08/globalisation.september112001>
- DW. (2000). Mannesmann: The mother of all takeovers | Business | Economy and finance news from a German perspective | DW | 03.02.2010. *DW.Com*. Retrieved from <http://www.dw.com/en/mannesmann-the-mother-of-all-takeovers/a-5206028>
- DW. (2017). VW world's R&D champion, in absolute terms | Business | Economy and finance news from a German perspective | DW | 25.10.2016. Retrieved May 4, 2018, from <http://www.dw.com/en/vw-worlds-rd-champion-in-absolute-terms/a-36145417>
- DW. (2018). VW reports record sales in 2017, boosted by China | News | DW | 15.01.2018. *DW.Com*. Retrieved from <http://www.dw.com/en/vw-reports-record-sales-in-2017-boosted-by-china/a-42145603>
- Economist. (2012). VW conquers the world - Volkswagen. Retrieved June 26, 2018, from <https://www.economist.com/business/2012/07/07/vw-conquers-the-world>
- Elkins, T. J., & Keller, R. T. (2004). Best Practices For R&D Project Leaders: Lessons From Thirty Years of Leadership Research. *International Journal of Innovation and Technology Management*, 01(01), 3–16. <https://doi.org/10.1142/S0219877004000052>
- Elson, C. M., Ferrere, C., & Goossen, N. J. (2015, November 25). The Bug at Volkswagen: Lessons in Co-Determination, Ownership, and Board Structure. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2737544
- EU. (2018). Company Law and Corporate Governance | European Commission. Retrieved June 25, 2018, from https://ec.europa.eu/info/business-economy-euro/doing-business-eu/company-law-and-corporate-governance_en
- Fama, E. F., & Jensen, M. C. (1983). Separation of Ownership and Control. *The Journal of Law & Economics*. The University of Chicago PressThe Booth School of Business, University of ChicagoThe University of Chicago Law School. <https://doi.org/10.2307/725104>
- Finkelstein, S. (2003). GM and the great automation solution. *Business Strategy Review*, 14(3), 18–24. <https://doi.org/10.1111/1467-8616.00268>
- Fligstein, N., & Shin, T. (2007). Shareholder Value and the Transformation of the U.S. Economy, 1984-2000. *Sociological Forum*, 22(4), 399–424.
<https://doi.org/10.1111/j.1573-7861.2007.00044.x>
- Fohlin, C. (2000). Economic, political, and legal factors in financial system development: international patterns in historical perspective. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=267674
- Fohlin, C. (2004). The history of corporate ownership and control in Germany.
- Fohlin, C. (2016). The Venture Capital Divide: Germany and the United States in the Post-War Era. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.2849237>
- Foley, C. F., Boland, F. K., & Lemm, M. (2017). GM's Capital Allocation Framework.

- Retrieved from <https://www.hbs.edu/faculty/Pages/item.aspx?num=53125>
- Frick, B. (1996). Co-determination and Personnel Turnover: The German Experience. *Labour*, 10(2), 407–430. <https://doi.org/10.1111/j.1467-9914.1996.tb00091.x>
- Fried, J. M., & Wang, C. C. Y. (2018, April). Are Buybacks Really Shortchanging Investment? *Harvard Business Review*. Retrieved from <https://hbr.org/2018/03/are-buybacks-really-shortchanging-investment>
- Friedman, M. (1963). *Inflation: Causes and consequences*. Asia Publishing House.
- Friedman, M. (1970, September 13). The Social Responsibility of Business is to Increase its Profits. *The New York Times Magazine*.
- Froud, J. (2006). *Financialization and strategy : narrative and numbers*. Routledge.
- Fuscaldo, D. (2018, July). Buybacks, Not iPhone Driving Apple Valuation: BMO | Investopedia. *Investopedia.Com*.
- Gehrke, L., Kühn, A. T., Rule, D., Moore, P., Bellmann, C., Siemes, S., & Standley, M. (2015). A Discussion of Qualifications and Skills in the Factory of the Future: A German and American Perspective. *VDI The Association of German Engineers*, 15.
- General Motors. (n.d.). *Annual Reports (1991-2017)*.
- GM. (2016). GM 2016 Sustainability Report - Our Management Approach. Retrieved June 7, 2018, from <http://www.gmsustainability.com/manage/governance.html>
- GM. (2017). Smith, Roger B. - Generations of GM. Retrieved June 7, 2018, from https://history.gmheritagecenter.com/wiki/index.php/Smith,_Roger_B.
