

Change in Indian Railways: The Strategic HR Model Perspectives

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While dealing with change, most organizations rely on change management philosophies as well as change management models. To initiate a change, organizations make assumptions, trust their beliefs, and implement various theoretical approaches. These various elements are called the 'philosophy of organizational change,' like a tool kit for an organization. This paper attempts to describe these changes using a few well-known management philosophies. Since change is not an abrupt one-time event, it is more appropriate to consider it as a continuous event. The study has adopted change philosophies viz.; Rational, Resource, Institutional, and Psychological, and considered change management models viz. ; Kurt Lewin's Three-stage Model, Force Field Analysis, and Kotter's 8-step Model.

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Introduction

Moran and Brightman (2000) state that change management is a process of continually renewing an organization's direction, structure, and capabilities to serve the ever-changing needs of external and internal customers. The change will neither vanish nor dissolve; instead, the rate of change has dramatically increased. Continuous change has become a norm in the technology, service, or manufacturing industry (Luecke, 2003). Studies consistently report that about three-quarters of change efforts failed to deliver the anticipated benefits mainly due to flawed implementation. Most organizations focus on how to change rather than what to change (Anand & Barsoux, 2017). Organizations shall not ignore change; else, the end

to such organizations perhaps would be sooner than later. To keep the business continuity and grow instead of fall, organizations must review strategies and genuinely reflect their capability to manage changes (Paton, 2008).

Organizational change can be classified into; organization-wide versus sub-system change, transformational versus incremental change, remedial versus developmental change, and unplanned versus planned change. When the management proactively plans on large-scale changes to be successful, these are classified as a planned type of organizational change.

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India's transport sector is large and diverse, catering to over 1.1 billion people (World Bank, 2020). (Indian logistics and transportation sector use rail, road, water, and air transport modes. India's logistics industry is estimated to increase at a CAGR of 10.5% from 2019 to 2025. The logistics sector has enormous potential to attract more investment inflows, with the government extending classifying it the infrastructure industry status. Higher investments are needed for faster growth of this sector. (Markets, 2020). Moreover, railways will be one of the key players who contribute to 1.2% of GDP. The Indian Railways first started in 1853 from Bombay to Thane, is a 166-year-old government organization. It is the world's fourth-largest railway network

behind the United States, Russia, and China and the world's most considerable passenger traffic. With 13,452 passenger trains and 9,141 freight trains, it operates more than 22,300 trains daily and carries annually over 8.3 billion passengers and more than 1,160 million freight tons. Run by the government under the Ministry of Railways, it employs about 1.3 million people under single management and is one of the world's biggest employers. Indian Railways' annual revenues stood at U.S. \$24.78 billion for the year 2020, and 64% of its earnings come from freight and the remaining from the passenger segment. Almost 95 percent of the profit from freight traffic was utilized to compensate for the loss from passengers and other coaching services (Zerrillo, 2020). Its vision and strategy on customer service, safety, network expansion, and financial sustainability, Indian Railways is undoubtedly on the fast track to growth, and it does face a wide range of challenges. Overcoming these challenges to achieve growth would make Indian Railways reclaim the distinctive advantage of de-facto transportation, which was lost in the last three decades (Sinha & Sarma, 2016). The change management process was initiated in 2017 by the Railway Board by the constitution of the Transformation Cell. Sudheer Kumar, Head of the Transformation Cell, had an unequivocal success of transformation in the South Central Railway Zone with its headquarters in Hyderabad, headed by V.K. Yadav, General Manager of the South Central Railways. Mr. Yadav undertook several experimental and innovative activities involving employees across the board. The support of employees to the

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Change Management Philosophies

Management philosophies act as a guide to change management to achieve specific goals of the organization. When applied rightly, different philosophies can motivate employees, improve customer satisfaction, improve performance, and solve problems. There are at least nine well-described change management philosophies, viz., rational, resources, institutional, psychological, systems, cultural, critical, dualities, and biological (Rune, 2005). Changes in Indian Railways are reviewed through a few selected philosophies viz., rational philosophy, also called 'strategic philosophy', according to which change initiatives are led by managers and managers act as a catalyst for change. According to this, change can be applied at any pace and scale (Smith & Graetz, 2011).

