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Disruptive Innovation in Manufacturing: A Qualitative Analysis of the Musk Operating Philosophy

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ABSTRACT

This paper examines the evolution of operations management by contrasting traditional frameworks—such as Lean Philosophy, Six Sigma, and Intel's agile management—with the disruptive innovations characterizing the Musk operating philosophy. While classical disruptive innovation theory typically traces advancements from the lower end of the market upward, modern applications encompass high-end breakthroughs that completely reinvent industries. By rejecting early design freezes and heavy outsourcing, Elon Musk's paradigm leverages hyper-vertical integration, single-piece Giga Press castings, AI-driven simulations, and a highly flexible "ALGORITHM" process to accelerate development.

Furthermore, this paper analyses the adoption of these disruptive manufacturing methodologies within the Indian ecosystem. The Government of India supports this transition through strategic policy frameworks and financial incentives like the Production Linked Incentive (PLI) and FAME schemes. Concurrently, the domestic private sector is pioneering software-defined vehicles, navigating unique challenges including local tariff negotiations, raw material capacity building, and integrating informal knowledge management styles like *Jugaad*. Ultimately, this qualitative analysis bridges the historical gap between academic theory and practical manufacturing affairs, outlining a strategic path forward for industrial self-reliance and technological modernization.

Keywords: Disruptive innovation-Musk Operating Philosophy-Operation Management-Hyper Vertical Integration-Indian Manufacturing ecosystem

Introduction

The field of management have been strongly influenced by the American and Japanese industrial practices. The revolution in management took place in the industrial units of these countries leading to better productivity and efficient use of resources thereby giving birth to the modern economy. The modern economy always aims at enhancing productivity and meet the target of generating profit and providing goods and services to the consumers as per their needs and demands. These have led to development of procedures and techniques which have been improved by various entrepreneurs in the past and will keep on improving and developing in the future too. These developments have strong theoretical and research foundation. Hambrick (1994) argues that all concepts and theories need to enter "world of practical affairs" which is the aim of all academic research. (Gulati, 2007) too states that the gap between theory and practice need to be overcome for the correct perspective to be understood. The present times are witnessing production and introduction of revolutionary production processes which are being deeply influenced by

Disruptive technology and AI. The practical application of revolutionary processes needs to be assessed and highlighted for their application in the practical world of production. Disruptive Innovation is one such concept which is being used in discussions and also implemented in niche industries. This concept was first discussed by Christensen in his Book 'The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail' where he covered the concepts of sustaining innovation and the disruptive innovation to bring forth the changes which can come in operations and production to bring a revolutionary transformation.

Progression of Operations Management

The previous tranche of changes in production was dominated by concepts like Lean Philosophy and the Six Sigma with the aim to provide the best and the most authentic product to the customers and the markets. These changes in a way aim at being similar to all the peers in that particular group of industries and avoid penalties associated with deviance (DiMaggio and Powell, 1983). Later on, there were innovations in management, such as the non-hierarchical structure that Robert Noyce, Gordon Moore, and Andrew Grove pioneered at Intel (Isaacson , 2014). Still these innovations were not able to breach the Disruptive Innovation boundary. Still strategy scholars have stressed how firms struggle to be different to gain competitive advantage by establishing valuable, rare, and unique products, and by staking a niche position for themselves (Barney, 1991; Porter, 1996). A brief look at the main themes of these prevailing innovations in management needs to be carried out so as to evaluate the new operating philosophy being introduced and how their status can be classified as disruptive in nature.

Lean Philosophy. The Lean Philosophy stressed on maximising customer value and reducing waste (*Muda*). Any material or process that does not adds value needs to be eliminated. The philosophy stresses that an integrated approach is more beneficial in securing sustained improvement. The interdependency of the Five Primary Elements: organization, metrics, logistics, manufacturing flow, and process control define Lean Manufacturing (Feld, 2000).Feld describes a proven, applied approach to creating a lean program using these elements. Traditional Toyota tools for example like value stream mapping (VSM), cellular manufacturing, Kanban, 5S, and Kaizen formed part of Lean philosophy. These tools were adapted to different other discrete manufacturing industries (Prasad etal, 2020). Kisperska-Moron & de Haan (2011) highlighted the balance between the Agile Paradigm and the Lean paradigm for sustained progress.

