The Role of Talent Analytics in Strategic Workforce Planning: *Jurnal Ilmi*
Enhancing Organizational Resilience   *Ilmi Journal*
(Nor saidi Mohamed Nasir)   *Volume 13 2023: 211-225*

The Role of Talent Analytics in Strategic Workforce Planning:
Enhancing Organizational Resilience

Nor saidi Mohamed Nasir

Faculty of Innovation and Business Technology
University of Malacca, Malaysia

Corresponding Author's Email: dr.norsaidi@unimel.edu.my

ABSTRACT

In today's ever-changing and unpredictable business landscape, organizational resilience has become a cornerstone of success. To thrive in the face of disruptions and uncertainties, organizations must prioritize building a workforce that is agile, adaptable, and well-prepared. This article delves into the pivotal role of talent analytics in achieving this goal. We begin by defining organizational resilience and highlighting its paramount importance in contemporary business environments. We then explore the concept of talent analytics, which empowers organizations to harness the power of data in strategic workforce planning. Talent analytics not only enables data-driven decision-making but also plays a critical role in identifying essential skills, creating succession plans, and fostering workforce flexibility. Through real- world examples and case studies, we illustrate how talent analytics assists organizations in adapting to changing circumstances, optimizing resource allocation, and mitigating talent- related risks. We also examine how talent analytics supports scenario planning and the cultivation of employee well-being and diversity, both of which are integral components of a resilient organization. Furthermore, we stress that talent analytics is not a one-time endeavor but a continuous process of improvement. Organizations are encouraged to embrace talent analytics as a strategic imperative, as it equips them with the tools to navigate uncertainty proactively. By leveraging talent analytics, organizations can build resilient workforces capable of thriving amidst the unpredictable, ultimately ensuring long-term success in today's dynamic business world.

Keywords: Talent Analytics, Workforce Resilience, Strategic Workforce Planning

Introduction

The contemporary business landscape is undergoing rapid and transformative changes, marked by a series of challenges and disruptions that have reshaped the way organizations operate (Varshney, 2020). Digital transformation, driven by technological advancements, has revolutionized industries, while globalization has interconnected businesses across the globe. This interconnectedness has made supply chains more complex and exposed companies to global events that can have far-reaching impacts. Market uncertainty has become the new normal, with economic fluctuations, geopolitical tensions, and natural disasters frequently altering the business landscape (Alexander et al., 2022) . Additionally, shifting workforce dynamics and evolving customer expectations further contribute to the volatility of the

environment.

In light of these changes, the need for organizational resilience has never been more pronounced. Resilience has emerged as a critical imperative for organizations for several compelling reasons. Firstly, it is vital for survival and sustainability. Resilient organizations are better prepared to withstand and recover from disruptions, ensuring their long-term viability (Paul et al., 2023). Secondly, resilience provides a competitive edge. Organizations that can swiftly adapt to changing circumstances gain a distinct advantage over less agile competitors (Anning-Dorson & Nyamekye, 2020) . Thirdly, it is essential for business continuity. Resilience safeguards essential operations, allowing organizations to maintain revenue streams and uphold customer trust, even in the face of adversity (Vito et al., 2023). Furthermore, resilient workplaces are more appealing to employees, contributing to talent retention and recruitment efforts (Lu et al., 2023) . Finally, organizational resilience engenders confidence among stakeholders, including investors, customers, and partners, who are more likely to trust organizations that have demonstrated their ability to navigate uncertain terrain (Bolton et al., 2023).

Talent analytics represents a transformative approach to workforce management that harnesses the power of data and advanced analytics to inform strategic workforce planning (Chalutz Ben-Gal, 2019) . In today's rapidly evolving business landscape, organizations recognize that their most valuable asset is their talent pool (Kichuk et al., 2019) . Talent analytics involves the collection, analysis, and interpretation of data related to employees and their performance, allowing organizations to make data-driven decisions regarding recruitment, development, and deployment of their workforce (Ramachandran et al., 2023) . By leveraging talent analytics, organizations gain insights into critical aspects such as employee productivity, skills gaps, succession planning, and diversity and inclusion. These insights, in turn, enable them to align their human capital strategies with broader business objectives, enhance organizational agility, and ultimately achieve a competitive edge in an environment where talent is a key driver of success.