Institutional philosophy encourages organizational changes due to pressure from the institutional environment; as per institutional philosophy, market and institutional bodies such as government pressure forces organizational changes (Moran & Brightman., 2000). This philosophy of change is adopted in Indian

Railways, where the demand for better customer service and efficiency from the public and the pressure from the government on declining revenues due to alternate transport mechanisms available to users.

The Indian Railways has lost considerable market share over the last 70 years. Its freight business market share fell from 80 percent in the 1950s to 25 percent in 2017, the passenger business market share dropped to 10 percent in 2017 though the traffic carried went up by 17 times over these seven decades. Indian Railways needed a massive infrastructural upgrade, network upgrade, and additional new track, all of which require investment.

The resource philosophy states the organizational changes begin with identifying critical and scarce resources to win and compete. The absence of these resources would hamper the objectives and goals of the organization. For the first time in the history of Indian Railways, the government is inviting private institutions for the operation of private passenger trains to attract more investment into the sector. This decision is expected to bring about US\$3 billion for running 150 train sets (Rao, 2017).

Psychological philosophy explains that understanding personal responses to changes are the key to organizational success (Cameron & Green, 2019). To bring successful changes, it is essential to collect good feedback from organizational members and remove any fears and uncertainty (Smith, 2011). Psychological

philosophy considers each employee a vital building block for the analysis of organizational change. Change becomes easy when psychological transitions are transparent to employees (Bridges, 1980). Indian Railways management recognized this need to energize employees, and explain the need for change from the status quo; it assessed the needs of employees at South Central Railways, which consisted of 100,000 people, and organized training at every level in a time-bound manner. Software to monitor the training of the entire workforce developed. This training enhanced technical competencies, and emotional intelligence and helped in developing the leadership skills of young employees (Uma & Shruthi, 2014).

Indian Railways adopted a systems philosophy by slowly moving away from a government-controlled bureaucracy to a corporate culture where decision-making authority on operational issues is given to various levels of the organization, thus speeding up improvements (Rao, 2017). Systems philosophy explains that organizations function well as a whole when their individual and interrelated parts work in cohesion. Coordination between functions and divisions such as human resources, operations, finance, and marketing is essential for the working system.

Analysis of Change

Any change undertaken by organizations will undergo resistance, several shortcomings while implementing changes, and communication problems. Change management models help in identifying the potential resistance and imple-

mentation issues before the change process begins (Galli, B.J., 2018). Using two models, Kurt Lewin's Three-step Model and Force Field Analysis and Kotter's Eight-step Model, change management in Indian Railways is analyzed.

In 1946, Lewin proposed a planned approach to change management. Before a change can be initiated, a new behavior shall be brought into practice, and the previous behavior shall be abandoned. This change model emphasizes the need to discard old behavior, practices, processes, and culture before successfully implementing new approaches (Bamford & Forrester, 2003).

Kurt Lewin's Model describes the change in 3 steps; unfreezing the current status quo, moving to a new state, and refreezing after stabilizing the new stage. Kurt Lewin's Force Field Analysis is like an investigative and analytical tool for the management to discuss driving and resisting forces in organizations. According to Force Field Analysis, driving and resisting forces act in any change situation, and if the change is to happen, driving forces must outweigh resisting forces (Lewin, 1951). The change contemplated by the Transformation Cell of Indian Railways transforms Indian Railways into a modern, efficient organization to become an engine of economic growth and enhanced service delivery to customers. Some of the driving forces for the change are: customers' demand for better services, faster trains to reduce travel time, on-time arrivals, clean stations, better comfort inside trains, increase in market share in the transport

sector, digitization of network, 100% electrification of the entire network, separate freight corridor, increase revenue. The resisting forces are; unionized employees, traditional skills, fewer technology skills, limited revenues, bureaucratic practices, government controls, underdeveloped infrastructure, insufficient track, and limited resources.

The force field analysis showed the major resisting factors and the transformation cell and the General Manager of South Central Railway had implemented several initiatives to minimize the resistance, these include; training of employees at all levels, authorizing local field units to take operations decisions, inviting private investment in passenger train running, motivating employees through the provision of necessities like providing bottled water to track inspection teams, changing rooms for women, providing necessary resources for station cleanliness, GPS location monitoring and train arrival times update to passengers, etc.