- GM. (2018a). General Motors Corporate Governance. Retrieved June 7, 2018, from <https://www.gm.com/investors/corporate-governance.html>
- GM. (2018b). Our Brands. Retrieved June 24, 2018, from <https://www.gm.com/our-brands.html>
- GM Bylaws. (2017). General Motors Company Amended and Restated Bylaws. Detroit: GM. Retrieved from https://www.gm.com/content/dam/gm/en_us/english/Group4/InvestorsPDFDocuments/Bylaws.pdf
- Gordon, R. J. (2012). The Decline of Innovation and Economic Growth. Retrieved April 23, 2018, from <https://www.wsj.com/articles/SB10001424127887324461604578191781756437940>
- Goutas, L., & Lane, C. (2009). The Translation of Shareholder Value in the German Business System: A Comparative Study of DaimlerChrysler and Volkswagen AG. *Competition & Change*, 13(4), 327–346. <https://doi.org/10.1179/102452909X12506915718076>
- Graban, M. (2016). GM's CEO Roger Smith Thought Toyota Had Magic, But This Was the "Secret" – Lean Blog. Retrieved August 14, 2018, from <https://www.leanblog.org/2016/06/gms-ceo-roger-smith-thought-toyota-had-magic-but-this-was-the-secret/>
- Griffin, A. (2018, July 18). Elon Musk apologises for calling British cave diver who helped rescue Thai boys a “pedo guy” | The Independent. *Independent.Co.Uk*.
- Grub, M. (1999). A Trend towards more Shareholder Value in Germany: Recent Developments in German Stock Corporation Law. *International Company and Commercial Law Review*, 10, 42–46.
- Guilford, D. (2011). Looking back: The 0% solution. *Crain Communications Inc. (Detroit)*, 86(6480).
- Haipeter, T. (2006). Recent Developments in Co-determination at Volkswagen: Challenges and Changes. *Journal of Industrial Relations*, 48(4), 541–547. <https://doi.org/10.1177/0022185606066144>
- Hall, B. H., Lotti, F., & Mairesse, J. (2013). Evidence on the impact of R&D and ICT investments on innovation and productivity in Italian firms. *Economics of Innovation and New Technology*, 22(3), 300–328. <https://doi.org/10.1080/10438599.2012.708134>
- Hall, P. A., & Soskice, D. (2001). *Varieties of Capitalism*. Oxford: Oxford University Press.
- Hansen, D. (2018, August). By Tripling Its Stock Buybacks, Apple Robs Workers And The

- Economy. *Forbes*. Retrieved from
<https://www.forbes.com/sites/drewhansen/2018/08/01/triple-stock-buybacks-apple-workers-economy/>
- Hart, O. (1989). An Economist's Perspective on the Theory of the Firm. *JSTOR*, 89(7), 1757–1774. Retrieved from <http://www.jstor.org/stable/1122818>
- Haslam, C., Tsitsianis, N., Andersson, T., & Gleadle, P. (2015). *Accounting for Business Models: Increasing the Visibility of Stakeholders*. United Kingdom *Journal of Business Models* (Vol. 3). Retrieved from <http://qmro.qmul.ac.uk/xmlui/handle/123456789/31987>
- Hayek, F. (1988). *The fatal conceit: The errors of socialism*. Routledge.
- Heirman, A., & Clarysse, B. (2007). Which Tangible and Intangible Assets Matter for Innovation Speed in Start-Ups? *Journal of Product Innovation Management*, 24(4), 303–315. <https://doi.org/10.1111/j.1540-5885.2007.00253.x>
- Himmelweit, S., Simonetti, R., & Trigg, A. (2001). *Microeconomics: Neoclassical and institutionalist perspectives on economic behaviour*. Cengage Learning EMEA.
- Hirsch, J. (2010, January). GM names Edward E. Whitacre permanent CEO - latimes. *LA Times*. Retrieved from <http://articles.latimes.com/2010/jan/26/business/la-fi-gm-whitacre26-2010jan26>
- Hockett, R. (2018). Federal Corporate Charter Letter of Support. Ithaca: Cornell University Law School. Retrieved from https://www.warren.senate.gov/imo/media/doc/Federal_Corporate_Charter_Letter_of_Support.pdf
- Holmstrom, B. (1979). Moral Hazard and Observability. *The Bell Journal of Economics*, 10(1), 74–91. <https://doi.org/10.2307/3003320>
- IHS Markit. (2017). *Five Critical Challenges Facing the Automotive Industry A Guide for Strategic Planners*. Retrieved from <http://cdn.ihs.com/www/pdf/AUT-TL-WhitePaper-5.pdf>
- Indeed. (2018). General Motors Salaries in the United States | Indeed.com. *Indeed.Com*. Retrieved from <https://www.indeed.com/cmp/General-Motors/salaries>
- Ingrassia, P. (2009, October). Saturn Couldn't Escape GM's Dysfunctional Orbit - WSJ. *The Wall Street Journal*.