The purpose of this article is to delve into the transformative role of talent analytics in empowering organizations to construct resilient workforces capable of thriving in the face of evolving challenges and uncertainties. By examining the strategic integration of data-driven talent management into workforce planning, we aim to elucidate how talent analytics equips organizations with the tools to identify critical skills, create robust succession plans, and foster workforce adaptability. Through real-world examples and practical insights, we will illustrate how talent analytics not only enhances an organization's ability to adapt to change but also contributes to long-term sustainability and competitive advantage, ultimately forging a pathway towards organizational resilience in today's dynamic and unpredictable business landscape.

Understanding Organizational Resilience

Organizational resilience is the capacity of an organization to withstand and adapt to various internal and external shocks, challenges, and disruptions while maintaining its core functions and strategic objectives (Arun et al., 2023) . In today's dynamic business environment, characterized by rapid technological advancements, global interconnectivity, and frequent unforeseen events, organizational resilience has assumed paramount significance (Potrich et al., 2022). It serves as a strategic imperative for businesses to not only survive but also thrive in the face of adversity. The ability to swiftly respond and recover from disruptions, such as

economic downturns, supply chain interruptions, natural disasters, or cybersecurity threats, is

The Role of Talent Analytics in Strategic Workforce Planning: *Jurnal Ilmi*
Enhancing Organizational Resilience *Ilmi Journal*
(Nor saidi Mohamed Nasir) *Volume 13 2023: 211-225*

212

essential for maintaining business continuity and safeguarding reputation (Suresh et al., 2020). Furthermore, a resilient organization is better positioned to seize opportunities, adapt to changing market conditions, and remain competitive (Hu & Kee, 2022) . In essence, organizational resilience is no longer a desirable attribute but a critical necessity for navigating the uncertainties and complexities of the modern business landscape, ensuring an organization's long-term success and sustainability.

In today's rapidly evolving business landscape, organizations face a multitude of challenges and uncertainties that underscore the critical need for proactive strategies (Turgay & Aydin, 2023) . These challenges span various dimensions, including technological disruptions, economic volatility, geopolitical tensions, and environmental concerns (Doğan et al., 2023). Rapid technological advancements are reshaping industries and business models, requiring organizations to constantly adapt to stay competitive (Grabowska, 2020) . Globalization has interconnected economies and markets, exposing businesses to a web of global risks, such as trade tensions and supply chain disruptions (Lund et al., 2020) . Economic uncertainty is a constant threat, with recessions and financial crises impacting businesses across sectors. Geopolitical instability adds another layer of complexity, as political tensions and trade disputes can have profound consequences for organizations (Wang et al., 2022). Additionally, the increasing frequency and intensity of natural disasters, along with the growing recognition of climate change, pose operational and reputational risks. Cybersecurity threats in the digital age are ever-present, requiring organizations to invest in robust cybersecurity measures to protect sensitive data and operations. The transformation of the workforce, including the rise of remote work, multi-generational teams, and evolving skill requirements, necessitates agile talent management strategies. Furthermore, shifting customer expectations and regulatory changes compel organizations to continuously innovate and adapt their operations to meet evolving demands and stay compliant with evolving laws and regulations.

Proactive strategies are imperative because relying solely on reactive measures after disruptions occur can lead to substantial costs, reputational damage, and competitive disadvantages (Kim & Chae, 2022) . Therefore, organizations must take a forward-looking approach to navigate this complex landscape successfully. Such proactive approaches encompass various facets, including rigorous risk assessment to identify potential vulnerabilities and assess their impact (Xia et al., 2023) , scenario planning to prepare for a range of future outcomes (Dator, 2019), fostering a culture of innovation and adaptability to respond swiftly to changing conditions (Karneli, 2023), strategic talent management to ensure the workforce is equipped with the necessary skills and capabilities (Goh & Okumus, 2020), diversification of revenue streams and market presence to reduce dependency on single sources (Shih, 2020) , robust cybersecurity measures and testing incident response plans to protect against cyber threats (Jha, 2023) , and sustainability initiatives to address environmental concerns and enhance overall resilience (Negri et al., 2021).

In conclusion, the contemporary business environment is rife with challenges and uncertainties, making proactive strategies an imperative for organizational survival and growth. By adopting proactive approaches, organizations can not only mitigate risks but also seize opportunities, positioning themselves as agile and resilient entities capable of thriving amidst uncertainty. These strategies enable organizations to anticipate, prepare for, and respond effectively to disruptions, ultimately ensuring their long-term success and sustainability in a volatile and unpredictable business landscape.

