

People and Data Analytics

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Abstract

Companies depend on analysts to moderate costs, realize benefits, identify new opportunities, understand the company's strengths and weaknesses, and guide the organization's future development. Moreover, companies must deal with profound changes in managing their business, customers, and business models since a data-driven revolution in management are overrunning them. Organizational leaders must recognize that the essential part of the business is its people. The ability to expand the team of analytics professionals will give the firm a competitive edge in the marketplace. This paper will explore the resources and the essential components that people provide, the structure of a competent team of business analysts, how Christian leadership plays a role, and this author's practical insight into the equation. A review of the scholarly literature, biblical parables, and scripture was used to develop a concise thesis to answer why people are the most crucial aspect in an analytics-driven culture and provide a real-world application of the theory and the current research into a business problem.

Keywords: Data analytics, decision-making, Christian leadership, business analytics, leadership, corporate data analysis, people and data analytics

People and Data Analytics

In the past two years, the business world has shifted, more companies face worker shortages, and the job market is in flux in many industries. Moreover, companies currently must deal with profound changes in how they manage their business, customers, and business models since they are being overrun by a data-driven revolution in management (Raguseo, 2018). The business community faces many challenges, and more companies rely on intelligent business analytics to make decisions for their firms. Companies depend on these analysts to moderate costs, realize benefits, identify new opportunities, understand the company's strengths and weaknesses, and guide the organization's future development. Organizational leaders must recognize that the essential part of the business is its people. The ability to expand the team of analytics professionals will give the firm a competitive edge in the marketplace (Bartlett, 2013). This paper will explore the resources and the essential components that people provide, the structure of a competent team of business analysts, how Christian leadership plays a role, and this author's practical insight into the equation.

Resources and Essential Components

As businesses grow and evolve, companies typically hire people to provide their first business analytics to leverage data to support decisions and validate the understating of the business. Eventually, business quants are employed, and more robust data analytics are incorporated into the business plan (Bartlett 2013). To orchestrate and leverage big data toward improved competitive performance, firms need to acquire and develop a unique mixture of technological, human, financial, and intangible resources, which will be difficult for competitors to imitate (Mikalef et al., 2020).

Ahmed and Pathan (2019) suggest that an organization must consider a strategy as the starting point in a business analytics process. Most project management programs are initiated to exploit opportunities in the light of organizational objectives. These processes must have the proper structure to complete the project and become viable as a firm meets its goals. Bartlett (2013) outlines the importance of a multi-tiered approach that includes components where analytics occurs among the business analysts performing the data analysis. Eventually, business analytics spreads horizontally to other lines of business, yet there is not much horizontal communication about how to solve problems (Bartlett, 2013). As resources allow and the essential components are set into place, an organization can then develop a structure that includes other critical business analytics structures.

Structure

In today's competitive environment, firms must constantly reconfigure and update the means that perform business and remain competitive (Mikalef et al., 2020). The ability to respond to changes is a complex process that includes sensing emerging threats and opportunities, seizing development opportunities, and transforming existing models to fit market needs better. Through data analysis, the resources are developed through the early stages of the organization's life cycle, and a firm can establish integration strategies that mix advanced analytics training and problem solving (Bartlett, 2013).

An organization should focus its business analytics on speed, quality, and communication. Bartlett (2013) suggests that an effective team of practitioners must be highly networked to the lines of business. Therefore, an organization should combine people who like working together and encourage them to create opportunities. A firm should also recruit qualified

individuals who can aid in developing opportunities based on their knowledge of data analytics. This provides a resilient structure that aids in establishing trust, integrity, and specialization.

Through this teamwork, an organization can pull people together to promote an esprit de corps and foster synergy (Bartlett, 2013). This teamwork can inoculate against people's problems and maintain the fabric of working relationships. This strategic management system of inter-connectivity, specialization, collaboration, and communication can be the unifying factor of a like-minded analytics team and thus create a culture that promotes thinking about what makes the organization function instead of just being dependent (Bartlett, 2013).

Christian Leadership

A Christian leader leads people by directing and providing specialization opportunities, which requires an understanding of its impact and potential. Good leadership is necessary to encourage people to perform at their best and create an environment that inspires, motivates, energizes, and unites while generating loyalty and producing results (Bartlett, 2013). A positive leader learns by listening to the speed with which analytics is performed correctly (Bartlett, 2013). Recent research shows that the relationship between organizational leaders is reflected in corporate values (Buil et al., 2019).