- Isidore, C. (2005, June). GM to close plants, cut 25,000 staff by end of '08. *CNN Money*. Retrieved from http://money.cnn.com/2005/06/07/news/fortune500/gm_closings/
- Isidore, C. (2009, June). General Motors bankruptcy: End of an era. *CNN Money*. Retrieved from http://money.cnn.com/2009/06/01/news/companies/gm_bankruptcy/
- JAS. (2017). Education & Training. *JAS*. Retrieved from https://www.uawgmjas.org/j/index.php?option=com_content&view=article&id=1014&Itemid=6
- Jensen, M. C. (1986). Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers. *The American Economic Review*, 76(2), 323–329. <https://doi.org/10.2307/1818789>
- Jensen, M. C. (1989). Eclipse of the Public Corporation. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.146149>
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
- Jensen, M. C., & Murphy, K. J. (1990). Performance Pay and Top-Management Incentives. *Journal of Political Economy*, 98(2), 225–264. <https://doi.org/10.2307/2937665>
- Jürgens, U. (1998). The Development of Volkswagen's Industrial Model, 1967-1995. *One Best Way*, 273–310.
- Jürgens, U. (2010). Corporate governance, innovation, and economic performance : a case study on Volkswagen. 02-205, 02-205, 38. Retrieved from <https://www.ssoar.info/ssoar/handle/document/11279>
- Jürgens, U., Lung, Y., Volpatto, G., & Frigant, V. (2002). The Arrival of Shareholder Value in the European Auto Industry a Case Study Comparison of Four Car Makers. *Competition & Change*, 6(1), 61–80. <https://doi.org/10.1080/10245290212673>
- Keeley, R. H., & Roure, J. B. (1993). The management team: a key element in technological

- start-ups. *Advances Global High-Technology Management*, 3, 35–59. Retrieved from <http://www.iese.edu/research/pdfs/di-0190-e.pdf>
- Kettering. (2018). About | Kettering University. Retrieved June 26, 2018, from <https://www.kettering.edu/about>
- Keynes, J. M. (1991). *The general theory of employment, interest, and money (1936)*. New York: Harcourt.
- Kleiner, Thibaut; Repplinger-Hach, R. (2007). The new community framework for state aid for research and development and innovation. Retrieved from http://ec.europa.eu/competition/publications/cpn/2007_1_3.pdf
- Kleinknecht, A., Van Montfort, K., & Brouwer, E. (2002). The Non-Trivial Choice between Innovation Indicators. *Economics of Innovation and New Technology*, 11(2), 109–121. <https://doi.org/10.1080/10438590210899>
- Kraaijenbrink, J., Spender, J.-C., & Groen, A. J. (2010). The Resource-Based View: A Review and Assessment of Its Critiques. *Journal of Management*, 36(1), 349–372. <https://doi.org/10.1177/0149206309350775>
- Krippner, G. R. (2005). The financialization of the American economy. *Socio-Economic Review*, 3(2), 173–208. <https://doi.org/10.1093/SER/mwi008>
- Kuehner-Hebert, K. (2018). Under Mary Barra, GM Focuses On Emerging Technologies. *Chief Executive*. Retrieved from <https://chiefexecutive.net/mary-barra-gm-focuses-emerging-tech-transform-company-industry/>
- Lazonick, W. (2004). Indigenous Innovation and Economic Development: Lessons from China's Leap into the Information Age. *Industry & Innovation*, 11(4), 273–297. <https://doi.org/10.1080/1366271042000289360>
- Lazonick, W. (2007). Varieties of Capitalism and Innovative Enterprise. In *Capitalisms Compared* (pp. 21–69). Emerald Group Publishing Limited. [https://doi.org/10.1016/S0195-6310\(06\)24001-8](https://doi.org/10.1016/S0195-6310(06)24001-8)
- Lazonick, W. (2008). The New Economy Business Model and Sustainable Prosperity. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.1134982>
- Lazonick, W. (2010). The Chandlerian corporation and the theory of innovative enterprise. *Industrial and Corporate Change*, 19(2), 317–349. <https://doi.org/10.1093/icc/dtq005>