Six Sigma: It aimed at complete perfection and is a data driven and highly disciplined approach to production. It operates on the DMAIC cycle which aims at Define, Measure, Analyse, Improve, and Control (Schroeder, K, Liedtke, & Choo, 2008). Jack Welch at GE adopted Six Sigma and initiated the elimination of variation from already lean business operations to promote gains in productivity and financial performance and considered variation an evil in any customer-touching process (Watson, 2001). Variance is eliminated by stabilising the process and reducing the fluctuations so that the highest level of perfection is achieved using statistical tools.

Intel's Pioneering Management Style In the 1970s and 80s, Intel founders Robert Noyce, Gordon Moore, and Andy Grove addressed the issue of rigidity in decision making and realized that rigid, slow-moving corporate hierarchies would choke a fast-paced industry like semiconductor industry. The pace of development of semiconductor industry outpaces the earlier slow-moving decision making. Moore and Grove pioneered a radical corporate culture that laid the groundwork for Silicon Valley's operational agility (Mahon, 2023). The present advancement in semiconductor industry is the result of this agility

developed at Intel. Some features of this pioneering management style are discussed in the succeeding paragraphs.

Non-Hierarchical Structure Corporations have hierarchies those are visible to the world and is followed in letter and spirit. Noyce and Grove famously ditched executive perks and privileges and aimed at an egalitarianism that was earlier non existing. The transition led to the abolishing of the executive suites, reserved parking spots, or corporate dining rooms which were a barrier in interaction and flow of ideas. Everyone—including the CEO—worked in a standard, open-plan cubicle. This destroyed communication barriers, allowing front-line engineers to talk directly to decision-makers (Mahon, 2023). This was a very drastic transformation which was simply out of the box and led to a revolution in the management techniques. **Constructive Confrontation** Andy Grove championed an environment where employees were expected to ruthlessly challenge ideas based on data and logic, regardless of who proposed them. Status meant nothing; the best idea won. This again broke the barrier where the flow of information was not stopped due to hierarchical differences and hence led to churning of ideas so that the incubation of ideas was fast and the product designs improved faster.

Objectives and Key Results (OKRs) Invented by Grove this framework aligns individual goals with corporate strategy which earlier used to be divergent and separate. It defines an Objective (what we want to achieve) and validates it with measurable Key Results (how we will know we achieved it). As a result, it aligns individual employee goals directly with the broader corporate strategy thereby bringing a synergy which led to enhanced productivity.

Knowledge-Power over Position-Power: Power was not measured by position but by Knowledge. In high-tech manufacturing like the semiconductor industry, the person with the most relevant technical knowledge has the "power" to make a decision, not necessarily the person with the highest job title. This led to faster implementation of ideas and thus fast paced the development process.

Whither Disruptive or Not?

It is important to lay down the parameter on which an invention, process or thought can be considered Disruptive. Clayton Christensen popularized the term ‘Disruption’ in his book ‘The Innovator's Dilemma’, writing of disruption as a set of risks that established firms face which are very different from the prevailing way of functioning and operations. Before this the inability of the firms to shift was attributed to the existing stakeholders making the introduction of new technology irrational and small experimental changes being hard to implement (Rosenbloom & Christensen, 1994). The concept was introduced to highlight the fact that most companies want to carry on sustaining already existing innovations rather than trying new approach and ignoring emerging technologies because early profit margins look small and their current buyers may not be needing them thus loosing on the new opportunities on the horizon. Clayton Christensen’s classic theory of disruptive innovation forms the bedrock of the definition of Disruptive innovation. Christensen developed the theory of disruptive innovation, which describes how firms that introduce fundamental products can eventually overtake established players by systematically and gradually improving the products until they meet the needs of mainstream consumers, mostly at low prices (Christensen, Raynor, & McDonald, 2015). Gans (2016) reevaluates the theory and finds out why successful firms fail and why resilient one’s survived the market. The fact that the present strategies are going so well that the firms fail to notice the changes taking place and the new opportunities rising. The concept’s development had been spasmodic with the academia not fully able to bridge the gap between the theory and the concept. Hambrick (1994) highlights this hiatus and dwell upon the institutional

isolationism and reinforces the industry to enter the practical field of industry. This isolationism led to the varied interpretation of the concept Disruption and its practical application thereby making the concept messy.

