


The Influence of Organizational Culture and Big Data Analytics on Employee Performance Mediated by Organizational Support at PT XYZ Operating in the Consumer Goods Sales Industry

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Article Info	ABSTRACT
<p>Keywords: Big Data Analytics, Organizational Culture, Organizational Support, Employee Performance</p>	<p>This study investigates the influence of organizational culture and big data analytics on employee performance, with organizational support as a mediating variable. Conducted at PT XYZ, a company in the essential goods sales industry (including rice, eggs, fruits, and vegetables), the research involved 90 employees using a quantitative approach. Data collection utilized questionnaires with a 5-point Likert scale, and the analysis employed Partial Least Squares Structural Equation Modelling (PLS-SEM) to explore relationships among variables. The results revealed several key insights. First, big data analytics does not significantly organizational support, while organizational culture positively and significantly affects it. Second, organizational support does not significantly impact employee performance, but both big data analytics and organizational culture have direct positive effects on employee performance. Third, mediation testing showed that organizational support does not mediate the relationship between big data analytics and employee performance, nor between organizational culture and employee performance. Based on these findings, it is recommended that PT XYZ prioritize enhancing employee capabilities, particularly among leaders, in communication and collaboration, to better utilize company support, such as systems and big data analytics. Additionally, establishing a strong organizational culture can significantly boost employee performance by fostering a supportive and comfortable work environment. The study highlights the importance of integrating technology and culture to achieve organizational success.</p>
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INTRODUCTION

The development of technology and digitalization presents significant challenges for companies, especially in the competitive and dynamic consumer goods industry. One way for companies to gain a competitive edge is using big data analytics, which helps in understanding consumer behavior patterns, predicting market trends, and improving operational efficiency (Mikalef et al., 2019). This technology enables the processing of large

volumes of structured and unstructured data from various sources such as social media, IoT devices, sales transactions, and operational systems (Gandomi & Haider, 2015).

However, the success of big data implementation depends on a supportive organizational culture. A strong organizational culture fosters collaboration, innovation, and data-driven decision-making, enhancing the company's adaptability in dynamic markets (Azeem et al., 2021). In the context of big data, a data-driven organizational culture becomes increasingly vital for leveraging the potential of innovation and digital transformation (Nguyen et al., 2024).

In addition, organizational support plays a crucial role. Perceived Organizational Support (POS), referring to employees' perceptions of how much the organization cares about their well-being, strengthens the relationship between organizational culture and employee performance (Rhoades & Eisenberger, 2002). This support ensures that employees can effectively utilize big data technology to enhance their performance and adaptability (Alqudah et al., 2022).

PT XYZ, operating in the basic needs sales industry, has begun adopting big data analytics to monitor market trends, consumer behavior, and sales performance. However, the company faces challenges in ensuring that its organizational culture and support help employees optimize the use of this technology. This study aims to analyze the influence of organizational culture and big data analytics on employee performance, with organizational support as a mediating factor, as well as to identify the synergy among these three elements to enhance the company's performance.

Literature Review and Hypotheses Development

The Relationship between Big Data and Organizational Support

The hypothesis that big data positively influences organizational support is based on its ability to enhance employees' perception of organizational care. Big data enables efficient data collection and analysis, improving decision-making, resource allocation, and transparency. According to Gupta and George (2016), big data adoption enhances understanding of employee needs and supports HR strategies. Akter et al. (2016) found that big data fosters adaptive and responsive workplaces, while Kurtessis et al. (2017) emphasized its role in providing personalized support. By leveraging data-driven insights, organizations strengthen perceived support among employees.

H1: Big data usage significantly and positively affects organizational support.

The Relationship between Organizational Culture and Organizational Support

A big data-driven organizational culture significantly impacts employees' perceptions of organizational support by enabling data-driven, transparent decision-making. Gupta and George (2016) highlight that big data enhances managerial decisions by providing comprehensive insights into employee performance and HR needs. Akter et al. (2016) emphasize its role in fostering quick, efficient responses to workplace changes, improving employees' perceptions of continuous support. Davenport and Harris (2017) note that data-

driven cultures promote fairness in performance evaluations and decisions, reducing bias and building trust. This strengthens Perceived Organizational Support (POS) by addressing employee needs effectively (Akter et al., 2016). Furthermore, Eisenberger et al. (2020) and Kurtessis et al. (2017) found that data-informed support increases employee engagement and commitment.

H2: Big data-driven organizational culture positively affects organizational support.