- Lazonick, W. (2011). From innovation to financialization: how shareholder value ideology is destroying the US Economy. *The Handbook of the Political Economy of Financial Crises*, 491–511. Retrieved from http://www.theairnet.org/files/research/lazonick/Lazonick_Innovation_Financialization_20110616.pdf
- Lazonick, W. (2012). Who Needs a Theory of Innovative Enterprise? Retrieved from <http://www.theairnet.org/files/research/lazonick/Lazonick Who Needs a Theory of Innovative Enterprise 20120803.pdf>
- Lazonick, W. (2013). The theory of innovative enterprise: A foundation of economic analysis. *University of Massachusetts: The Academic Industry ...*, (February), 127–159. Retrieved from http://www.theairnet.org/files/research/WorkingPapers/Lazonick_InnovativeEnterprise_AIR-WP13.0501.pdf
- Lazonick, W. (2015). Effective Public Management Stock buybacks: From retain-and-reinvest to downsize-and-distribute. Retrieved from <https://www.brookings.edu/wp-content/uploads/2016/06/lazonick.pdf>
- Lazonick, W. (2017a). *Innovative Enterprise and Sustainable Prosperity*. Retrieved from <https://www.ineteconomics.org/uploads/papers/Lazonick-Innovative-Enterprise-and-Sustainable-Prosperity-INET-20171010.pdf>
- Lazonick, W. (2017b). Innovative Enterprise Solves the Agency Problem: The Theory of the Firm, Financial Flows, and Economic Performance. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3081556>
- Lazonick, W. (2017c). The New Normal is “Maximizing Shareholder Value”: Predatory Value Extraction, Slowing Productivity, and the Vanishing American Middle Class. *International Journal of Political Economy*, 46(4), 217–226.

- <https://doi.org/10.1080/08911916.2017.1407736>
- Lazonick, W., & Mazzucato, M. (2013). The risk-reward nexus in the innovation-inequality relationship: Who takes the risks? Who gets the rewards? *Industrial and Corporate Change*, 22(4), 1093–1128. <https://doi.org/10.1093/icc/dtt019>
- Lazonick, W., Mazzucato, M., & Tulum, Ö. (2013). Apple's changing business model: What should the world's richest company do with all those profits? *Accounting Forum*, 37(4), 249–267. <https://doi.org/10.1016/J.ACCFOR.2013.07.002>
- Lazonick, W., & O'Sullivan, M. (2000). Maximizing shareholder value: a new ideology for corporate governance. *Economy and Society*, 29(1), 13–35. <https://doi.org/10.1080/030851400360541>
- Lazonick, W., & Prencipe, A. (2005). Dynamic capabilities and sustained innovation: strategic control and financial commitment at Rolls-Royce plc. *Industrial and Corporate Change*, 14(3), 501–542. <https://doi.org/10.1093/icc/dth061>
- Lazonick, W., & Tulum, Ö. (2011). US Biopharmaceutical Finance and the Sustainability of the Biotech Business Model. *Research Policy Journal Research Policy*, 40, 1170–1187. <https://doi.org/10.1016/j.respol.2011.05.021>
- Levin, D. (1998). 11,500 Employees Strike At a Major G.M. Factory - The New York Times. *New York Times*. Retrieved from <https://www.nytimes.com/1994/09/28/us/11500-employees-strike-at-a-major-gm-factory.html>
- Levs, J. (2009, November). Big Three auto CEOs flew private jets to ask for taxpayer money - CNN.com. *CNN*. Retrieved from <http://edition.cnn.com/2008/US/11/19/autos.ceo.jets/>
- Lincoln, Y., & Guba, E. (1985). *Naturalistic Inquiry* (Vol. 75). Sage.
- Lippert, I., Huzzard, T., Jürgens, U., & Lazonick, W. (2014). *Corporate governance, employee voice, and work organization: sustaining high-road jobs in the automotive supply industry*. Oxford University Press.
- Lu, Q. (2000). *China's leap into the information age : innovation and organization in the computer industry*. Oxford: Oxford University Press.