However, the concept of Disruptive Innovation is subject to misunderstanding and hence lead to dilemma (Christensen, 2006). The relevance of the concept gets questioned and hence need clarification. Gulati (2007) dealt upon the gap existing between theory/concepts and practical application of the same. The same is apparent in the case of Disruptive Innovation. 'Disruptive innovation is not limited to specific market segments, but can occur across various industries and technologies' (Gemelgo, Pereira, & Carvalho, 2025). Disruptive Innovation evolves with its starting point being the lower end of the market and going on to the higher end. This maybe in terms of cost, utility, accessibility etc. The rationale for this starting point is that since any innovation which makes a mark on human civilisation ought to be first accessible to be tested or used by the lower end of the society is what decides the start point. True disruptive innovation (as defined by Clayton Christensen) usually involves a low-cost, low-quality product that initially attracts the lower end of the market before gradually improving to steal mainstream or the higher end of the spectrum customers. However, the scope of disruptive innovation has evolved over a period of time and replaced the progression from lower end to the higher end spectrum. New research has widened the scope of disruptive innovation and involve the high-end disruptive invention which shows that it can take place not only at specific segments but can take place in different industries and technologies (Liu, Liu, & Mboga, 2020).

Disruptive innovation does not create something new but literally reinvents an industry because of the development. The transition from horse carriage to the motor car was one such Disruptive innovation. The Assembly line was another which reduced the time to build a car drastically from approx. 12 hours to say approx. 2 hours. Tushman and Anderson (1986) found out that technology-based industries basically undergo small and incremental changes which are disturbed by breakthroughs which dramatically change the competence of the company.

Guttentag & Smith (2017) have carried out an empirical study to determine the status of Airbnb as a disruptive innovation as compared to traditional hotels. They opined that 'Relative to hotels, Airbnb's characteristics are somewhat – but not completely – consistent with the concept of disruptive innovation' which raises the issue that should interventions like Musk's in EV, Space X and AI be considered as Disruptive innovation ? There is no doubt that Airbnb has impacted the hospitality industry in a very innovative manner but not considered disruptive.

Foundation to the concept of Disruption started with the observation by Bower (1970) that innovation ideas are filtered by middle managers who decide to give 'impetus' to certain ideas by raising them to the level of top management while deciding to not pursue others. This filteration is subject to lots of factors with resource availabillity and mangemnet being one of them and underpins the theory of disruptive technologies. The evolution of the Disruptive Innovation Theory had one of its origin in the Pfeffer and Salancik's **Resource Dependence Theory** which explains the failure of established companies facing disruptive innovation (Pfeffer & Salancik, 1978). Pfeffer and Salancik (1978) argued that an organization's behavior is dictated by whoever controls its resources and as a result every innovation carried out does not favours with the resource controlling entity there by curbing the innovation. Driven by resource dependence, the resource controlling entity rationally starve the disruptive technology of funding to satisfy their current revenue drivers. The need to use strategic resources to reconcile conformity versus differentiation tension have been highlighted so as to be different from peers so as to be competitive (Zhao

et al, 2017). The innovation does catches the market attention but by that time it is too late. It is here the importance of strategic investment comes in. Christensen & Bower (1996) called this as "resource allocation process" which takes precedence over the technological competence. It is a link between the resource dependence with resource allocation and the failure to comprehend this can be attributed to managerial myopia or organsiational lethargy or to insufficent resources or expertise. The strategic management need to take notice of this important aspect.

Thus Clayton Christensen opines that successful companies are so resource dependent and interested in satisfying their current customers that they are not able to become part of the innovation revolution. It is not their managers were incompetent or blind to technological change but the culture to do everything right prevents them for imbibing disruptive innovation. This barrier whosever breaks makes pivotal contribution to the product or idea making far reaching changes in the companies growth and fortunes. The firms are complex, multidimensional entities, and they should identify and orchestrate various types of strategic resources to reconcile conformity versus differentiation tensions, address the multiplicity of stakeholder expectations, and aptly modify their positioning strategies in order to succeed in dynamic environments (Zhao etal, 2017). This in a way leads to Disruptive innovation as the firm has to reconcile the stakeholders expectations as these are the constraints in which the company operates.