The Relationship between Organizational Support and Employee Performance

The influence of organizational support on employee performance has been a central focus in research due to its role in enhancing productivity and employee well-being. Organizational support refers to the extent to which employees feel valued and supported by their organization through resources, recognition, and attention to their welfare. Studies indicate that employees who perceive high levels of support tend to perform better, driven by increased emotional attachment and motivation to contribute maximally to the organization (Kurtessis et al., 2017). According to the Perceived Organizational Support (POS) theory, employees who feel their organization cares about their well-being are more committed and motivated to excel in their roles (Eisenberger et al., 2020). Organizational support also helps mitigate workplace stress, enabling employees to handle high job demands effectively by providing necessary resources like training or technology (Bakker & Demerouti, 2018). Furthermore, support fosters organizational citizenship behavior (OCB), encouraging employees to voluntarily assist colleagues and enhance organizational success (Caesens et al., 2019). It also promotes perceptions of fairness, boosting commitment and motivation (Kundu & Lata, 2017). In conclusion, organizational support significantly influences employee performance by creating a positive work environment, reducing stress and encouraging proactive behaviour.

H3: Organizational support positively influences employee performance

The Relationship between Big Data and Employee Performance

Big data significantly impacts employee performance by providing detailed, data-driven insights into work behavior, decision-making, and efficiency. It allows organizations to collect and analyze large datasets to make informed decisions, especially in employee management. McAfee and Brynjolfsson (2017) highlight that big data enhances training programs, refines reward systems, and streamlines workflows, increasing productivity. Real-time monitoring capabilities enable companies to deliver immediate feedback, improving employee engagement and addressing performance gaps effectively (Akter et al., 2016). Davenport and Harris (2017) emphasize that big data supports personalized performance strategies by tailoring solutions based on data from sources like surveys and digital tools. Predictive analytics helps identify challenges, such as workload imbalances, allowing organizations to proactively address employee needs, improving well-being and output (Grander et al., 2021). Furthermore, access to relevant data fosters autonomy, motivation, and efficiency, driving better performance outcomes (Deci et al., 2017)

H4: Big data positively influences employee performance.

The Relationship between Organizational Culture and Employee Performance

Organizational culture significantly impacts employee performance by shaping values, norms, and practices that influence behaviour and productivity. A strong, positive culture enhances motivation, engagement, and commitment, driving better performance outcomes. Robbins et al. (2013) highlight that cultures fostering innovation, openness, and collaboration encourage employees to be proactive and contribute to organizational goals. Cultures prioritizing employee well-being, inclusivity, and career development also boost engagement and reduce turnover, leading to higher motivation and performance (Hartnell et al., 2019). According to the Competing Values Framework, flexible and adaptive cultures promote autonomy and innovation, which positively affect performance (Rodriguez & Walters, 2017). Cohesive cultures align employee values with organizational goals, fostering motivation and contribution to success (Makumbe & Washaya, 2022). Transparent and collaborative cultures improve efficiency by enabling access to relevant information and support (Zheng, 2017)

H5: Organizational culture positively influences employee performance.

Organizational Support as a Mediator Between Big Data and Employee Performance

Organizational support plays a crucial role in mediating the impact of big data on employee performance. While big data provides deep insights into employee behavior and needs, its influence on performance depends heavily on the support provided by the organization. McAfee and Brynjolfsson (2017) highlight that data-driven decision-making has a greater impact when accompanied by effective support, such as tailored training and development programs. Akter et al. (2016) and González et al. (2020) emphasize that big data helps organizations design specific support strategies, including skill-based training, which directly enhances employee productivity. Grander et al. (2021) note that big data-driven strategies foster a supportive environment, boosting performance. Additionally, data-based organizational support strengthens perceptions of fairness. Objective decision-making using big data enhances employee engagement and motivation (Kurtessis et al., 2017; Davenport & Harris, 2017). By reducing stress and improving well-being through targeted actions, organizational support transforms big data insights into measurable performance improvements (Eisenberger et al., 2020).

H6: Organizational support mediates the relationship between big data and employee performance.