- Maielli, G., & Haslam, C. (2016). General motors: A financialized account of corporate behaviour 1909–1940. In *Accounting Forum*, 40(4), 251–264. Retrieved from <https://www.sciencedirect.com/science/article/pii/S0155998216300503>
- Malkiel, B. G., & Fama, E. F. (1970). Efficient Capital Markets: A Review of Theory and Empirical Work. *The Journal of Finance*, 25(2), 383–417. <https://doi.org/10.1111/j.1540-6261.1970.tb00518.x>
- Manual, O. (2005). The Measurement of Scientific and Technological Activities - Proposed Guidelines for Collecting and Interpreting Technological Innovation Data. European Commission - Eurostat. Retrieved from <https://www.oecd.org/sti/inno/2367580.pdf>
- Matousek, M. (2017). Mary Barra was called a “lightweight” when she became CEO of GM — here’s how she transformed the company and silenced her doubters. *Business Insider*. Retrieved from <https://www.businessinsider.nl/heres-how-mary-barra-silenced-critics-who-called-her-a-lightweight-2018-1/?international=true&r=US>
- Maynard, M. (2006, July). G.M. Reports a \$3.1 Billion Loss - The New York Times. *The New York Times*.
- Maynard, M. (2007, December). Roger B. Smith, 82, Ex-Chief of G.M., Dies. *The New York Times*. Retrieved from <https://www.nytimes.com/2007/12/01/business/01smith.html>
- Mazzucato, M. (2005). Risk, variety and volatility: Growth, innovation and stock prices in early industry evolution. *Entrepreneurship, the New Economy and Public Policy: Schumpeterian Perspectives*, 13(5), 33–54. https://doi.org/10.1007/3-540-26994-0_4
- Mazzucato, M. (2013). Financing innovation: creative destruction vs. destructive creation. *Industrial and Corporate Change*, 22(4), 851–867. <https://doi.org/10.1093/icc/dtt025>
- McGaughey, E. (2015). The Codetermination Bargains: The History of German Corporate and Labour Law. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.2579932>
- Meredith, R. (2001, October). What's Good for General Motors... *Forbes*.

- MINT EC. (2018). die Seite konnte nicht gefunden werden : MINT-EC. Retrieved May 4, 2018, from <https://www.mint-ec.de/home.html>;
- Mintzberg, H. (1978). Patterns in Strategy Formation. *Management Science*, 24(9), 934–948. <https://doi.org/10.1287/mnsc.24.9.934>
- Modigliani, F., & Miller, M. H. (1963). Corporate income taxes and the cost of capital: a correction. *The American Economic Review*, 53(3), 433–443.
- Moore, G. A. (1991). *Crossing the Chasm*. New York City: Harper Business Essentials.
- Morck, R. (2014). The Social Value of Shareholder Value. *Corporate Governance: An International Review*, 22(3), 185–193. <https://doi.org/10.1111/corg.12063>
- Morck, R., Shleifer, A., & Vishny, R. (1988). Management Ownership and Market Valuation: An Empirical Analysis. *Journal of Financial Economics*, 20(1–2), 293–315. Retrieved from <https://scholar.harvard.edu/shleifer/publications/management-ownership-and-market-valuation-empirical-analysis>
- Morrison, C. (2015). Volkswagen supports STEM, apprenticeship programs. Retrieved May 4, 2018, from <http://nooga.com/171556/volkswagen-supports-stem-apprenticeship-programs/>
- Morrison, J. (2009). General Motors cutting more than half of its Kettering University co-op students | MLive.com. *Michigan Live*.
- Musgrave, R. A. (1987). U.S. Fiscal Policy, Keynes, and Keynesian Economics. *Journal of Post Keynesian Economics*, 10(2), 171–182. <https://doi.org/10.2307/4538063>
- Naudé, W., & Nagler, P. (2017). Technological Innovation and Inclusive Growth in Germany. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3088958
- Naughton, K. (2007). Why Toyota Is Becoming the World's Top Carmaker. Retrieved June 8, 2018, from <http://www.newsweek.com/why-toyota-becoming-worlds-top-carmaker-95469>
- Nelson, R. R. (1991). Why do firms differ, and how does it matter? *Strategic Management Journal*, 12(S2), 61–74. <https://doi.org/10.1002/smj.4250121006>
- Nelson, R. R., & Winter, S. G. (1977). In search of useful theory of innovation. *Research Policy*, 6(1), 36–76. [https://doi.org/10.1016/0048-7333\(77\)90029-4](https://doi.org/10.1016/0048-7333(77)90029-4)
- Nelson, R. R., & Winter, S. G. (1982). *An Evolutionary Theory of Economic Change*. Belknap Press of Harvard University Press.
- Newman, P. (Ed. . (1998). *The new Palgrave dictionary of Economics and the Law*. Macmillan Reference.