The ways out for these companies are creating independent spin-off units to nurture disruptive technologies, altering their resource allocation metrics and shifting focus from current customer feedback to future market creation. Since Musk transformed the processes at the higher end of the market spectrum and gradually slided down to the lower end does not obviate his contribution of the concepts and technologies introduced by him as they have revolitionised the EV manufacturing and Space Exploration which is going to have far reaching impact on these sectors.

Chaactrsitics of the Innovative and Dispruptive Process

The human being's narrowed sense of ambition and a lack of imagination in the business world and indeed in society as a whole have characterised the development in the scientific field where very few innovations have achieved revolutionary results. The human civilisation is given a new path by Disruptive innovations which give a totally different perspective to our various facets of life.

Musk's principles have introduced key changes undertaken which can be summed up as:

1. Pulled apart the traditional Assembly Line
2. Reinvented Outsourcing
3. Specialisation in one task has been replaced by General Purpose Ability for all aspects of production.

The Tesla manufacturing facility is characterised by speed, software and control replacing the earlier stress on efficiency and scale. The operations management since long have followed the Toyota model incorporating Just in time, Kaizen and other best practices. The Tesla facilities has been designed in a manner that the factory is a product and an innovation in the factory will lead improvement in the product too. This disruptive innovation is the result of the strong foundation of Musk in computers and software. The company provides over-the-air updates which improves the car long after delivery, offering performance upgrades, new features, and even safety enhancements which are a must in view of the cabs with no steering wheels and no drivers likely to be introduced shortly in a big way. In doing so, Tesla redefined the ownership experience, thereby enhancing consumer expectations from a car over time.

Pulling apart the Assembly line is no mean feat as it transcends the established production process which stood the test of time. The transition which Assembly line gave to the production process was no small

feat as it gave a speed of production which was unimaginable to the human capacity. The same assembly line over a period of time is being used in the production process across the length and breadth of products churning out in various industries. On the surface it appears that it is the pinnacle of human capacity and innovation. The first line of this section seems true as it states 'human being narrowed sense of ambition and a lack of imagination in the business world' has prevented from disruption in the processes in vogue. The ability to disrupt requires taking risk and having faith in the thoughts and imagination of the visionary. It is in normal parlance suicidal as it may lead to the ruining of the business as such. The stakes and the influences are so strong that to initiate innovative changes is no mean task.

The limitations of the Resource Dependency Theory were overcome by Musk by Reinventing the Outsourcing paradigm. As stated earlier the effect of the various resource controlling entity is huge and to break the cycle is difficult if not impossible. The traditional frameworks (like Lean Management System) advocated for outsourcing non-core competencies to minimize overhead and optimize fragmented supply chains thus maximising profit and to focus on the core competencies. Musk's processes have disrupted this by implementing extreme vertical integration driven by raw data and custom technology which is pathbreaking and truly disruptive in nature. Musk created the in-house AI Ecosystem and Deep Supply Chains which made him overcome the raw material suppliers and other middlemen. The employment of the 'Giga Press' led to replacing thousands of spare parts being designed by single piece 'Giga Press' die castings. The Giga Press can make complex vehicle underbody sections as a single piece rather than welding dozens of smaller parts together which is used by the Assembly Line production process. This path breaking technology along with use of AI and software is the disruption carried out by Musk. Such interventions and disruptions took place after a very long time in modern production systems. Musk thus overcame the 'human being narrowed sense of ambition and a lack of imagination in the business world' by implementing these concepts in his ventures. The radical innovation, rapid iteration, vertical integration, reinventing the process and rapid learning are the innovations introduced by Musk that have revolutionised the production processes. The earlier lean systems and other practices in the production process are witnessing these changes in the products being introduced by Musk and will certainly revolutionise the operations management in the near future.

Past Processes and Musk s Disruptions

In the Lean and Six Sigma processes the design is frozen early to eliminate variance, control costs, and prevent defects during mass assembly which Musk rejected it and Design freezes are explicitly rejected in his scheme of things. Instead, continuous, real-time hardware and software updates are deployed seamlessly on the production floor via AI-driven simulation and design and even on the product which the customer is using. The non-core competencies are heavily outsourced to trusted suppliers to reduce overhead and minimize capital footprint. This was the norm being followed till Musk stepped in to Disrupt the processes. Musk implemented the hyper-vertical integration from the ground up and include everything from buying raw materials directly from mines to fabricating aerospace-grade components and building custom AI inference chips in-house thereby reducing the dependence on the factors beyond the control of the manufacturer. The single-purpose machinery and specialized robotic arms that are optimized to perform exactly one task have been replaced by robots which can do multitasking to dynamically pivot to entirely new tasks. The reliance on the rigid 5-phase structured cycles like DMAIC (Define, Measure, Analyse, Improve, Control) have been replaced by the new process "ALGORITHM" which works on the principle of questioning everything and accelerating the time frame which is highly flexible in nature.