Kotter expanded Kurts Lewin's 3 stage model and proposed eight main steps in leading change: (1) create a sense of urgency; (2) create a robust guiding coalition; (3) develop a vision and strategy; (4) communicate the vision; (5) empower employees for acting on vision; (6) generate short-term wins; (7) consolidate gains and make more changes; and (8) anchor the changes to the organization culture. Kotter's is a top-down model where management shall be involved in change management to be effective.

The first step of the model is creating a sense of urgency throughout the organization. The sense of urgency to modernize railways and make it efficient was evident from the data on lost market share over the past few decades and the low image in society about railways in crucial customer satisfaction indicators. From 1950 to 2017, the freight business's market share fell from 80% to 25% and the passenger share to 10% in 2017 (Markets Report, 2020). Furthermore, coaches' limited capacity and high demand made the travel difficult by train unless one books tickets in advance. Reversing this trend required a sense of urgency, and creating a transformation cell in the Ministry of Railways shows the sense of urgency was felt to transform the organization. Thom (2020) describes the Titanic incident; the passengers on the Titanic were not aware of the extent of the damage caused by the iceberg, so they did not perceive any significant danger, and they were not alerted by the ship management until it was too late. Like most people, they did not want their comfort zones disturbed and were quite happy to continue as they had always been. People need to be brought to the point where they realize the urgent need for change. The last dying words of any organization are: 'But, we have never done it that way before...' (Thom, 2020).

The second step in Kotter's Model is building a robust guiding coalition, and

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according to Kotter (2012), most significant changes are connected with at least one highly noticeable person. Kotter made the point that “A guiding coalition with good managers but poor leaders will not succeed.” Leaders should not make the mistake of believing that only managers can be on the ‘guiding coalition.’ Kotter (2010) points out that people should have trust and a common goal to make for a powerful team. This guiding coalition can make needed change happen despite all the complacent resisting forces in the organization. It is evident that the General Manager of South Central Railway V.K. Yadav was a visible leader who built a good team. Further, Head of the Transformation Cell, Sudheer Kumar, empowered almost all decisions related to the field units’ operations, which fast-tracked decision-making and improvement in service delivery.

The third step of Kotter’s Model is developing a vision and strategy. Kotter emphasizes, in a change process, the right vision serves three essential purposes. First, it gives a general direction for change. Second, it gives motivation to people. Third, it acts as a reference coordination point for different people toward organizational goals (Kotter, 2012). The Transformation Cell of Indian Railways has set out a long-term vision to upgrade the old railway system to modern standards by 2030, to electrify 100% of its track by 2024, digitize, and improve the productivity and image perception of the railways. Its plans include running electric trains and raising the average speed of trains.

The fourth step of Kotter’s model is to communicate the vision to the workforce. Kotter points out, a great vision can serve a useful purpose even if just a few key people understand it. However, the real power of a vision is realized only when most of those involved in an enterprise or activity have a common understanding of it. The transformation cell headed by Sudheer Kumar and South-Central Railway General Manager, V.K. Yadav have taken steps to bring awareness of the vision of the Indian Railways through coaching and training sessions for the entire workforce. The effectiveness of this was monitored through updates in software.

Empowering people to act on the vision is the fifth step of Kotter’s Model. Kotter says that, even after creating a sense of urgency, creating a guiding coalition, creating a vision, and communicating the vision, employees might not contribute and commit to the needed changes. Empowering many people at different levels to remove barriers to implementing the change will enable achieving the vision. The policy directives issued by the Transformation Cell of the Ministry of Railways to empower the field units reduced the bureaucracy in the organization and lessened interdependencies and fast-tracked decision-making, thereby improving service delivery. Divisional Railway Managers with over 25 years of experience were authorized to make almost all decisions relating to the operation, maintenance, safety, and revenue and ensure that the employees are provided with a pleasant work environment. The Transformation

Cell of the Railway Board has brought out more than 200 policy directives in various fields of railway operations, which are showing perceptible improvements in safety and other operational areas. These were initiated to improve insights, efficiencies, and capabilities with the locus of control moving from the Railway Board to Divisions and Zonal Railways. Remote monitoring, coordination, and policy intervention have all come about by embracing the new technology and building trust in Divisional Railway Managers.

