Statistical Analysis and a Healthy Business

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Abstract

Data analytics has transformed the way businesses compete. It presents new techniques for extracting hidden patterns from basic information for making correct decisions, increasing productivity, generating knowledge, and upgrading innovations. A mindful leader with the proper training and managerial judgment to understand the presented data can communicate it for the stakeholders in the organization to understand. A confident leader can lead their team to enhance the organization's performance by improving the firm's agility as it increases the speed of processes to accomplish tasks. A search of the scholarly literature and biblical scripture will provide insights on how Christian leadership can inform how statistical analysis can be used in a healthy business and how a real-world business problem can be addressed based on the information gained from the literature.

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

Statistical Analysis and a Healthy Business

Data analytics has transformed the way businesses compete (Müller et al., 2018). It presents new techniques in extracting hidden patterns from a set of essential information for making correct decisions, increasing productivity, generating knowledge, and upgrading innovations (Maroufkhani et al., 2020). A conscious leader with the proper training and managerial insight can understand the presented data and communicate it in a way for the stakeholders in the organization to comprehend. Bartlett (2013) postulates that communication skills are imperative for simply expressing complex results and for relationship building and both of which are facilitated by having analytics professionals present their results and encouraging them to master the business. In addition, savvy leaders can lead their team to enhance the organization's performance by improving the firm's agility as it increases the speed of processes to accomplish tasks (Ghasemaghaei et al., 2015).

Furthermore, statistical data analysis requires commitment and innovation in an organization. This innovation will not always come easy. Rogers (2003; as cited in Ghasemaghaei et al., 2015) affirmed that adoption of new technology or systems might fail if perceived as too ambitious and challenging to implement. Challenges exist, for example, in altering the processes in which systems work together or how the organization uses data collected on their clients. Thereby, new technology must be easy to use to enhance the chances of adoption (Alshamaila et al., 2013; Kandil et al., 2018; as cited in Ghasemaghaei et al., 2015). But what if the technology is not easy to use? As will be discussed later in this paper, employees must quickly acquire knowledge about the new technology, and buy-in may become challenging as uncertainty and process implementation are presented.

Consequently, decision-makers are in a dilemma about adopting the innovation, and sometimes it is more than money that comes into play in an organization. A value system must be built on trust within the organization. As Bartlett (2013) describes, it is essential to take what is learned through training, and as this author would argue, through diligent trial and error within his organization and communicate these processes to the stakeholders. This author attempts to be the best servant-leader and commit to a value system based on ethical decisions and Christian leadership.

Christian Leadership in the Corporation

It can be argued that no amount of training, whether it be certification programs, academic endeavors, or trial and error, can replace an organization's ethical values and Christian leadership. An organization that is based on the development of teams that includes the individual and fostering their ability to encourage direction, alignment, and commitment within the group will allow for the expansion of the capacity of the teams to be effective in the company and its processes (McCauley, Velsor, & Ruderman, 2010; as cited in Krispin, 2020).

Further, Christian leadership must be concerned with developing the few so that the many can be impacted. Jesus transformed the world because he poured his life into the twelve apostles (Davis 1991; as cited in Thomas, 2018). Data and numbers aside, a savvy Christian leader should lead within and with integrity. This is far more impactful in an intimate relationship within an organization where everyone understands the values system and trusts the leader's understanding of direction based on ethical, data-centric decision making. This is expounded in Merida (2015) with Solomon understanding the importance of wisdom and how that can be transferred within the organization.

Proverbs 24:6 says, "with many advisors, there is success" (*New International Version*, 1978, Prov. 24:6). This is in line with the Bartlett (2013) text and the importance of leadership, communication, and transference of skills and training, along with the research of Ghasemaghaei et al. (2015). Therefore, in business or our personal lives, we must surround ourselves with people who possess the skills we lack, whether that be analytics professionals, those that an organization can develop from within, or who we can seek for advice, who we can share responsibilities and who can challenge and encourage us with our ideas and decisions. Together we are more effective than by ourselves, is a powerful mantra that is a core tenant of Christian leadership that can easily be applied to the organizational mission as they work within their communities. So how can this be applied to a real-world business problem?