Merida (2015) posits that Elisha was not only a leader but a teacher. Whereby, 2 Kings 2:15 says, "When the sons of the prophets from Jericho who were facing him saw him, they said, "The spirit of Elijah rests on Elisha." They came to meet him and bowed down to the ground in front of him" (*New International Version*, 1978, 2 Kings 2:15). A plea of a Christian leader is to embrace your calling. A savvy Christian leader proves himself after he is called to be one. In Elisha's case, he takes over the ministry of Elijah. Thus, there is a transition from one generation to the next.

It is also imperative for a Christian leader to embrace cooperation, where the people of an organization matter. At some point, a business leader will deal with people who want to do things their way. There may come a moment when employees or contractors think they know how things should be done. Although God has clearly shown people that a transition in policy, procedure, or even data collection efforts must be made, some people will resist. Some people will long for the previous leader or for an easier way to do things. This is just human nature.

2 Kings 2:16 says, "since there are 50 strong men here with your servants, please let them go and search for your master. Maybe the Spirit of the Lord has carried him away and put him on one of the mountains or into one of the valleys." He answered, "Don't send them" (*New International Version*, 1978, 2 Kings 2:16). From a Christian point of view, maintaining cooperation is one of the most challenging tests for a leader. Some people may not like your ideas or the new processes that rely on data versus the old way of doing things, on intuition. However, a Christian leader can embrace both cooperation and their calling and add structure and resources to their organization that allows his people to excel at data analytics and provide an opportunity for the firm to gain a position in the industry where others feel honored and embraced when they come to work. This is the culture that Christian leadership envisions when thinking of the future.

Organizational Culture

Just as crucial as the resources and structure of an organization and the leadership that guides the company, a cohesive culture must be built for data analysts to thrive. Deshpandé et al. (1993; as cited in Dubey et al. 2019) define organizational culture as a collection of shared assumptions, values, and beliefs reflected in its practices and goals and further helps its members understand the organizational functions. Thus, a robust corporate culture can enhance trust and

collaborative performance. In addition, this culture affects how the firm responds to external events and makes strategic choices, and it is based on established values, beliefs, goals, and objectives that support the firm's stakeholders.

Dubey et al. (2019) studied the relationship between collaborative relationships within organizations through exchanging information, knowledge, and resources. The authors found a crucial difference between coordination and collaboration, which is essential in how data analytics are used within a company by its employees and contractors. Dubey et al. (2019) found that coordination is limited to sharing information and resources, whereas collaboration is more concerned with working together to create something new.

Bartlett (2013) suggests that most organizations need to upgrade their corporate infrastructure. He argues that an organization cannot fully leverage business analytics without changing the corporation by expanding to a team of analytics professionals with more leaders and decision-makers. It is imperative to find the right people, place them in the right roles, and build a culture that allows these stakeholders to embrace their possibilities. Dubey et al. (2019) suggest collaboration and cooperation between actors (e.g., employees, contractors) can occur over one or more tasks such as information sharing, capacity analysis, and needs assessments. It should be noted that each actor comes to a firm with their resources, networks, and working experience (Ergun et al. 2014; as cited in Dubey et al. 2019), and coordination and collaboration are complex due to various operational circumstances. A leader's responsibility is to understand the broader mechanisms through which Big Data and this cooperation and collaboration can create value, including the organizational and cultural dimensions (Dubey et al. 2019).

So how can a resilient organizational culture affect data analytics? Through relationships. Relationship-based collaboration is demonstrated by forming close, long-term partnerships in

which parties actively share information and resources to achieve a common goal. On the other hand, process-driven partnership occurs when two or more organizations engage to achieve common goals (Simatupang and Sridharan, 2002, Moshtari, 2016, Prasanna and Haavisto, 2018; as cited in Dubey et al. 2019).

Practical Application

This author is the owner and operator of a family-run firm that offers dog training services for clients throughout North America. During the last two years, the business saw an immediate shift in its operations due to the impact of the Covid-19 pandemic. Literally, overnight, new information technology (IT) programs had to come online, and the small business members had to become data analysts very quickly. One implemented project was an online/virtual dog training program called *PupPortal* that relied heavily on data from the organization's customer management system (CMS). A vital component of this data collection is adding tags to a client profile that advance the customer along a path in the course pipeline. Unfortunately, the buy-in to the new system from the clients and the organization's members has been slow, and some problems develop almost daily within the company.