Organizational Support as a Mediator Between Organizational Culture and Employee Performance

Organizational support serves as a critical mediator in the relationship between organizational culture and employee performance. A strong organizational culture shapes shared values, norms, and practices that influence employee behavior. However, its impact

on performance is largely determined by the level of perceived organizational support. Eisenberger et al. (2020) argue that support mechanisms allow employees to feel valued, especially in cultures that promote autonomy and growth opportunities. Kurtessis et al. (2017) highlight that organizational support enhances the effects of culture by fostering a work environment that prioritizes well-being and motivation. Cultures encouraging collaboration and innovation, combined with organizational support, boost employee engagement and commitment (Robbins et al., 2013). Recognition and tangible support, such as resources and career development, ensure cultural values translate into improved performance (Hartnell et al., 2019). Davenport and Harris (2017) emphasize that data-driven cultures strengthen fairness and transparency in decision-making, increasing motivation and performance. By integrating big data analytics, organizations can better adapt to employee needs and provide data-informed support, fostering continuous feedback and productivity improvements (Grander et al., 2021).

H7: Organizational support mediates the relationship between organizational culture and employee performance.

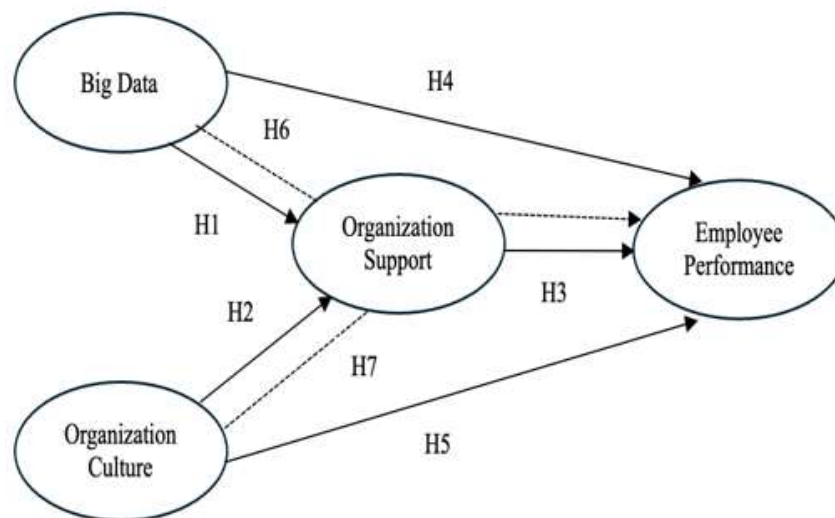


Figure 1. Research Model

RESEARCH METHOD

This study employs a quantitative approach to analyze the relationship between big data (BD), organizational culture (OC), organizational support (OS), and employee performance (EP). The research focuses on employees of PT XYZ, operating in the essential goods sales industry, with a minimum work tenure of 9 months to ensure familiarity with performance evaluations. Data were collected through questionnaires using a 5-point Likert scale, ranging from "strongly disagree" to "strongly agree." The unit of analysis is individual, with each respondent providing data for statistical analysis. A correlational analysis approach

was used to test hypotheses and determine significant relationships between variables. Data collection occurred within a specific time frame, applying interval scales to measure latent variables for deeper analysis, such as mean and standard deviation. The study uses Partial Least Squares Structural Equation Modelling (PLS-SEM) to examine the direct and indirect effects of the variables. This method ensures accurate statistical testing of the research hypotheses.

RESEARCH RESULT

Demographic Profile Respondent

The respondent profile for this study consists of active employees of PT XYZ who have been employed for more than 12 months as of October 30, 2024. Based on the calculation for determining the number of respondents, this study involved 90 qualified respondents, achieving a 100% response rate. Below are the descriptions and categories of the respondent.

Table 1. Demographic Profile Respondent

Description	Category	Frequency	Percentage (%)
Gender	Male	41	46%
	Female	49	54%
Ages	22-25	14	16%
	>25-30	30	33%
	>30-35	20	22%
	>35-40	13	14%
	>40-45	5	6%
	>45-50	5	6%
	>50-55	3	3%
Marital Status	Single	47	52%
	Married	43	48%
Working Period	<1-2 Year	47	52%
	>2-3 Years	16	18%
	>3-4 Years	15	17%
	>4 Years	12	13%

Convergent Validity Result

In Table 2, it is shown that the AVE results for each variable are above 0.5. Therefore, it can be concluded that all variables meet the requirements and can be further analyzed.

