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BIG DATA DRIVEN CHANGE MANAGEMENT: AN OUTLOOK DURING M&AS

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ABSTRACT

For almost all business organizations change management is an inevitable process. It has been defined as a systematic approach to dealing with the transformation of the organization's goals, technologies, and processes.

It is paramount for businesses to brace themselves at this phase of industry 4.0. Therefore, every organization should implement such strategies that provide ways to effectively carry on change management.

It is sensible for organizations to structure their strategies on the basis of Big data analytics in order to survive in the increasingly quantified business world. This revolution is moving in tandem with digital transformation and is said to be a challenge in the changing business landscape.

In this paper, we will be investigating the manager's attitude by understanding their perception of Big Data and its analytics. This report will contain a summary of a survey conducted on managers from various industries that are adopting Big Data in their change management processes. Change management is an incessant process for any organization that can be effectively driven by big data. This way, managers can constructively materialize the benefits that big data brings with it and be able to stand upright in this wave of digitization.

1. Introduction

In the current unpredictable and disruptive business environment, it has become quite inevitable for organizations to make changes that are inclined strategically to meet ever-changing customer demand, fast pacing technological advancements, drastic shifts in the market place. It has become very essential for organizations to acquaint their systems and structures to a more flexible outlook. This is where we understand the relevance and utmost need for the concept of change management. Effective change management has become a prerequisite for organizations in unprecedented times and to be a step ahead from its competitors.

Coming to the next part of our report, we will be discussing the changes that are brought about during mergers and acquisitions of businesses. During mergers, two or more organizations enter into a series of negotiations and discussions which leads to forming a coalition between the two. Acquisitions can be termed as two or more companies. However, the key difference is, during acquisitions the larger organizations buy in the smaller organizations.

Researchers of the industries have proved that mergers and acquisitions have been able to generate higher value and have shown over a period of 11 years that M&A activities have resulted in higher shareholder returns than other companies (Bain & Company, 2017). It is an indisputable fact that this arrangement has its benefits. However, it is another fact that executives and senior-level managers struggle with proactively managing the change that comes with this arrangement. Whenever M&As take place it is not only from the financial perspective but has other aspects to it as well. Aspects like Human Resources, Public Relations, Information Systems, Patents, Copyrights, etc. get merged as well.

Circling back to change management, a post-merger integration(PMI) of businesses undergoes several changes. These changes happen imperceptibly and are ought to be as interactive as possible. It is essential because two or more organizations should be able to co-operate in the transfer of strategic, technological, and professional capabilities. Effective change management is quintessential for a post-merger integration. As we discussed that many aspects of businesses are merged like finances, Information systems, human resource, etc., it is crucial to understand that we need to find modern solutions to avert ourselves and brace ourselves to faulty integrations. In order to reap the best of mergers and acquisitions, we should use modern technology and science that streamlines the process and drives the change management.

Big data Analytics has gained quite a lot of popularity with business practitioners, analysts, and researchers. The big question is- Is it possible that advanced analytics and big data can help to make these amalgamations more efficient? Can big data analytics provide us tools and techniques that can be applied in business contexts, where businesses can strikingly improve their costs and revenues? (Mckinsey, 2019). Technology-driven data analytics is sure to play a crucial role in M&A activities. A survey of 500 corporate executives reflects that the majority of the organizations are using data analytics today and 80 percent see that data analytics is becoming increasingly vital in the future of M&A. (Deloitte, 2019). In other words, data analytics is set to bring a higher level of confidence for every transaction, and every business move that executives make.

2. Objectives of Research-

In this paper, we will investigate a manager's attitude by understanding their perception of Big Data and its analytics. This report will contain a summary of a survey conducted on managers from various industries that are adopting Big Data in their change management processes. Change management is an incessant process for any organization that can be effectively driven by big data. This way, managers can constructively materialize the benefits that big data brings with it and be able to stand upright in this wave of digitization.

3. Literature Review-

Change management is not a separate work stream or a standalone activity. It is a process that is primarily owned by top executives and should be led by other team members like managers, supervisors, and employees. [1] One way to efficiently incorporate change management is to enlist the change agents throughout the organization. They can be inter-department, inter-region, managers, etc. A survey conducted highlights the fact that there are certain ways that organizations can carry on with successful strategic transformation. Engaging the whole company with a highly visible and involved CEO is important. [2] It is of utmost importance that task leaders must make sure that they empower people, encourage them to embrace change, and normalize their fear/resistance to change.