These are some of the changes which took place by the Disruption bought in by Elon Musk. The impact of Musk can be gauged from the fact that SpaceX went public with an IPO priced at $135 per share, and its shares subsequently surged in market trading to push the company's valuation past $2.7 trillion. The company is selling investors not only rockets and Starlink, but also AI computing resources and speculative plans such as space-based data centres which are revolutionary concepts (Mangu-Ward, 2026). These have brought Musk in the realm of Disruption and making a revolutionary contribution to the production processes.

Indian Scenario

These technological breakthroughs and interventions are being adopted by the Indian manufacturing sector and is being implemented in the EV sectors, Defence and Space technology companies. The Government of India have taken steps like Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (FAME India) Scheme Phase-II, PM Electric Drive Revolution in Innovative Vehicle Enhancement (PM E-DRIVE) Scheme, PLI Scheme for Advanced Chemistry Cell (ACC), Production Linked Incentive (PLI) Scheme for Automobile and Auto Component Industry in India (PLI-Auto), Scheme for Promotion of Manufacturing of Electric Passenger Cars in India (SPMEPCI) and PM e-Bus Sewa-Payment Security Mechanism (PSM) Scheme (PIB, 2025). These are healthy signs for the Indian manufacturing sector to become part of this journey. The challenges to the Indian industry are huge particularly in terms of capacity building in the vertical integration and also availability of raw materials particularly the rare earth minerals. Although the Government has launched the National Rare Earth Mission and allocated capital for the mission and provided various incentives, yet the industry needs to cover ground to reach the international level of such disruptive techniques like the Gig press which can considerably influence the cost and the quality of manufacturing in the country. The Production Linked Incentive for processes like vertical integration have been allotted funds worth Rs 1.9 lakh crores by the government which will certainly bring changes in the manufacturing sector. This is a necessity as the share of the manufacturing sector is 14 per cent of the GDP as compared to the services sector which stands at 55 per cent. The manufacturing sector is the foundation for military self-reliance and the larger national prosperity which cannot be left stagnant.

The Government of India should incubate entrepreneurship in the country for rapid growth. Why does this matter? First, it is widely believed that entrepreneurship is beneficial for economic growth and development. Second, entrepreneurship has been remarkably resurgent over the past three decades in countries that have achieved substantial poverty reduction, such as China. Third, donors and international development agencies have turned to entrepreneurship to improve the effectiveness and sustainability of aid' (Naude, 2013). The impact of Musk on the growth of sectors highlighted above are results of entrepreneurship and it is important that the government takes proactive steps to encourage them so that disruptive innovation environment can be generated for their development. The Government of India is setting up Centres of excellence for development of niche technologies not available in India, including technologies related to EVs. The International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI), Hyderabad, an autonomous R&D centre under Department of Science and Technology (DST), has developed several advanced battery technologies which is matching with the best in the world (PIB, Initiatives To Improve EV Sector, 2025). The Ministry of Heavy Industries and Steel is the nodal agency to carry out the synthesis of the Research and Industry. Taking cue from the prevailing environment over 29 states and Union Territories governments are offering supplementary policies which include

capital subsidies (15–25% of fixed investment), preferential land allotment, stamp duty waivers, and up to 100% SGST reimbursement (Singla, 2025). These are supposed to give impetus to become part of the growth story of the Disruptive Innovation which Musk introduced in his ventures from EVs to Space. However, the international environment needs government initiative and innovative schemes to get the best out of the prevailing ecosystem.