Table 2. Convergent Validity

Variable	Indicator	Loading (>0.7)	AVE (>0.5)
<i>Big Data</i>	BD1	0,719	0,622
	BD2	0,754	

Variable	Indicator	Loading (>0.7)	AVE (>0.5)
<i>Organizational Culture</i>	BD3	0,847	0,602
	BD4	0,826	
	BD5	0,847	
	BD6	0,727	
	OC1	0,709	
	OC3	0,776	
	OC4	0,788	
	OC5	0,815	
	OC6	0,841	
	OC7	0,833	
<i>Organizational Support</i>	OC8	0,776	0,664
	OC9	0,718	
	OC10	0,717	
	OS1	0,816	
	OS2	0,798	
	OS3	0,783	
	OS4	0,736	
	OS5	0,845	
	OS6	0,793	
	OS7	0,860	
<i>Employee Performance</i>	OS8	0,874	0,610
	OS9	0,820	
	EP1	0,776	
	EP2	0,715	
	EP3	0,797	
	EP4	0,751	
	EP5	0,812	
EP7	0,830		

Source: Primary Data Processed

Discriminant Validity Results

The data shown in Table 3 indicates that the HTMT ratio results are below 0.9. Based on the test results, it can be concluded that each indicator of the latent variables has been uniquely and distinctly measured from other indicators. In other words, the discriminant validity of the research model has been achieved. These results demonstrate that each indicator is most appropriate for measuring its respective construct. This means that the indicators are specifically capable of measuring their respective constructs. Therefore, it can be assured that the data obtained from the research variables is reliable for answering the proposed research question.

Table 3. Discriminant Validity

Variable	BD	EP	OC	OS	OS x OC	OS x BD
BD						
EP	0,771					
OC	0,762	0,862				

OS	0,742	0,840	0,883	
OS x OC	0,177	0,324	0,433	0,425
OS x BD	0,289	0,332	0,263	0,326 0,622

Source: Primary Data Processed

Construct Reliability Results

Reliability testing was conducted by evaluating construct reliability, which measures the consistency of an instrument in assessing the same concept across different conditions and repeated measurements. This ensures the instrument is not only valid but also stable and reliable. In the second stage of the outer model analysis, construct reliability was assessed using Cronbach's Alpha and Composite Reliability, with a threshold of 0.7. Constructs exceeding this value are considered reliable, indicating consistency and dependability in the indicators used. As shown in Table 4, all Cronbach's Alpha and Composite Reliability values are above 0.7, confirming that all variables in this study meet the reliability and validity criteria.

Table 4. Construct Reliability

Variable	Cronbach's Alpha >0,7	Composite Reliability >0,7
Big Data	0,878	0,908
Employee Performance	0,873	0,904
Organizational Culture	0,917	0,931
Organizational Support	0,937	0,947

Source: Primary Data Processed

Collinearity Results

Multicollinearity testing examines the relationship between independent variables (Hair Jr et al., 2019). The Variance Inflation Factor (VIF) is used to assess dependency levels among independent variables. A VIF value below 5 indicates no multicollinearity, meaning there is no strong correlation between independent variables that could bias the analysis. As shown in Table 5, all variables have VIF values below 5, confirming that there is no multicollinearity, and the variables are valid for further analysis.

Table 5. Coefficient of Determination

Variable	BD	EP	OC	OS
BD		2,339		1,934
EP				
OC		4,981		1,934
OS		4,395		
OS x OC		2,129		

Source: Primary Data Processed

R-Square Results

In Table 6, the R² results meet the standard criteria for variable acceptance. The mediation variable, organizational support, has an R² value of 0.804, indicating that big data and organizational culture explain 80.4% of the variance in organizational support, with the remaining 19.6% influenced by other variables not included in this study. For the variable employee performance, the R² value is 0.668, which means that big data, organizational

culture, and organizational support collectively explain 66.8% of the variance in employee performance. The remaining 33.2% is explained by other variables not examined in this study, such as work-life balance. According to a prior study by Arif and Farooqi (2014), work-life balance supported by organizational policies, such as flexible working hours and managerial support, helps reduce work stress, increase job satisfaction, and strengthen organizational commitment. Another potential factor is the role of Human Resource Management Practices (HRMP). Previous research suggests that HRMP involving effective communication, clear job descriptions, comprehensive training, and active participation enhances employee commitment and effectiveness (Alqudah et al., 2022).