The Role of Talent Analytics in Strategic Workforce Planning: *Jurnal Ilmi*
Enhancing Organizational Resilience   *Ilmi Journal*
(Nor saidi Mohamed Nasir)   *Volume 13 2023: 211-225*

A resilient workforce is the backbone of an organization's ability to thrive amidst adversity and uncertainty (Chhibber & Gupta, 2020) , and it significantly contributes to overall organizational resilience. Firstly, resilient employees possess the adaptability and agility needed to respond effectively to unexpected disruptions (Hadida & Odiase, 2024). They can readily embrace change, adjust to new working conditions, and remain productive under challenging circumstances, ensuring the organization's operations continue smoothly (Vahdat, 2022) . Secondly, resilient individuals tend to excel in problem-solving and critical thinking (Anastasopoulou et al., 2023). They can identify solutions to complex issues swiftly, enabling the organization to navigate obstacles with precision and minimize the impact of disruptions (Aguinis & Burgi-Tian, 2021). Moreover, their ability to manage stress and remain composed during crises ensures a more stable work environment, allowing for efficient decision-making and coordinated responses to challenges.

Furthermore, a resilient workforce fosters a culture of collaboration and effective teamwork (Stratone et al., 2022) . Employees who can work seamlessly together enhance the organization's capacity to tackle multifaceted problems that may arise. Their collective resilience contributes to an environment where everyone is committed to the organization's mission and prepared to go above and beyond to achieve common goals (Brimhall, 2019) . Additionally, resilient employees often exhibit strong leadership qualities, which are essential for guiding the organization through turbulent times (Kane et al., 2019) . They inspire confidence, provide stability, and motivate their peers, ensuring that the organization remains steadfast and focused on its objectives during adversity (Sonenshein & Nault, 2023) . In essence, a resilient workforce is an indispensable asset in fortifying an organization's ability to withstand, adapt to, and recover from disruptions, thereby strengthening its overall organizational resilience.

The Power of Talent Analytics

Talent analytics is a systematic approach to leveraging data related to an organization's workforce, aiming to make data-driven decisions that enhance talent management and overall business performance (Conte & Siano, 2023) . This process involves the collection of data from various sources, including HR records, performance evaluations, surveys, and external market data (Mohammed, 2019). Subsequently, this data is subjected to rigorous analysis to extract valuable insights and trends. Talent analytics helps organizations predict future workforce-related outcomes, such as turnover rates or skill shortages, by utilizing historical data and predictive modelling (Fernandez & Gallardo-Gallardo, 2021). These insights support informed decision-making, particularly in talent acquisition, development, compensation, and workforce planning (Mai et al., 2023) . By aligning talent strategies with broader organizational goals, talent analytics plays a pivotal role in shaping a company's strategic workforce planning and continuous improvement efforts (Armstrong, 2020). Additionally, it helps organizations address diversity and inclusion challenges, ultimately contributing to a more effective and resilient workforce capable of thriving in a dynamic business landscape (Kareska, 2023).

Talent analytics relies on a diverse array of data sources to provide comprehensive insights into an organization's workforce (Mohammed, 2019) . These sources encompass a wide spectrum of information, including HR records, employee surveys, market data, and more. HR records serve as a foundational source, offering essential data on employee demographics, roles, tenure, and performance metrics. Employee surveys provide valuable subjective data,

shedding light on engagement levels, job satisfaction, and perceptions of organizational culture. Market data offers external context, enabling organizations to benchmark their talent strategies against industry standards and market trends. Additionally, other data sources may include performance appraisals, training records, compensation data, and even data from social media platforms for assessing employer branding and recruitment efforts. By amalgamating insights from these diverse data sources, talent analytics empowers organizations to make more informed decisions, develop tailored talent strategies, and enhance overall workforce management, thereby fostering resilience and adaptability in today's competitive business environment (Batool et al., 2023).

The evolution of talent analytics represents a transformative journey in the realms of HR and business strategy (Larsson & Edwards, 2022). Initially, HR departments primarily focused on record-keeping and administrative functions (Al Haziazi, 2019) . However, as organizations recognized the strategic significance of their workforce, they began to delve deeper into data analysis. The early stages of talent analytics involved basic reporting and metrics, primarily centered around employee headcounts, turnover rates, and basic performance indicators (McCartney & Fu, 2023) . Over time, talent analytics evolved into a more sophisticated discipline, driven by advancements in data science and technology (Sheng et al., 2021) . Organizations started harnessing more complex data sets, incorporating predictive and prescriptive analytics. Managing voluntary employee turnover with HR analytics. Prescriptive analytics then provided actionable recommendations to optimize HR and business strategies based on data-driven insights (Sarker, 2021).