Since Disruptive Innovation and AI are niche technology, the Indian industry is managing knowledge in their own Indian ways. *Jugaad* reflects the tendency to utilize limited resources at hand to develop and/or redesign products and processes, from scratch, at minimum cost, and relates to new uses or new versions of existing technologies. An efficient and effective Knowledge Management system strengthens the path that starts from gaining innovative knowledge and leads to the evolution of available resources' utilization (Chatterjee etal, 2022). The Indian industry uses flexibility and resource management to manage knowledge. The *Jugaad* approach has a moderating impact on managing knowledge in Indian industry. As discussed earlier Indian government has taken bold steps to develop the eco system for the introduction of such Disruptive Innovations in the Indian Manufacturing System and the same is progressing in the right direction.

While the government is designing the policy framework, India's private sector is leading the disruptive technology revolution. Private companies and startups have transformed electric vehicles (EVs) from simple machines into Software-Defined Vehicles (SDVs). They have poured over ₹2.23 lakh crore into the sector (Shrivastava, 2026). Union Cabinet approved the Research, Development and Innovation (RDI) Scheme on 01 July 2025 to promote enhanced participation of the private sector in research and development (PIB, Deep Tech Startup Policy, 2026).

The road block and obstacles in the Disruptive Innovation ecosystem can be highlighted by the case study of Tesla proposal to set up a local production facility in India but the negotiation with the government failed on the issue of tariffs and commitment to local manufacturing. These issues were not resolved and finally Tesla gave up its plan to set up the local production facility. Presently the cars in India are being sold by importing completely built units (CBUs) from its Shanghai Gigafactory and the cars are expensive in comparison to the local EV brands. The technology being used by Tesla is highly advanced and its transfer and use in local production is a tricky issue. Such and other policy matters need to be handled with caution and care so that the Indian interests and the concern of the foreign investor are also taken care off. The Indian approach to *Jugaad* is commendable yet it needs to aligned with the principles of responsible innovation, such as anticipation, reflexivity, inclusion, and responsiveness (Subramaniam & Chan, 2025).

Conclusion

This paper has sought to update and revise prevailing conceptualizations of disruptive innovation and to assess how the Operations Management paradigm underwent change in recent times. While charting how a descriptive account of technology change evolved into a normative theory of innovation, the paper documented nuances to the theory's core tenets and how the same is in vogue in Musks ventures. With a newly unified theoretical base and the assessment of Govt of Indias initiatives, the paper laid down the path to reinvigorate management research and implementation of the disruption innovation in the Indian ecosystem. Rather than a definitive or conclusive over view of disruptive innovation, the paper attempts to clear the fog of understanding around Disruptive innovations. Presently the world is in awe with the

disruptions and rightfully too. We cannot miss this 'now or never opportunity' for an ***Atmanirbhar Bharat***. The path is in front of us. We have to start the journey.

References

1. Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management, 17*(1), 99-120.
2. Bower, J. L. (1970). *Managing the Resource Allocation Process: A Study of Corporate Planning and Investment.* Boston, MA: Harvard Business School Press.
3. Chatterjee, S., Chaudhuri, R., & Vrontis, D. (2022). Managing knowledge in Indian Organizations: An empirical investigation to examine the moderating role of jugaad. *Journal of Business Research, 141*, 26-39.
4. Christensen, C. M. (1997). *The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail.* Boston, MA: Harvard Business School Press.
5. Christensen, C. M. (2006). The ongoing process of building a theory of disruption. *Journal of Product Innovation Management, 23*, 39-55.
6. Christensen, C. M., & Bower, J. L. (1996). Customer Power, Strategic Investment, and the Failure of Leading Firms. *Strategic Management Journal, 17*, 197-218.
7. Christensen, C. M., Raynor, M., & McDonald, R. (2015). Tesla's Not as Disruptive as You Might Think. *Harvard Business Review*.
8. DiMaggio, W., & Powell, P. (1983). The iron cage revisited: institutional isomorphism and collective rationality in organisational field. *American Sociological Review, 48*(2), 147-160.
9. Dyer, J., & Bryce, D. (2015, September 30). *Tesla's High End Disruption Gamble.* Retrieved from Forbes Web site: https://www.forbes.com
10. Feld, W. M. (2000). *Lean Manufacturing Tools, Techniques, and How to Use Them.* Boca Raton, FL: CRC Press. doi:ISBN 9781574442977
11. Gans, J. (2016). *The Disruption Dilemma.* Cambridge, MA: MIT Press.
12. Gemelgo, B., Pereira, L. P., & Carvalho, J. C. (2025). Unpacking disruptive innovation: Key insights and strategies for competitive advantage. *Journal of Open Innovation: Technology, Market, and Complexity*, 1-21.
13. Gulati, R. (2007). 'Tent poles, tribalism, and boundary spanning: The rigor-relevance debate in management research'. *Academy of Management Journal, 50*, 775-82.
14. Guttentag, D. A., & Smith, S. L. (2017, July). Assessing Airbnb as a disruptive innovation relative to hotels: Substitution and comparative performance expectations. *International Journal of Hospitality Management, 64*, 1-10.
15. Hambrick, D. C. (1994). What If the Academy Actually Mattered? *Academy of Management Review*(19), 11-16.
16. Isaacson, W. (2014). *The Innovators: How a Group of Hackers, Geniuses, and Geeks Created the Digital Revolution.* Simon & Schuster.
17. Kisperska-Moro, D., & de Haan, J. (2011). Improving supply chain performance to satisfy final customers: 'Leagile' experiences of a Polish distributor". *International Journal of Production Economics, 133*(1), 217-224.