Table 6. R-Square Results

Variable	R-square	R-square adjusted
Employee Performance	0,687	0,668
Organizational Support	0,809	0,804

Source: Primary Data Processed

Predictive Relevance Results (Q^2)

The predictive relevance (Q^2) test assesses how well independent variables predict dependent variables within the research model. Hair et al. (2021) categorize Q^2 values as small (0–0.25), medium (0.25–0.5), and high (>0.5), with values closer to 1 indicating greater predictive accuracy. Table 7 shows that organizational support has high predictive relevance ($Q^2 > 0.5$), while employee performance demonstrates medium predictive relevance (Q^2 between 0.25 and 0.5)

Table 7. Predictive Relevance Results

Variabel	Q^2 Predict
Organizational Support	0.519
Employee Performance	0.398

Source: Primary Data Processed

Effect Size (f^2)

The effect size (F^2) test evaluates the contribution of independent variables in influencing dependent variables, classifying the impact into three categories: small ($F^2 > 0.02$), medium ($F^2 > 0.15$), and large ($F^2 > 0.35$). If F^2 is below 0.02, the variable has no significant effect (Hair Jr et al., 2019). As shown in Table 8, big data and organizational culture have a strong influence on organizational support and employee performance. Additionally, organizational support, mediated by organizational culture, shows a strong effect on employee performance, while organizational support, mediated by big data, has a medium effect on employee performance.

Table 8. Effect Size Results

Path	f -square
BD -> EP	0,067
BD -> OS	0,030
OC -> EP	0,077
OC -> OS	1,829
OS -> EP	0,046

OS x OC -> EP	0,048
OS x BD -> EP	0,023

Source: Primary Data Processed

Hypothesis tests

The results of hypothesis testing in Table 9 reveal mixed findings. The relationship between big data and organizational support was not supported, as indicated by a t-statistic below 1.645 and a p-value above 0.05, despite a positive original sample value. However, the influence of organizational culture on organizational support was supported, showing a strong positive relationship of 82.3%. Similarly, the impact of big data on employee performance was supported, with a positive relationship of 22.2%, while the influence of organizational culture on employee performance showed a stronger positive effect of 38.1%. Conversely, the influence of organizational support on employee performance was not supported, as the p-value exceeded 0.05, despite a positive trend. Regarding mediation effects, organizational support did not mediate the relationship between big data and employee performance, with a negative original sample value. Additionally, the mediation of organizational support between organizational culture and employee performance was not supported, as the t-statistic fell below the threshold and the p-value was above 0.05.

Table 9. Summary of Statistics Hypothesis Testing Results

Hypothesis	Original Sample (O)	T Statistics (O/STDEV)	P Values	Result
<i>Big Data -> Organizational Support</i>	0,105	1,465	0,143	Not Supported
<i>Organizational Culture -> Organizational Support</i>	0,823	13,759	0,000	Supported
<i>Organizational Support -> Employee Performance</i>	0,279	1,853	0,064	Not Supported
<i>Big Data -> Employee Performance</i>	0,222	2,535	0,011	Supported
<i>Organizational Culture -> Employee Performance</i>	0,381	2,566	0,010	Supported
<i>Organizational Support x Big Data-> Employee Performance</i>	-0,139	1,439	0,150	Not Supported
<i>Organizational Support x Organizational Culture -> Employee Performance</i>	0,053	0,762	0,446	Not Supported

Source: Primary Data Processed

Results and Discussion

This study investigates the influence of big data, organizational culture, and organizational support on employee performance at PT XYZ by analyzing seven hypotheses. The findings reveal mixed outcomes, highlighting areas of success and improvement. While the hypothesis that big data positively impacts organizational support was not supported, the analysis showed a positive original sample value. Interviews with employees revealed that limitations in technology implementation, which was confined to specific staff levels, and insufficient training created a disconnect between employees and the perceived benefits of

big data. Employees used the system within their understanding but lacked the support needed to maximize its potential, weakening the connection between big data and organizational support.

Hypothesis 1, that big data positively influences organizational support was not supported, as indicated by the statistical analysis. Although the original sample value was positive, interviews revealed limitations in technology implementation, which was confined to certain staff levels. This restricted adoption led employees to feel disconnected from the benefits of big data. Additionally, employees lacked training on how to utilize big data systems effectively, creating a knowledge gap that hindered the perception of support from big data utilization.

Hypothesis 2, that organizational culture positively influences organizational support was supported, with a strong relationship of 82.3%. PT XYZ emphasizes its corporate culture through daily activities like briefings, company marches, and consistent reinforcement during recruitment and training. The integration of a data-driven culture enables quick and accurate responses to workplace changes, fostering employee perceptions of continuous support. Management's consistent efforts to align employee understanding with company goals further strengthen this relationship.

Hypothesis 3, that organizational support influences employee performance was not supported, despite a positive trend. Interviews revealed issues such as unclear communication from supervisors, inconsistent policies, and limited understanding of the company's vision and mission among employees. These factors created confusion and stress, reducing the effectiveness of organizational support in enhancing employee performance.