Leveraging Talent Analytics for Resilience

Talent analytics serves as a potent catalyst for data-driven decision-making in workforce planning by leveraging data to enhance the precision, objectivity, and effectiveness of HR strategies (Khan & Millner, 2023) . It begins with the collection and analysis of a diverse range of workforce-related data, including employee demographics, performance metrics, skill sets, and historical trends. This data forms the basis for identifying critical talent insights that inform key HR decisions. For example, organizations can use talent analytics to pinpoint skill gaps within the workforce, allowing them to proactively address training and development needs.

Furthermore, talent analytics facilitates evidence-based recruitment and talent acquisition processes (Ali & Elias, 2023) . It helps organizations identify the most effective sourcing channels, predict candidate success, and assess the return on investment of various recruitment strategies (McCartney & Fu, 2022b). This enables HR teams to allocate resources efficiently and improve the quality of their hires. Talent analytics also aids in optimizing workforce deployment and succession planning. By assessing employee performance, potential, and career aspirations, organizations can identify high-potential individuals and tailor succession plans accordingly (Scully et al., 2020). This data-driven approach minimizes talent shortages and ensures a smoother transition of key roles, bolstering organizational resilience.

Overall, talent analytics empowers organizations to make informed decisions at every stage of workforce planning, ensuring that HR strategies are aligned with broader business objectives and poised to navigate the complexities of today's dynamic business landscape with agility and precision (Falletta & Combs, 2021) . Organizations can leverage talent

analytics as a powerful tool to identify critical skills and competencies essential for their sustained success (Shet et al., 2021) . Talent analytics mines diverse data sources, including employee performance records, training histories, and market trends, to unearth insights into the specific skills and competencies that drive exceptional performance and align with the company's strategic objectives.

By analyzing historical data, talent analytics can identify correlations between certain skills and high-performance outcomes (Gurusinghe et al., 2021) . For example, it can reveal that employees with proficiency in data analytics tend to achieve better sales results or that project managers with strong communication skills consistently deliver projects on time and within budget. These findings enable organizations to pinpoint the precise skills that directly impact their bottom line. Moreover, talent analytics allows organizations to forecast future skill needs by analyzing market trends, technological advancements, and industry shifts (Chalutz Ben-Gal, 2019). For instance, it can predict the rising demand for cybersecurity expertise in response to increasing cyber threats or the growing importance of data science skills in the age of big data. Armed with this foresight, organizations can proactively invest in talent development, recruitment, or training programs to ensure they have the right skills and competencies to remain competitive.

Talent analytics plays a pivotal role in creating robust succession plans by providing organizations with data-driven insights into their workforce's capabilities, potential, and readiness for leadership roles (Kareska, 2023) . Through the analysis of employee performance, skills, and career trajectories, talent analytics identifies high-potential individuals within the organization. These insights allow HR and leadership teams to nurture and develop these future leaders through targeted training and development programs. Furthermore, talent analytics assesses the alignment between individual employee competencies and the specific skills and traits required for key leadership positions (Nocker & Sena, 2019) . By comparing current talent profiles with the skill sets demanded by future leadership roles, organizations can identify skills gaps and proactively address them, either through internal development or external recruitment. Additionally, talent analytics evaluates historical succession planning efforts, identifying what has worked and where improvements are needed (McCartney & Fu, 2022a). It provides a continuous feedback loop for succession planning strategies, enabling organizations to refine and adapt their plans based on past outcomes and current workforce data.

Ultimately, talent analytics enhances the effectiveness and precision of succession planning, ensuring that organizations have a pipeline of qualified and well-prepared individuals to step into critical leadership positions when needed (Sousa et al., 2019). This strategic approach to talent management enhances organizational resilience by minimizing leadership vacuums and enabling a smooth transition of responsibilities, even in the face of unexpected changes or disruptions.