- Nielson, J. (2017). Automotive History: Saturn's Early Years – Corporate Camelot. Retrieved from <http://www.curbsideclassic.com/automotive-histories/automotive-history-saturns-early-years-corporate-camelot/>
- Nisen, M. (2013). Mary Barra GM CEO Career Bio - Business Insider. *Business Insider*. Retrieved from <http://www.businessinsider.com/mary-barra-gm-ceo-career-bio-2013-12?international=true&r=US&IR=T>
- O'Sullivan, M. (2000). The innovative enterprise and corporate governance. *Cambridge Journal of Economics*, 24(4), 393–416. <https://doi.org/10.2307/23600462>
- O'Sullivan, M., & Lazonick, W. (2010). Corporate Governance and the Innovative Economy: Policy Implications. *STEP Report Series*. Retrieved from <https://ideas.repec.org/p/stp/stepre/1998r03.html>
- O'Toole, J. (2001). When leadership is an organizational trait. *The Future of Leadership*, 158–174.
- Odartey-Mills, E. (2015). Corporate governance structure and shareholder wealth maximisation. Retrieved from <https://mpra.ub.uni-muenchen.de/id/eprint/68087>
- Palley, T. I. (2012). *From financial crisis to stagnation: The destruction of shared prosperity and the role of economics*. Cambridge University Press. <https://doi.org/10.1017/CBO9781139061285>
- Palley, T. I. (2013). Financialization: What It Is and Why It Matters. In *Financialization* (pp. 17–40). London: Palgrave Macmillan UK. https://doi.org/10.1057/9781137265821_2

- Palmer, R., & Brookes, R. (2002). Incremental innovation: A case study analysis. *Journal of Database Marketing & Customer Strategy Management*, 10(1), 71–83.
<https://doi.org/10.1057/palgrave.jdm.3240095>
- Phelan, M. (2017). Mary Barra shapes a new GM: Fast, focused and decisive. *Detroit Free Press*. Retrieved from <https://eu.freep.com/story/money/cars/mark-phelan/2017/06/04/mary-barra-general-motors/352853001/>
- Phelps, E. S. (2013, February). Less Innovation, More Inequality. *The New York Times*, February. Retrieved from <https://opinionator.blogs.nytimes.com/2013/02/24/less-innovation-more-inequality/?hp>
- Porter, M., Rivkin, J., & Kanter, R. (2013). Competitiveness at a Crossroads. *Boston: Harvard Business School*, (February), 32. Retrieved from <http://iridiumfs.co.uk/files/competitiveness-at-a-crossroads.pdf>
- Pritchard, L. J. (1943). The Effects of Specific and Ad Valorem Taxes. *The Quarterly Journal of Economics*, 58(1), 149–152. <https://doi.org/10.2307/1885763>
- PwC. (2017). Auto industry growth strategies: Fasten your seatbelts. Retrieved August 4, 2018, from <https://www.strategyand.pwc.com/strategythatworks/growth/autoindustry>
- Rattner, S. (2018, July). The Myth of Corporate America's Short-Term Thinking. *The New York Times*.
- Rauh, J., & Zingales, L. (2009). GM solution: Chapter 11 with government restructuring finance | VOX, CEPR Policy Portal. Retrieved June 26, 2018, from <https://voxeu.org/article/gm-solution-chapter-11-government-restructuring-finance>
- Reuters. (2017a). VW Group 2017 sales rose to 10.7M cars, beating Toyota, paper says. *Europe Autonews*. Retrieved from <http://europe.autonews.com/article/20180107/ANE/180109829/vw-group-2017-sales-rose-to-10.7m-cars-beating-toyota-paper-says>
- Reuters. (2017b, November). Why Stock Buybacks Are Cannibalizing Innovation. *Fortune*. Retrieved from <http://fortune.com/2015/11/17/stock-buybacks-innovation/>
- Rosen, R. (2016). Leadership Journeys - Mary Barra - IDEP. *IDEP*, May.
- Samuelson, P. (1965). Proof that properly anticipated prices fluctuate randomly. *IMR; Industrial Management Review*, 6(2), 41.
- Sanger, D. E. (1995). Sanctions of Japan: The Overview: 100% Tariffs Set on 13 Top Models of Japanese Cars. *The New York Times*. Retrieved from <https://www.nytimes.com/1995/05/17/business/sanctions-japan-overview-100-tariffs-set-13-top-models-japanese-cars.html>
- Schumpeter, J. A. (1934). *The Theory of Economic Development: An Inquiry Into Profits, Credit, Interest, and the Business Cycle*. Harvard University Press.