Hypothesis 4 that big data positively influences employee performance was supported, with a moderate relationship of 22.2%. Big data enabled detailed analyses of employee behavior, improving training, reward systems, and workflow optimization. Interviews highlighted that while not all employees utilized big data fully, managers effectively leveraged historical data for decision-making, such as business expansion and negotiations, resulting in improved performance outcomes.

Hypothesis 5, that organizational culture positively influences employee performance was supported, with a significant relationship of 38.1%. PT XYZ's strong culture fosters innovation, openness, and collaboration, motivating employees to perform better. Interviews confirmed that employees felt motivated by the supportive and comfortable work environment created by the company's cultural initiatives.

Hypothesis 6, that organizational support mediates the relationship between big data and employee performance was not supported. Interviews revealed a lack of comprehensive understanding and utilization of big data systems among staff, as well as limited two-way communication between employees and management. These issues weakened the mediation effect of organizational support.

Hypothesis 7, that organizational support mediates the relationship between organizational culture and employee performance was also not supported. Despite a

positive cultural environment, differences in perception and understanding of the company's expectations among employees and leaders limited the full implementation of support systems. Interviews indicated that while employees valued corporate culture, they lacked clarity on how data-driven practices aligned with company goals and enhanced performance. In summary, this study underscores the need for PT XYZ to enhance its training programs, foster clearer communication, and bridge knowledge gaps to align technology, culture, and support more effectively. These efforts are crucial for maximizing the benefits of big data and organizational culture in improving employee performance.

CONCLUSION

This study aimed to examine whether big data and organizational culture influence employee performance, mediated by organizational support, at PT XYZ. This quantitative research involved 90 employees of PT XYZ as the sample, with data collected through a questionnaire distributed via Google Forms. The responses were analyzed using SmartPLS 4 software. The findings revealed that big data does not have a positive or significant influence on organizational support, while organizational culture has a positive and significant impact on organizational support. Organizational support itself does not have a positive or significant effect on employee performance. However, big data positively and significantly influences employee performance, as does organizational culture. Furthermore, big data does not exhibit a positive or significant relationship with employee performance through organizational support, nor does organizational culture show a positive or significant relationship with employee performance through organizational support.

REFERENCES

- Ahmad, Hanandeh, Qais Kilani, and Sakher Alnajdawi. 2023. "The Effects of Big Data Analytics and Workplace Pressures on Productivity." *International Journal of Data and Network Science* 7(4):1485–92. doi: 10.5267/j.ijdns.2023.8.014.
- Akter, Shahriar, Samuel Fosso Wamba, Angappa Gunasekaran, Rameshwar Dubey, and Stephen J. Childe. 2016. "How to Improve Firm Performance Using Big Data Analytics Capability and Business Strategy Alignment?" *International Journal of Production Economics* 182:113–31.
- Alqudah, Ikrema HA, Adolfo Carballo-Penela, and Emilio Ruzo-Sanmartín. 2022. "High-Performance Human Resource Management Practices and Readiness for Change: An Integrative Model Including Affective Commitment, Employees' Performance, and the Moderating Role of Hierarchy Culture." *European Research on Management and Business Economics* 28(1):100177.
- Alsafadi, Yousef, and Shadi Altahat. 2021. "Human Resource Management Practices and Employee Performance: The Role of Job Satisfaction." *The Journal of Asian Finance, Economics and Business* 8(1):519–29.
- Anon. n.d. "Uma Sekaran Dan Roger Bougie."