Ahmed and Pathan (2019) suggest that the success of IT projects is abysmally low, and the project failure rate is higher as corporations become larger. Project success is a significant issue even in mainstream project management and relies on triple constraints of cost, on time, and within specifications (Ahmed and Pathan, 2019, p. 231). Research by Freeman and Beal (Zwikael et al. 2016; as cited in Ahmed and Pathan, 2019) propose a model that includes technical performance, the efficiency of execution, personal growth, business performance, and technological innovation (p. 231). The research of Dvir and Shanhar (Turner et al., 2013; as cited in Ahmed and Pathan, 2019) suggests the importance of the development and implementation of

procedures by data analysts to ensure the success of a project. The critical component for this author's project is to borrow from the processes outlined in the literature and apply these principles in a real-world setting with concrete consequences rather than theoretical models offered in studies that do not correlate with the organization's industry.

The *PupPortal* project has been one of much research in the last two years as this author is a business operator and a doctorate student researching strategic organizational management and relies on recent scholarly literature to guide his decisions in how to implement the program best. Interestingly the concept of people-centric decision-making processes that rely heavily on data analysis is the subject of this paper. Furthermore, Big Data and big analytics are the new basis for organizations to build their business strategies to survive in an increasingly quantified world (Pugna et al., 2019). Until just two years ago, this author's small business relied not upon Big Data but on what our trainers and contractors told us about them. While this is data collection, it is opinion-based data that cannot be quantified. However, according to a recent survey, 85% percent of enterprises have launched analytics and Big Data initiatives to bring greater accuracy and accelerate their decision-making. Over a third of these companies say the area is their top priority (Pugna et al. 2019). Although Big Data remains fashionable, it is not a well-understood concept and technology, and the need for a leadership commitment is a critical component for success. This is directly in line with the *PupPortal* project.

The people side of data and the PupPortal project

As mentioned, the people side of data analytics for the *PupPortal* project has always been there. A client tells a trainer that their dog needs a puppy class, and the company places them in the appropriate program. It is what happens after that where the analytics gets murky, and the scholarly research shows why. Maguire (2018; as cited in Pugna et al., 2019) argues that a lot of

what early adopters of business analytics do has nothing to do with technology and data but has everything to do with organizational change and adoption. Therein lies why people are the essential part of the data analytics equation. Kotter (2012) points out that organizational change fails because some people try and manipulate events quietly behind the scenes and purposefully avoid any discussion of future direction.

It is clear from the literature that a lean transformation involves changing the company's culture (AlManei et al., 2018). Clarifying the direction of change is vital because, often, most people disagree on the approach or are confused and wonder if a significant change is necessary (Kotter, 2012). By et al. (2018) argue that businesses that can successfully implement change have one thing in common: they do not entail relatively simple structural changes but require careful implementation of new ways of working in all levels of the organization.

So what does all this mean? McAfee and Brynjolfsson (2012; as cited in Pugna et al., 2019) identify the main management challenges related to the transition to a data-driven organizational model: leadership, talent management, technology, decision making, and company culture. Only one of these challenges is related to the technological aspects; all others relate to human and organizational issues (Pugna et al., 2019). Increasingly, executives realize that the most significant barriers to creating data-driven organizations and building data culture within their firms are technology issues relating to people and change. Almost half (48.5%) of the U.S. executives surveyed in 2018 identified people challenges as the most significant barrier to becoming data-driven, while only 19,1% cite technology as the issue. "People challenges loom greatest as firms strive to create data culture" is listed as one of the critical findings of this study (Bean, 2018).

Conclusions

This paper proposes whether people are an essential part of the data analysis equation for small businesses. The scholarly literature found that with proper resources, structure, and savvy Christian leadership Big Data and business analytics can quickly become a driver for a small business organization to have a competitive advantage. Research by Janssen et al. (2017) and Sivarajah et al. (2017) shows that understanding what Big Data implies and what potential benefits are for the organization is paramount, and even advanced analytics can be mastered. When an organization can develop and implement human resource policies to attract and train employees and contractors to become data analysts, even on a small level, it can significantly impact the organization. A forward-thinking organization should embrace and create a collaborative environment committed to integrating and embedding a culture of Big Data and business analytics within the company (Pugna et al. 2019).

This culture will create a measure of trust that will improve the alignment between data and decision-making. But there will be weaknesses. As many business owners learned over the last two years, an organization can change overnight, and the need to shift can cause swift action. In addition, data analytics is challenging in any environment. More so in an organization that is not used to quantifying their processes with a proven methodology. Therefore, for a small business organization to thrive in its industry and remain competitive, the company and its leadership need to be quite clear about their ideas and what they should expect from their teams in the era of Big Data. This will be the future of small businesses.

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