Practical Application

Customer and client interactivity data are crucial, as with when they are contacted, which communication medium they used, the duration of the communication, and anything related to customer support (Ahmed & Pathan, 2019). Over the past two months, this author's organization began implementing a program and a series of data gathering and analysis tools that have changed his business overnight and follow the pattern that Ahmed and Pathan (2019) outline. With this program, *Keap*, the organization can use and evaluate data in real-time, rather than in the past, where it would take several programs and finite resources to gain the same analysis. Furthermore, as Ahmed and Pathan (2019) posit, rather than using data when needed, one can adopt and integrate information into analytics workflow and predict when and how customers will connect.

More importantly, this author can use these real-time analytics to look for conflicts of interest and the appropriate qualifications to go with the analytics results. In turn, the

organization can build models by identifying a pattern in the data and finding a structure to

express and replicate this pattern (Bartlett, 2013; Ghasemaghaei et al., 2015). For example, the

Keap software program offers pipeline automation to automate critical steps in a process. Here,

the organization can keep new client leads moving through sales by configuring automation that

triggers when a new lead enters or exits a stage. This is utilized by real-time statistical data

analysis both by an algorithm and human interpretation. Simply, if a leader does this, and the

data supports it, when that occurs.

So how does this all work, and how can this data analysis be a part of a healthy small

business? At just two months in with the new program, it takes a great deal of effort on this

author's part to get buy-in from his employees and contractors. This software is not a simple

solution and has a high learning curve. Before, the company relied more on quick decisions

without data analysis in the sales and client nurturing process. Using a transformational

leadership model as outlined in Northouse (2018) and further in Chai et al. (2017) shows that

through various factors, leadership has been recognized as one of the critical forces that change

employees' behavior (Northouse, 2018).

Transformational leadership has been considered a crucial component in fostering

organizational commitment in various corporate settings. With this knowledge and a better

understanding of the statistical relevance of the data gathered, this author can lead from within,

knowing that positive change can come from better data analysis. This is possible and can be

communicated to his team because transformational leaders strategically envision the future,

build team spirit, and create team commitment to the organizational vision.

Through insight gained from Merida (2015), the biblical literature, and more recently, the

Thomas (2018) research, and well as Krispin (2020), this author can use transformational and

servant leadership to create a positive impact on his follower's performance. In this vein, transformational leadership and Christian values within the organization will increase the shared vision and team members' commitment to team goals, which positively influences organizational commitment (Chai et al., 2017). But, more importantly, the organization will become well versed in their clients' behaviors and develop a better relationship within the organization and the community at large.

Conclusion

Christian leadership is more than statistics, data, and predictions. It is also about people. Thomas (2018) posits the indispensable mark of Christian leadership is the combined effort of action and agenda and to purposefully influence others intentionally. Correspondingly, leadership is more about impetuous decisions, and well-informed leaders will lean on more than just their ability to make analytics-based decisions and perform the analysis well (Bartlett, 2013). Innovative leadership is needed to help socialize the findings of data presented and direct people toward intelligent decision-making. This type of leader communicates effectively by expressing complex results simply and helps bridge the gap between stakeholders who understand analytics and those who do not. Following the advice found in scripture and within the secular literature will allow a conversant Christian leader to develop the statistical analytics prowess to make informed decisions and the know-how to look for conflicts, judge the reliability of the results, and how to incorporate them into utility functions. A Christian leader can leverage their resources, time, knowledge, and experience, to impact and influence others directly. Thereby, a thorough understanding of business analytics, partnered with sound Christian leadership will implore a leader to lead from within, while serving the greater good of community as a whole.

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