18. Liu, W., Liu, R.-h., & Mboga, J. (2020, March 24). Perspectives on disruptive technologies & Innovation: Exploring Conflicts, characterisation in emerging economies. *International Journal of Conflict Management, 31*(3), 313-331.
19. Mahon, T. (2023, May 25). *My morning with Andy Grove and Gordon Moore*. Retrieved from A Medium Web site: https://tmahon3.medium.com/my-morning-with-andy-grove-part-2-adc53615b270
20. Mangu-Ward, K. (2026, August-September). No One Can Control the Future. *Reason Free Minds and Free Market, 58*(4).
21. Naude, W. (2013). *Entrepreneurship and Economic Development.* Retrieved from IDRC Digital Library: https://idl-bnc-idrc.dspacedirect.org/
22. Pfeffer, J., & Salancik, G. R. (1978). *The External Control of Organizations: A Resource Dependence Perspective.* New York: Harper & Row.
23. PIB. (2025, August 05). Initiatives To Improve EV Sector. New Delhi. Retrieved June 20, 2026
24. PIB. (2026, February 12). Deep Tech Startup Policy. New Delhi. Retrieved June 20, 2026
25. Porter, M. (1996). What is Strategy? *Harvard Business Review, 78*(1), 61-78.
26. Prasad, M. M., Dhiyaneswari, J. M., Jamaan, R. J., Mythreyan, S., & Sutharsan, S. M. (2020). A framework for lean manufacturing implementation in Indian textile industry. *Materials Today: Proceedings*.
27. Rosenbloom, R. S., & Christensen, C. M. (1994). Technological discontinuities, organizational capabilities, and strategic commitments. *Industrial and Corporate Change, 3*, 655-85.
28. Schroeder, R. G., K, L., Liedtke, C., & Choo, A. S. (2008). Six Sigma: Definition and Underlying Theory. *Journal of Operations Management, 26*(4), 536-554.
29. Shrivastava, S. (2026, February 26). *INR2.23 lakh crore invested in India's EV sector (2020-2025), yet 82% of the required capital is still unmet*. Retrieved from Institute for Energy Economics and Financial Analysis: https://ieefa.org
30. Singla, K. (2025, December 12). *Inside India's EV Manufacturing Ecosystem: Key Investment Trends, Government Policies, and Market Outlook*. Retrieved from Invest India Website: https://www.investindia.gov.in
31. Subramaniam, A., & Chan, C. (2025). The paradox of responsible Jugaad innovation: Implications for Indian multinational Corporations. *Journal of Open Innovation: Technology, Market,*. doi:https://doi.org/10.1016/j.joitmc.2025.100672
32. Tushman, M., & Anderson, P. (1986). Technological Discontinuities and Organizational Environments. *Administrative Science Quarterly, 31*(3), 439-465.
33. Watson, G. H. (2001). Cycles of Learning: Observations of Jack Welch. *Six Sigma Forum Magazine*, 13-17.
34. Zhao, E. Y., Fisher, G., Lounsbury, M., & Miller, D. (2017). Optimal Distinctiveness: Broadening the Interface betweeen Institutional Theory and Strategic Management . *Strategic Management Journal*, 93-113.