The sixth step of Kotter's Model is creating Short-Term Wins. Kotter recommends planning and achieving short-term results as this gives at least six key benefits and provides evidence that the sacrifices are worth it and the cost involved in the transformation is justified. First, it gives reinforcement of the initiative as a result of extra efforts by people; second, these little wins allow pausing and celebrating; third, it is a test for the management team about the achievability of the vision; fourth, it will be an answer to cynical employees, resistors of change; fifth, it helps gain more support from the sponsors and the sixth benefit is the short term wins that help to build the momentum of the journey.

The Indian Railways team has already achieved several short-term wins. These short-term wins are; a) introduction of a human resource management system in which almost 80 percent of the data of its 1.3 million employees has been digitized. It is ex-

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pected that in 2020, all human resource functions will be managed through the digital platform. b) 60 percent of railway offices are now on an e-office platform, simultaneously improving transparency and sustainability through the reduction in paper use, c) partnered with the Indian Space Research Organization (ISRO) to develop a Real-Time Train Information System (RTIS) and fitting locomotives with a global positioning system (GPS) which is connected via satellite. With the help of two satellites, the location, status, and speed of trains are updated every 30 seconds. This real-time information is integrated and helps in controlling train movement and allows for better utilization of network capacity and the railway stations, d) improved service delivery to customers while taking care of its employees, e) noticeable improvements at workspaces like resting places after every five to 6 kms of track maintenance, better clothing, footwear and tools, providing bottled water, facilities to warm the food, changing rooms for women, f) outstanding improvement in cleanliness at railway stations g) improved on-time arrivals of trains.

The next step, step 7 of Kotter's model, is about consolidating gains and producing more changes. Indian Railways is divided into 17 zones, and the South-central Railway, with its head-

quarters in Hyderabad, has embraced the changes and gave measurable short-term wins. These positive changes in productivity, perception, and image have a ripple effect on the remaining 16 zones to bring more changes and consolidate the changes. In Sept 2020, the Government of India made further changes by appointing a CEO for faster decision-making and bringing accountability. In addition, more changes are planned by Indian Railways; a dedicated freight corridor of 3,360 km by 2020, and feed 700 stations with solar power.

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The eighth and final step of Kotter's change management model is, anchoring changes to its culture. Kotter (2012) says culture is a decisive factor in any organization because it influences human behavior. It is difficult to change and because of the invisibility, it makes it hard to address directly. Culture refers to the shared beliefs and values of people within an organization. Kotter suggests that in most cases, the old culture is incompatible with the new vision, although some specific norms will be. In that case, the challenge is to drive new practices onto the old roots while overriding the inconsistent elements of culture. Anchoring a new set of practices in culture is difficult enough when those approaches are consistent with the culture. When they are not, the challenge can be much more

significant. Kotter points out that it's a wrong concept as culture is not something that we can manipulate easily. Attempts to grab it and twist it into a new shape never work because we cannot grab it. Culture change can only occur when we succeed in modifying peoples' actions and behavior. Thus, most culture change happens in stage eight.

The Indian Railways used to be a bureaucratic organization, and this bureaucratic culture is changed by empowering managers at different levels giving them decision-making power. Furthermore, the culture of not caring for lower-level employees such as track maintenance crew, female employees working conditions, etc. has been completely changed by providing them their necessities. Employees now have positive behavior, which can be noticed in improved productivity, service delivery, and change in the image of railways. As described in a case study, the policy changes brought by the Transformation Cell have resulted in long-lasting cultural and behavioral changes as per new change management efforts. This analysis using Kotter's 8-step model demonstrates that the changes in any organization can be made successful by involving people at all levels through necessary training and skill development

Organizational change has two aspects; the business aspect and the people aspect. Changes are successful when both these change aspects occur together linearly (Luecke, R., 2003). The ADKAR Model developed by Prosci in 2001 is one of the diagnostic tools to identify the gaps in change management and provide nec-

essary coaching to employees. In contrast to other models, the ADKAR Model (Hiatt, 2006) emphasizes on people change rather than change itself. A study of 248 companies by Prosci revealed that the people aspect is one of the top three success factors in any change management initiatives by management. The five phases of the ADKAR Model are: awareness of the need to change, desire to participate and support the change, knowledge of how to change, ability to implement the change on a day-to-day basis, reinforcement to keep the change in place, help in taking along people by coaching them through these phases. ADKAR Model has several key benefits; minimizes employee resistance, smoothens the process transition to change, develops skills enhancement plans, and develops a management strategy.