For a very long time, organizations have relied on quantitative scorecards and data to assess situations, but have used qualitative measure to evaluate their employees. [3]. It is crucial to understand that managing the change that comes with a merger must be tailored according to every situation. Aspects like sources of synergies, the time available, cultures, geographies and the magnitude of impact on the employees should be taken into account. [1] Two-thirds of respondents in an M&A survey say that they use data analytics as a part of their M&A analysis. Those who were surveyed were either director level or above and were at firms with at least 10 million dollars in revenue. (Bird Brian W. Deloitte & Touche LLP, 2020)

The escalation in the dependence on data over the recent years has capitulated the in-depth, fact-rich diligence insights. Quantitative and predictive insights are being generated in the due diligence process by analysts and parties during M&As. (KPMG, 2018). The intelligence generated from the use of analytics can be considered as a strategic shift that bridges any gap in value expectations and realizations. This way data analytics is proving to be a core component that drives M&A, from the acquiring assessment to the entire lifecycle of conducting change management. [4]

Over recent years, the application of data analytics during post-merger integration has proven to accelerate the delivery of benefits. It has also helped to identify additional opportunities through techniques like data mining and predictive analytics. [5] Several analytical tools have been recently developed that are used by executives engaging in M&A activities. They use these tools to get the best of the value of multiple and varied data sources and the strength that advanced analytics have to adapt to a more growth-oriented and sustainable merger deal. [6] Data Analytics and come up to be a widely used term for technology solutions that have readily helped organizations interpret the available datasets and analyze business trends. This has provided sophistication and precision to business processes. [1]

While managing M&A is important to take into consideration factors related to company expertise and resources that might have its effect on Information Systems (IS) integration. There should be involvement of IS specialists and implementation project manager [7]. The successful management and implementation of M&As should be done keeping in mind the value propositions that will support the business transactions and should be stated clearly to all the stakeholders. Delay in gauging defined datasets could impact huge opportunities, affect regulatory compliance, and create security issues in terms of information and data integrity. [8] Analytical techniques that undergo constant changes and development have created an opportunity to do 'risk bartering'. This has brought drastic revolutions to post-merger change management techniques and resulted in mutual acceptance in the integration process. Risk is being used as an underlying currency and that's how the integration process is being carried forward. (Ian A. Harwood, Chris B. Chapman, 2009).

In big data analytics multifarious data sets are created in an unstructured form, such as chat boxes, images, CRM data, user experience, non-relational databases, etc. Datasets being used for M&A analytics or for that matter many business transactions should be obtained and analyzed keeping in mind the source, speed, and volatility of the data. Data analytics is backed up by the IS/IT services in organizations. [9] These services play a vigilant role in the M&A process by creating such opportunities that in turn generate competitive advantage and enhances the result of change management in the organization thus formed. [7]

Sanctifying the relevance of effectively transforming organizations

Over the years, business organizations have undergone various transformations with advent of new culture, technology, human resource dynamics, etc. These transformations have at times caused unease and turbulence in the effective working of businesses. [10]

For businesses all over the world managing this transformation or rather change has drained plenty of resources and even after that the end result at times is not even satisfactory. Therefore, it is crucial to deal with change in a systematic manner. Following this realisation, came into existence change management as we know it today. However, conventional ways of change management now pretty much can't be applied to modern business change and requirements. And with industry 4.0 and its subsequent digital transformation, traditional change management models are considered to be counterproductive.

We must look into ways to more efficiently handle business urgencies. Change as we know it is inevitable, however, what we are not sure about is in which form will change come to us. Few decades from now, we wouldn't have required the need to manage our storage systems on cloud platforms and most of it would have been on premise. Another example could be, using Artificial Intelligence to recruit or screen candidates for jobs. These new ways of doing business requires new ways of handling change.

While we look into incorporating change in the organization, we need to understand where and how it should begin. Implementing change management is like an inverted funnel or inverted triangle. The top management of any organization should be vigilant enough in their efforts and be accepting of change and be aware of the need of change in order to proactively incorporate change in the organization. Now that we have focused too much on the word “change”, we shall look into why it is so critical for effective functioning of businesses.

As we discussed earlier, the CEO or the top management, should act as a visionary to change. It should be emphasised that 70% of change fails from resistance of the employees or lower level management. [11] Therefore, change policies should be such that can be moulded keeping in mind both employee satisfaction as well as business requirements.

4. Data Analytics: A Business Tool

The phrase “going with the gut” no more serves as the bar for making crucial business decisions. Many academicians, researchers and industry analysts would accept the fact that with the advent of progressively complicated business environment and the changes that follow it have made it imperative for business leaders to inculcate the use of Data Analytics for almost every business decision, plans and procedures. Over the years, it has been proved that analytics have enabled businesses to maintain their profits, ensure business continuity and in risk management.