- Shujahat, M., Ali, B., Nawaz, F., Durst, S., & Kianto, A. (2018). Translating the impact of knowledge management into knowledge-based innovation: The neglected and mediating role of knowledge-worker satisfaction. *Human Factors and Ergonomics in Manufacturing & Service Industries*. <https://doi.org/10.1002/hfm.20735>
- Simon, H. A. (1951). A Formal Theory of the Employment Relationship. *Econometrica*, 19(3), 293–305. <https://doi.org/10.2307/1906815>
- Sloan, A. (1964). *My years with general motors*. Crown Business.
- Solow, R. M. (1957). Technical Change and the Aggregate Production Function. *The Review of Economics and Statistics*, 39(3), 312–320. <https://doi.org/10.2307/1926047>
- Sorge, A., & Streeck, W. (1987). *Industrial Relations and Technical Change: The Case for an Extended Perspective (Vol. 81)*. Berlin: Wissenschaftszentrum.
- Soros, G. (2013). Fallibility, reflexivity, and the human uncertainty principle. *Journal of Economic Methodology*, 20(4), 309–329. <https://doi.org/10.1080/1350178X.2013.859415>
- Soskice, D. (1990). Wage Determination : the Changing Role of Institutions in Advanced Industrialized Countries. *Oxford Review of Economic Policy*, 6(4), 36–61. <https://doi.org/10.2307/23606157>
- Speidel, F. (2000). Co-managed versus management-dominated globalisation – The

- implications of the globalisation of assembly and production in the German and French automobile industry on industrial relations with particular reference to the cases of Volkswagen and Renault. Retrieved from <http://aei.pitt.edu/751/>
- Stanford. (2018). Center for Automotive Research at Stanford. Retrieved June 26, 2018, from <https://cars.stanford.edu/>
- Stevis, M. (2011, November 24). EU To Sue Germany Again Over "Volkswagen Law." *The Wall Street Journal*. Retrieved from <https://www.wsj.com/articles/SB10001424052970204630904577057730270544356>
- Storm, S. (2017). The New Normal: Demand, Secular Stagnation, and the Vanishing Middle Class: A Reply to James K. Galbraith and William Lazonick. *International Journal of Political Economy*, 46(4), 227–232. <https://doi.org/10.1080/08911916.2017.1411425>
- Storm, S., & Naastepad, C. W. M. (2012). *Macroeconomics Beyond the NAIRU*. Harvard University Press. Retrieved from <http://www.jstor.org/stable/j.ctt24hhs5>
- Stout, D. (2014). CEO Mary Barra Says GM Will Get Over Recall Crisis in 2015 | Time. *Time*. Retrieved from <http://time.com/3661004/general-motors-chief-mary-barra-2015/>
- Tagliabue, J. (1981). VW's 1980 Net Fell 51.9% - The New York Times. *The New York Times*. Retrieved from <https://www.nytimes.com/1981/04/30/business/vw-s-1980-net-fell-51.9.html>
- Tagliabue, J. (1987). VW Fraud May Total \$259 Million - The New York Times. *The New York Times*. Retrieved from <https://www.nytimes.com/1987/03/11/business/vw-fraud-may-total-259-million.html>
- Taylor, A. (1994). GM's \$11,000,000,000 Turn Around CEO Jack Smith didn't just stop the bleeding. Retrieved June 25, 2018, from http://archive.fortune.com/magazines/fortune/fortune_archive/1994/10/17/79852/index.htm
- Taylor, A. (2009). Why Fritz Henderson Resigned as GM's CEO. *Time*. Retrieved from <http://content.time.com/time/business/article/0,8599,1944544,00.html>
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533.
- Tirole, J. (1988). *The Theory of Industrial Organization*. MIT press.