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Indian Railways Transformation Cell team recognized that the support of employees is critical for making planned changes successful. Led by V.K. Yadav, the then General Manager of the South-central Railway, the management team launched awareness training sessions across the zones and at all levels of the organization to energize and teach employees about the need for change. Taking a bottom-up approach employee needs were assessed, reviewed, and started to pro-

vide necessities to the lowest ranks of the organization such as bottled drinking water to track maintenance workers, changing rooms for female workers, resting option after every six km of track checking, passport mela, job mela for family members of the employees etc. These actions from management had the biggest motivation and participation of employees in the change management process initiated. As defined in the ADKAR Model awareness of the need for change and desire to participate in change initiative phases are successfully executed. In the next phase of knowledge to change, management took steps to develop training monitoring software for all Indian Railway workforce. Trainings are conducted to increase the competency and emotional intelligence of employees at every level. Employees in Indian Railways possessed outstanding and long experience; however, bureaucratic processes were not easy for the employees to make decisions. Transformation Cell's policy directives authorized managers who have over 25 years of experience to make operational decisions at the field level. These policy decisions allowed all the divisional managers to make decisions for improvement towards the change. The final phase of the ADKAR Model for people's participation in change is about reinforcement of changes, as per independent surveys, the lasting and noticeable changes like clean and neat stations, and improved customer service. Also, performance improvements in the workforce across 68 divisions were noticed and recorded.

Recommendations & Conclusions

The Transformation Cell of Indian Railways is able to make changes to a legacy system of operation by introducing several organizational changes and adopting the modern principles of change management. The change process has mainly focused on the South Central zone which is one out of 17 zones. The decision to transform Indian Railways in a phased manner would take decades to cover the entire network. Instead, the Transformation cell could have selected at least four zones representing four different regions of the country e.g. South, North, East and West as a General Manager heads each zone. Initiating similar transformation efforts in parallel at different zones would have given healthy competition as well as faster rollout in the era of a highly competitive transport industry.

Though there are targets for the electrification of track and completion of dedicated freight corridor, there are no specific deadlines outlined for other objectives e.g. on timely arrivals, passenger amenities, higher speeds and modernizing the entire railway system. One of the incredible things the railways has achieved through this transformation initiative was to make network upgradation without disrupting the network's existing traffic. A substantial decrease in market share to other transport modes should have been a matter of concern to the management. A special drive to attract more business should have been undertaken by the management such as a dedicated

sales and marketing team to increase business volumes and identify customer requirements. Also, Indian Railways should target modernizing freight handling systems to match other well-established modes of transportation like airlines and, the courier industry as this will have greater customer trust in the system. Further, plans for an end-to-end service for freight services e.g. collect from the doorstep and deliver at the doorstep, could give much more revenue and also attract more customers to railways while at the same time, would have improved the image of railways. It appears that the Transformation Cell could only select the South-Central Railway team for change. This is an indication that there is a potential shortage of skilled top-level leadership. It might be more beneficial to identify competent individuals to undertake initiatives at other zones as well. Most developed nations have by now established modern railway networks where the accident rates are relatively low compared to those in the Indian Railway network. Transformation Cell could learn directly from these countries on safety systems that are good and adopt them to the Indian Railway system without much delay. The idea of modernizing the network is to bring the highest safety in transportation, which should be one of the foremost objectives for Indian Railways.

This is an indication that there is a potential shortage of skilled top-level leadership.

Railways appears to have ignored measuring customer satisfaction measurements directly from the travelers, which, if collected using right methods, would give a massive list of ideas and suggestions for drawing further plans. Indian Railways can choose to benchmark their services to any of the world's leading rail network service providers; this method would perhaps make the organization truly world-class. An example of best services is from none other than Mr. IIMS Rana, the late former Chairman of Railway Board, who shared an incident when he traveled to Japan in 1983 about perfection in the Japanese system. During his trip, he forgot his eyeglasses on the local bus and reported to reception to help if they can find his glasses. After collecting information about Mr. Rana's bus boarding and leaving time, place etc, reception could track and trace the lost eyeglasses in 20 minutes. Such a great perfection is to be benchmarked in Indian Railways (Prabhakar, 2011). Indian Railways has rolled out an e-platform for procurement of goods and works that brought more transparency to the procurement process. Its introduction of the e-office platform has been a phenomenal success. During the COVID-19 period, the e-office platform's use has increased many folds and helped to convert 1.2 million physical documents to digital form. As a part of the change management, railways could have taken initiatives relating to changing passenger habits and behavior towards cleanliness. The railway compartments are generally left with used water bottles, plates, and food items. Those items give an awkward ambiance