Moreover, data analytics as we know it has disrupted irrationally used models and business frameworks. It has commissioned to a great extent new business ecosystems that has capabilities of capturing utmost advantage of vast data proliferation and migration effectively. Having data is now considered as having wealth. In this paper we will focus on Business Analytics and how it has led many organizations to its way of better decision making during change management. In a business environment, business analytics brings upon several opportunities as organizations streamline their operations which in turn improve their processes. Expansion in the usage of data has also led to popularization of Artificial Intelligence (AI) and Machine Learning and then subsequently deep learning. The vastly available data acts as a driving force that gives sustenance to AI and its operations further aid extensive business applications across sectors.

Data and analytics have resulted in vast amounts of value creation. However, simply having data and revolutionizing algorithms alone won’t help organizations in their business operations. The essence of inculcating analytics in business lies in a holistic organizational transformation. Change management as we know it and discussed earlier can be driven very well if an organization has top-notch “big” data analytics capabilities. [12]

As for the scope of this research paper, we shall be looking at how Analytics is aiding change management during Mergers and Acquisitions. We will be discussing the role of M&A analytics pre-merger, however, our focus will be on change management processes that takes place in an organization post mergers and acquisitions and how big data analytics drives it.

5. Introduction to Mergers and Acquisitions

During mergers, two or more organizations enter into a series of negotiations and discussions which leads to forming a coalition between the two. Acquisitions can also be termed as two or more companies merging. However, the key difference is, during acquisitions the larger organizations buy in the smaller organizations. Researchers of the industries have proved that mergers and acquisitions have been able to generate higher value and have shown over a period of 11 years that M&A activities have resulted in higher shareholder returns than other companies. [1] It is an indisputable fact that this arrangement has its benefits. However, it is another fact that executives and senior-level managers struggle with proactively managing the change that comes with this arrangement.

Even though mergers and acquisitions are strategically intertwined they still face many challenges. Even after spending a huge amount of capital, time, and effort, organizations and business leaders fail to recognize the fact that in order for a merger to succeed it is important to have an advanced post-merger implementation plan. [13]

- Research states that 23 percent of all acquisitions that take place to earn their cost of capital. This shows that the acquisition has not materialized as planned.
- 47 percent of executives leave within the first year and 75 percent leave within the first three years in acquired companies.
- In the first four to eight months that follow a deal, productivity may be reduced by up to 50 percent [14]

Now that we know that the industries are moving from splintered pieces to more consolidates ones. This has given organizations all the more reasons to be cautious in taking decision before and after they perform any merger or acquisition. The change that is brought upon the organization post a merger should be dealt with strategically with the help of modern business tools and frameworks that are available. [15] Using Big data analytics in mergers and acquisitions has helped business leaders effectively deal with the change management that an organization goes through.

In this report, we shall look into various tools and techniques, simulations, deep learning, machine learning ability that big data analytics enables. We will be correlating key activities and devise ways to integrate the two or more organizations (parties) in a way that can ensure business continuity of the newly formed organization.

Business organizations use new techniques, strategies, and technologies to generate value creation models that help these organizations to withstand all the current and upcoming uncertainties. After a merger, two or more organizations that had different ways of handling their finances, logistics, IT systems, and assets are to be integrated together in a way that gives the resultant organization help in effectively manage its business processes.

Research Methodology

In order to gather more understanding of the correlation between Mergers and acquisition and change management and to understand what is the practical scenario of M&A analytics we conducted a survey. The survey was filled by people who are working in Fortune 500 companies and have an adequate corporate experience and were serving from almost all sectors of the industry.

Results and Discussions-

Following were few questions and subsequent to it were the responses-

- Do you agree with this term "Efficient change management is crucial for an organization's success"?

80% of the respondents agree to the given statement, 15% were neutral and rest 5% didn’t agree to it. Thus making us understand the relevance of change management in current industrial scenario.

- Do you think big data analytics can drive change management in business organizations?

For the above mentioned question, 85% of respondents said “YES” and rest 15% said “NO”. This shows how data analytics and its usage can drive business growth and help business leaders.

- When do you think M&A analytics are required and will it create the most value for a business- Post-merger or pre-merger?

To this 70% of the respondents felt that M&A analytics is required both during pre-merger as well as post-merger.

- According to you, what all business activities can big data analytics drive after a merger?

The options given in this question were-

a) Finance
b) IT systems
c) Distributors, Partners and Suppliers (Logistics)
d) Asset Management
e) Due Diligence (Issues, Opportunities and Risks)

To this, the respondents gave highest response to IT systems, followed by Finance and Due Diligence and the logistics and Subsequently Asset Management.

- Do you think adopting M&A analytics can help organizations in business continuity?

To the above mentioned question, 86% of respondents selected “YES”. This clearly indicates that using M&A analytics as a tool for change management post and pre-merger have potential effects on business continuity.

6. Business Analytics Models-

Managing Logistics post-merger-

Managing the changes in logistics and managing the supply chain post a merger can be different and a tedious process. It is important to make sure that such processes are followed that enable the smooth functioning of all business activities.