- Tobin, J. (1984). On the Efficiency of the Financial System. *Lloyd's Bank Review*, 153, 1–15. Retrieved from <https://economicsociologydotorg.files.wordpress.com/2014/12/tobin-on-the-efficiency-of-the-financial-system.pdf>
- Tushman, M. L. (1997). Winning through innovation. *Strategy & Leadership*, 25(4), 14–19. <https://doi.org/10.1108/eb054591>
- UPI. (1983, July 26). GM reports \$1 billion profit - UPI Archives. *United Press International*. Retrieved from <https://www.upi.com/Archives/1983/07/26/GM-reports-1-billion-profit/8041428040000/>
- Utterback, J. M., & Abernathy, W. J. (1975). A dynamic model of process and product innovation. *Omega*, 3(6), 639–656. [https://doi.org/10.1016/0305-0483\(75\)90068-7](https://doi.org/10.1016/0305-0483(75)90068-7)
- van der Panne, G., van Beers, C., & Kleinknecht, A. (2003). Success and Failure of Innovation: A Literature Review. *International Journal of Innovation Management*, 07(03), 309–338. <https://doi.org/10.1142/S1363919603000830>
- Visram, T. (2018). Tax cut fuels record \$200 billion stock buyback bonanza. *CNN Money*. Retrieved from <http://money.cnn.com/2018/06/05/investing/stock-buybacks/index.html?iid=EL>
- Vojtěch, N. (2011). *Acquisition of Škoda Auto Company*. Filozofická fakulta Univerzity Palackého. Retrieved from <https://theses.cz/id/sgu4xy/00140705-621242035.pdf>
- Volkswagen. (n.d.). *Annual Reports (1991-2017)*.
- Volkswagen. (2000). *Volkswagen AG - Annual Report 2000*. Wolfsburg. Retrieved from <https://ddd.uab.cat/pub/infanu/146223/iaVOLKSWAGENa2000ieng.pdf>
- Volkswagen. (2008). Historical Notes. *A Series of Publications from Volkswagen Aktiengesellschaft*,

- Corporate History Department.* Retrieved from
https://www.volkswagenag.com/presence/konzern/documents/history/englisch/Heft_7_EN.pdf
- Volkswagen. (2014). Qualification | Volkswagen Sustainability Report 2014. Retrieved May 4, 2018, from <http://sustainabilityreport2014.volkswagenag.com/people/qualification>
- Volkswagen. (2018a). 1945–1949: The Work of the British. Retrieved May 9, 2018, from <https://www.volkswagenag.com/en/group/history/chronicle/1945-1949.html>
- Volkswagen. (2018b). 1950–1960: Internationalisation and Mass Production in the Era of Germany's Economic Miracle. *Volkswagen AG*. Retrieved from <https://www.volkswagenag.com/en/group/history/chronicle/1950-1960.html>
- Volkswagen. (2018c). Shareholder Structure. Retrieved May 2, 2018, from <https://www.volkswagenag.com/en/InvestorRelations/shares/shareholder-structure.html>
- Volkswagen. (2018d). Supervisory Board. Retrieved May 2, 2018, from <https://www.volkswagenag.com/en/InvestorRelations/corporate-governance/AR.html>
- Volkswagen. (2018e). Volkswagen Group. Retrieved May 2, 2018, from <https://www.volkswagenag.com/en/group.html>
- Volkswagen. (2018f). Volkswagen Nachhaltigkeitsbericht 2015 - People - Qualification. Retrieved May 4, 2018, from <http://sustainabilityreport2015.volkswagenag.com/people/qualification.html>
- Volkswagen. (2018g). Volkswagen Timeline : Volkswagen UK. Retrieved June 27, 2018, from <http://www.volkswagen.co.uk/timeline>
- Watt, A., Keune, M., & Galgoczi, B. (2008). *Jobs on the Move: An Analytical Approach to Relocation and Its Impact on Employment*. Brussels.
- Weernink, W. O. (2007). Volkswagen's branding plan takes shape. *Automotive News Europe*. Retrieved from <http://europe.autonews.com/apps/pbcs.dll/article?AID=/20011203/ANE/112030837>
- West, J., & Gallagher, S. (2006). Challenges of open innovation: the paradox of firm investment in open-source software. *R and D Management*, 36(3), 319–331. <https://doi.org/10.1111/j.1467-9310.2006.00436.x>
- Williamson, O. E. (2005). The Economics of Governance. *American Economic Review*, 95(2), 1–18. <https://doi.org/10.1257/000282805774669880>
- WilmerHale. (2018). Features of German Labor and Employment Law | WilmerHale. Retrieved June 26, 2018, from <https://www.wilmerhale.com/en/insights/publications/features-of-german-labor-and-employment-law-october-8-2003>
- Wurgler, J. (2000). Financial markets and the allocation of capital. *Journal of Financial Economics*, 58(1–2), 187–214. [https://doi.org/10.1016/S0304-405X\(00\)00070-2](https://doi.org/10.1016/S0304-405X(00)00070-2)
- Yin, R. K. (2013). *Case Study Research: Design and Methods (Applied Social Research Methods)*. London and Singapore: SAGE.