to the travelers. The planned change management approach has few drawbacks (Burnes, 1996); it follows incremental changes instead, which means more time is needed for giant organizations and difficult to make quick changes. This approach considers organizations to work under stable conditions, and actions are taken in a pre-planned way; however, today's environment is fast changing.

The management can collect employee feedback and form a more active team besides empowering the managers. Despite protests from workers, the decision taken to initiate reforms such as corporatizing production units, eg. coach manufacturing factories, will usher in a new era in Indian Railways as it is expected to improve efficiency and make the leadership accountable (India Transportation, 2020).

References

- Anand, N. & Barsoux, J.L. (2017), What Everyone Gets Wrong About Change Management, *Harvard Business Review*, Online verfügbar unter <https://hbr.org/2017/11/what-everyone-gets-wrong-about-change-management>, zuletzt geprüft am, 23, 2019.
- By, R.T. (2005), "Organizational Change Management: A Critical Review", *Journal of Change Management*, 5 (4): 369-80.
- Cameron, E. & Green, M. (2019), Making Sense of Change Management: A Complete Guide to the Models, Tools, and Techniques of Organizational Change", Kogan Page Publishers, London.
- Galli, B.J. (2018), "Change Management Models: A Comparative Analysis and Concerns", *IEEE Engineering Management Review*, 46(3):124-32.

- Hiatt, J. M. (2013). *Employees Survival Guide to Change: The Complete Guide to Surviving and Thriving During Organizational Change*. Loveland, CO, USA: Prosci Research. 216-19
- Lewin, K. (1951), *Field Theory in Social Science: Selected Theoretical Papers* (Edited by Dorwin Cartwright.), Harper Collins Publishers LLC, New York.
- Luecke, R. (2003), *Managing Change and Transition* (Vol. 3), Harvard Business Press, New York
- Markets, R. (2020), *India's Logistics Market, 2020 Research Report*. [online] GlobeNewswire News Room. Available at: <<https://www.globenewswire.com/news-release/2020/04/01/2009812/0/en/India-s-Logistics-Market-2020-Research-Report.html>> [Accessed 28 November 2020].
- Moran, J.W. & Brightman, B.K. (2000), "Leading Organizational Change", *The Journal of Workplace Learning*, 12 (2): 66-74.
- Paton, R.A. & McCalman, J. (2008), *Change Management: A Guide to Effective Implementation*. Sage, London.
- Prabhakar, G.P. (2011), *Leading Indian Railways: corporatization initiatives and challenges*. *International Journal of Public Sector Management*, 7: 4, 601-652
- Rao, J.K. (2017), "Understanding Strategy for Transformation in Public Enterprises", *Journal of Management Change*, 7(1):430-51
- Rune, Todnem (2005), "Organizational Change Management: A Critical Review", *Journal of Change Management*, 5 (4): 369-80, DOI: [10.1080/14697010500359250](https://doi.org/10.1080/14697010500359250)
- Sinha, S. & Sarma, V. (2016), *Indian Railways: On the Fast Track to Growth*, McKinsey & Company, September.
- Smith, A. & Graetz, F.M. (2011), *Philosophies of Organizational Change*. Edward Elgar Publishing.
- Thom, D. (2020), *Leading Change By John Kotter*. [online] Academia.edu. Available at: <https://www.academia.edu/42650646/Leading_Change_by_John_Kotter> [Accessed 28 November 2020].
- Uma, H.R. & Shruthi, B.R. (2014), "An Analysis of Indian Railways Contribution Towards Employment Generation", *International Journal of Advanced Research in Management and Social Sciences*, 3(3): 85-96.
- World Bank. (2020), *India Transportation*. [online] Available at: <<https://www.worldbank.org/en/news/feature/2011/09/23/india-transportation>> [Accessed 28 November 2020].
- Zerrillo, P. C. (2020), "The Indian Railways: On Track for Transformation", *Asian Management Insights*. 7 (1): 22-27.