The supply chain is a process to link resources from one vendor to another, managing logistics and movement of raw materials to processed goods. In this paper, we are not focusing on a particular service sector (IT, manufacturing, agriculture, etc) but it is inevitable that there is a value chain or supply chain that exists for every type of organization.

As for the business analytics model, post a merger, analysts and business leaders can conduct a business simulation to forecast and decide upon the required changes and characteristics of the newly established supply chain. In order to integrate high capability supply chains that were previously existing and to make a stronger supply chain, organizations require large data warehousing capabilities. Not only this the data stored in data warehouses needs to be transformed to generate intelligence. [16]

Considering before the merger or acquisition, all the parties will have their own structure of logistics and supply chain management, in order to incorporate change management and establish a new structure for supply chain or logistics we can follow the following process by incorporating business simulations and selecting which alternative will be most profitable.

- Data Mining- In the first step, we shall find out all the prominent vendors that were available. All the necessary information is required to integrate legacy supply chains.
- Data Warehousing- The data discovered will be vast and will require high storage capabilities which can then be used to form desired and profitable synergy models and frameworks.
- Process Maps- Taking full advantage of integrated talent, technology, and leading practices of the supply chain we will be able to draw frameworks and process maps to efficiently integrate supply chains. This integration requires incremental changes. These changes focus on vast scale business initiatives like sales, marketing, strategic analysis, distribution network, and can aid in generating significant deal value.
- Business Simulation- In order to continue with incremental changes, we shall use the process maps we created to make various business scenarios or simulations. This technique will help us create a well-informed decision on which alternative to choose. We shall be doing cos/benefit analysis of every scenario and will be choosing the best alternative amongst them.

This way, by using the vast data available we will be able to identify, encapsulate, and implement profitable synergies. This will help us in investing in those operations that will surely contribute to business growth objectives. Organizations post-merger will be able to integrate legacy supply chains with a negligible impact on its customers, employees, and partner. Having a pre-disposed framework and steps to be carried on will help in making critical business decisions effectively.

7. Managing Financial activities post-merger using Analytics

Financial analytics is a term that gives different views on the financial data of the company. It helps to provide in-depth expertise and take decisive measures upon them to boost the overall success of the company. Financial analytics is a subset of BI & Enterprise Performance Management (EPM) and influences every part of the business. It plays a critical role in determining the income for your company. [17]

In the current digitally disrupted scenario, companies need information in good time for decision-making purposes. Businesses need cautious financial planning and forecasting. Considering the advances in technology and the availability of vast financial data, business leaders needs to make sure they take the best advantage of them. Financial Analytics can help shape future goals for the company and can help improve strategies for decision making. [12]

- Trend Analysis refers to linking past data with those of a base year over a period of time. Under this method, the percentage relationship is calculated, in the base year, that each statement item bears to the same item. Time-series as a tool for business analytics can be correlated with business analytics to streamline management efforts to make financing decisions for the organization formed after merger or acquisition. This way the business will gain meaningful insight and change from previously adopted ways of handling finance can be carried out.
- Comparing Income statement- Using KNN classification, common items in income statements of all the parties can be easily correlated and can generate intelligence for ease of business operations. Clusters thus formed can serve as a means to easily integrate all the financial data.

8. Managing IT systems after Mergers and Acquisitions

Mergers are hugely complex. It can be a daunting challenge to incorporate business processes, software, and data. Organizations run several different distributed software systems of various data sources, both hosted on-site and in the cloud. That means more data coming out of more silos.

All too often, firms engaged in mergers or acquisitions ignore the IT scalability of their new business partner or systems. It's not that businesses can make or break strategic decisions based on the company's IT infrastructure they intend to enter or take over, but it's necessary to have up-front information on how the IT merger is likely to proceed.

A slow or poorly controlled integration of IT between the merging companies can jeopardize the business objectives. So once an M&A is put in motion, the role of the CIO is to ensure that the IT integration occurs quickly and smoothly. There are two different but equally important phases to go through once an M&A is proposed: caution and preparation. Realistically, the diligence step is the last opportunity to call off the M&A before both sides commit, and as such a CIO will look for red and yellow flags that indicate integration would be harder than anticipated (and budgeted for). [18]

Post integration, after the CIO has done all due diligence process, we just have to merely extract the data and manage it.

Now, in this case, we can use Predictive Analytics to do due diligence and further to that data mining operations to extract data to manage IT systems of all the parties involved in the merger.

9. Conclusion

One of the biggest reasons why post-merger integration is successful is because there is an efficient change management process that has taken place. We have discussed in this paper that change management have been practiced in business organizations for a few decades now. However, with the technological disruptions, we take the guidance from the vast field of analytics and utilize the great wealth of knowledge we get from our data. These large sets of data (big data) have enabled many organizations to reach the top and have enabled many businesses to reach greatness.

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