- Arif, Bushra, and Yasir Aftab Farooqi. 2014. "Impact of Work Life Balance on Job Satisfaction and Organizational Commitment Among University Teachers: A Case Study of University of Gujrat, Pakistan." 5(9).
- Azeem, Muhammad, Munir Ahmed, Sajid Haider, and Muhammad Sajjad. 2021. "Expanding Competitive Advantage through Organizational Culture, Knowledge Sharing and Organizational Innovation." *Technology in Society* 66:101635. doi: 10.1016/j.techsoc.2021.101635.
- Bakker, Arnold B., and Evangelia Demerouti. 2018. "Multiple Levels in Job Demands-Resources Theory: Implications for Employee Well-Being and Performance." *Handbook of Well-Being* 255.
- Bedarkar, Madhura, and Deepika Pandita. 2014. "A Study on the Drivers of Employee Engagement Impacting Employee Performance." *Procedia-Social and Behavioral Sciences* 133:106–15.
- Boon, Corine, Deanne N. Den Hartog, and David P. Lepak. 2019. "A Systematic Review of Human Resource Management Systems and Their Measurement." *Journal of Management* 45(6):2498–2537.
- Bougie, Roger, and Uma Sekaran. 2019. *Research Methods for Business: A Skill Building Approach*. John Wiley & Sons.
- Brown, Sarah, Daniel Gray, Jolian McHardy, and Karl Taylor. 2015. "Employee Trust and Workplace Performance." *Journal of Economic Behavior & Organization* 116:361–78.
- Caesens, Gaëtane, Florence Stinglhamber, Stéphanie Demoulin, Matthias De Wilde, and Adrien Mierop. 2019. "Perceived Organizational Support and Workplace Conflict: The Mediating Role of Failure-Related Trust." *Frontiers in Psychology* 9:2704.
- Carnevale, Joel B., and Isabella Hatak. 2020. "Employee Adjustment and Well-Being in the Era of COVID-19: Implications for Human Resource Management." *Journal of Business Research* 116:183–87.
- Davenport, Thomas, and Jeanne Harris. 2017. *Competing on Analytics: Updated, with a New Introduction: The New Science of Winning*. Harvard Business Press.
- Davidescu, Adriana AnaMaria, Simona-Andreea Apostu, Andreea Paul, and Ionut Casuneanu. 2020. "Work Flexibility, Job Satisfaction, and Job Performance among Romanian Employees—Implications for Sustainable Human Resource Management." *Sustainability* 12(15):6086.
- Deci, Edward L., Anja H. Olafsen, and Richard M. Ryan. 2017. "Self-Determination Theory in Work Organizations: The State of a Science." *Annual Review of Organizational Psychology and Organizational Behavior* 4(1):19–43. doi: 10.1146/annurev-orgpsych-032516-113108.
- Eisenberger, Robert, Linda Rhoades Shanock, and Xueqi Wen. 2020. "Perceived Organizational Support: Why Caring About Employees Counts." *Annual Review of Organizational Psychology and Organizational Behavior* 7(1):101–24. doi: 10.1146/annurev-orgpsych-012119-044917.

- Elgendy, Nada, and Ahmed Elragal. 2014. "Big Data Analytics: A Literature Review Paper." Pp. 214–27 in *Advances in Data Mining. Applications and Theoretical Aspects*. Vol. 8557, *Lecture Notes in Computer Science*, edited by P. Perner. Cham: Springer International Publishing.
- Eliyana, Anis, Syamsul Ma'arif, and Muzakki. 2019. "Job Satisfaction and Organizational Commitment Effect in the Transformational Leadership towards Employee Performance." *European Research on Management and Business Economics* 25(3):144–50. doi: 10.1016/j.iemeen.2019.05.001.
- Gandomi, Amir, and Murtaza Haider. 2015. "Beyond the Hype: Big Data Concepts, Methods, and Analytics." *International Journal of Information Management* 35(2):137–44.
- Garavan, Thomas, Sandra Watson, Ronan Carbery, and Fergal O'Brien. 2016. "The Antecedents of Leadership Development Practices in SMEs: The Influence of HRM Strategy and Practice." *International Small Business Journal: Researching Entrepreneurship* 34(6):870–90. doi: 10.1177/0266242615594215.
- Grander, Gustavo, Luciano Ferreira da Silva, and Ernesto Del Rosário Santibañez Gonzalez. 2021. "Big Data as a Value Generator in Decision Support Systems: A Literature Review." *Revista de Gestão* 28(3):205–22.
- Gupta, Manjul, and Joey F. George. 2016. "Toward the Development of a Big Data Analytics Capability." *Information & Management* 53(8):1049–64.
- Hair, Joseph F., Jeffrey J. Risher, Marko Sarstedt, and Christian M. Ringle. 2019. "When to Use and How to Report the Results of PLS-SEM." *European Business Review* 31(1):2–24.
- Hair Jr, Joe, Michael Page, and Niek Brunsveld. 2019. *Essentials of Business Research Methods*. Routledge.
- Hallikainen, Heli, Emma Savimäki, and Tommi Laukkanen. 2020. "Fostering B2B Sales with Customer Big Data Analytics." *Industrial Marketing Management* 86:90–98.
- Hartnell, Chad A., Amy Y. Ou, Angelo J. Kinicki, Dongwon Choi, and Elizabeth P. Karam. 2019. "A Meta-Analytic Test of Organizational Culture's Association with Elements of an Organization's System and Its Relative Predictive Validity on Organizational Outcomes." *Journal of Applied Psychology* 104(6):832.
- Kundu, Subhash C., and Kusum Lata. 2017. "Effects of Supportive Work Environment on Employee Retention: Mediating Role of Organizational Engagement." *International Journal of Organizational Analysis* 25(4):703–22.
- Kurtessis, James N., Robert Eisenberger, Michael T. Ford, Louis C. Buffardi, Kathleen A. Stewart, and Cory S. Adis. 2017. "Perceived Organizational Support: A Meta-Analytic Evaluation of Organizational Support Theory." *Journal of Management* 43(6):1854–84. doi: 10.1177/0149206315575554.
- Makumbe, William, and Yollanda Yeukai Washaya. 2022. "Organisational Culture and Innovation: Testing the Schein Model at a Private University in Zimbabwe." *Cogent Business & Management* 9(1):2150120. doi: 10.1080/23311975.2022.2150120.

- McAfee, Andrew, and Erik Brynjolfsson. 2017. *Machine, Platform, Crowd: Harnessing Our Digital Future*. WW Norton & Company.
- Memon, Mumtaz Ali, T. Ramayah, Jun-Hwa Cheah, Hiram Ting, Francis Chuah, and Tat Huei Cham. 2021. "PLS-SEM Statistical Programs: A Review." *Journal of Applied Structural Equation Modeling* 5(1):1–14.
- Mikalef, Patrick, Maria Boura, George Lekakos, and John Krogstie. 2019. "Big Data Analytics Capabilities and Innovation: The Mediating Role of Dynamic Capabilities and Moderating Effect of the Environment." *British Journal of Management* 30(2):272–98. doi: 10.1111/1467-8551.12343.
- Mikalef, Patrick, John Krogstie, Ilias O. Pappas, and Paul Pavlou. 2020. "Exploring the Relationship between Big Data Analytics Capability and Competitive Performance: The Mediating Roles of Dynamic and Operational Capabilities." *Information & Management* 57(2):103169. doi: 10.1016/j.im.2019.05.004.
- Nguyen, Hoai Nam, Quoc Hoi Le, Quang Bach Tran, Thi Hoang Mai Tran, Thi Hai Yen Nguyen, and Thi Thuy Quynh Nguyen. 2020. "The Impact of Organizational Commitment on Employee Motivation: A Study in Vietnamese Enterprises." *The Journal of Asian Finance, Economics and Business* 7(6):439–47.
- Nguyen, Ninh, Thac Dang-Van, Tan Vo-Thanh, Hai-Ninh Do, and Simon Pervan. 2024. "Digitalization Strategy Adoption: The Roles of Key Stakeholders, Big Data Organizational Culture, and Leader Commitment." *International Journal of Hospitality Management* 117:103643.
- Rasool, Samma Faiz, Mansi Wang, Minze Tang, Amir Saeed, and Javed Iqbal. 2021. "How Toxic Workplace Environment Effects the Employee Engagement: The Mediating Role of Organizational Support and Employee Wellbeing." *International Journal of Environmental Research and Public Health* 18(5):2294. doi: 10.3390/ijerph18052294.
- Rhoades, Linda, and Robert Eisenberger. 2002. "Perceived Organizational Support: A Review of the Literature." *Journal of Applied Psychology* 87(4):698.
- Robbins, Stephen, Timothy A. Judge, Bruce Millett, and Maree Boyle. 2013. *Organisational Behaviour*. Pearson Higher Education AU.
- Rodriguez, Joel, and Kelley Walters. 2017. "The Importance of Training and Development in Employee Performance and Evaluation." *World Wide Journal of Multidisciplinary Research and Development* 3(10):206–12.
- Sekaran, Uma, and Roger Bougie. 2016. "Research Methods for Business Seventh Edition."
- Shamim, Saqib, Jing Zeng, Syed Muhammad Shariq, and Zaheer Khan. 2019. "Role of Big Data Management in Enhancing Big Data Decision-Making Capability and Quality among Chinese Firms: A Dynamic Capabilities View." *Information & Management* 56(6):103135.
- Sivarajah, Uthayasankar, Muhammad Mustafa Kamal, Zahir Irani, and Vishanth Weerakkody. 2017. "Critical Analysis of Big Data Challenges and Analytical Methods." *Journal of Business Research* 70:263–86.

Zheng, Lili. 2017. "Does Online Perceived Risk Depend on Culture? Individualistic versus Collectivistic Culture." *Journal of Decision Systems* 26(3):256–74. doi: 10.1080/12460125.2017.1351861.