Adapting to Changing Circumstances

Workforce flexibility is paramount in today's rapidly changing business landscape, where uncertainties and disruptions are the norm rather than the exception (Rimita & Hoon, 2019). The ability to adapt to shifting conditions, deploy talent strategically, and respond swiftly to evolving market demands is crucial for organizational resilience and competitiveness (Promise-Elechi & Onuoha, 2023) . Talent analytics serves as the linchpin in achieving

workforce flexibility by providing organizations with the insights needed to make informed decisions about their talent. Talent analytics enables organizations to identify not only current skill sets but also potential skill gaps and surpluses within the workforce (Sivathanu & Pillai, 2020) . By analyzing data related to employee skills, competencies, and career aspirations, organizations can strategically allocate resources to upskill or reskill employees, ensuring that the workforce remains adaptable and aligned with the organization's evolving needs. Moreover, talent analytics aids in creating agile workforce planning strategies (McCartney & Fu, 2022a), allowing organizations to quickly adjust staffing levels, roles, and responsibilities in response to changing market conditions or unforeseen disruptions.

Additionally, talent analytics assists in identifying flexible work arrangements and scheduling options that meet both employee preferences and business requirements (Subramanian & Suresh, 2022). By analyzing data on employee preferences, work patterns, and performance, organizations can develop more accommodating work schedules, such as remote work or flexible hours, that contribute to higher job satisfaction and retention rates. Talent analytics evaluates the performance and productivity of employees engaged in flexible work (Giermindl et al., 2022) . It tracks key performance indicators, project completion rates, and other relevant metrics to gauge the impact of flexible arrangements on productivity. This data-driven approach allows organizations to identify best practices and refine their flexible work policies to maximize productivity.

Several organizations have demonstrated the power of talent analytics in adapting to unforeseen challenges (Polzer, 2022) . For instance, during the COVID-19 pandemic, companies like Microsoft relied heavily on talent analytics to swiftly transition to remote work and adapt their workforce strategies (Zahoor et al., 2022). In the retail sector, Walmart used talent analytics to address a surge in demand for online shopping during the pandemic (Kale et al., 2022). By analyzing workforce data, they optimized staff scheduling to meet e-commerce demand while maintaining social distancing protocols in physical stores. This data-driven approach allowed Walmart to navigate the sudden shift in customer behavior seamlessly. Another notable example is IBM, which leveraged talent analytics to tackle the challenge of skills gaps in emerging technologies like artificial intelligence and cloud computing (Biswas et al., 2023). By analyzing internal data on employee skills and mapping them to the evolving tech landscape, IBM identified skill deficiencies and developed targeted training programs. This proactive approach not only filled crucial skill gaps but also enabled IBM to stay at the forefront of the technology industry. These real-world examples illustrate how talent analytics empowers organizations to adapt swiftly to unforeseen challenges, optimizing workforce strategies and resource allocation in response to rapidly changing circumstances.

Cost Management and Risk Mitigation

Talent analytics serves as a strategic compass for organizations in optimizing resource allocation for talent development (Nikpour & Semushkina, 2021). By harnessing data-driven insights, organizations can make informed decisions about where to invest their resources most effectively. Firstly, talent analytics identifies high-potential employees and skill gaps within the workforce (Bandari, 2019). It assesses individual performance, career trajectories, and skills data to pinpoint individuals with the greatest potential to drive the organization's success. This information guides resource allocation by focusing development efforts on those who will yield the highest returns. Secondly, talent analytics assesses the effectiveness

The Role of Talent Analytics in Strategic Workforce Planning: *Jurnal Ilmi*
Enhancing Organizational Resilience   *Ilmi Journal*
(Nor saidi Mohamed Nasir)   *Volume 13 2023: 211-225*

of various training and development programs (Bag et al., 2020). By tracking metrics such as training completion rates, skill acquisition, and on-the-job application of newly acquired skills, organizations can identify which programs deliver the most significant impact. This data-driven approach ensures that resources are allocated to initiatives that yield tangible results in talent development. Additionally, talent analytics supports personalized development plans (Huang et al., 2023). It tailors learning paths to individual employee needs, optimizing resource allocation by ensuring that training and development efforts are directly aligned with each employee's career goals and skill enhancement requirements. Furthermore, talent analytics assists in workforce planning by identifying areas where external talent acquisition may be necessary (Gurusinghe et al., 2021) . If skill gaps cannot be sufficiently addressed through internal development, organizations can allocate resources towards strategic recruitment efforts to fill those gaps efficiently.

Talent analytics plays a crucial role in identifying and addressing talent-related risks within an organization. By analyzing a wide range of workforce data, it can pinpoint potential risks and provide insights that enable proactive mitigation strategies. Talent analytics can identify turnover risks (Nocker & Sena, 2019) , by assessing historical turnover rates, analyzing employee engagement data, and considering external market factors, organizations can predict which teams or departments may be at higher risk of losing valuable talent. Armed with this information, they can take preventive actions such as targeted retention efforts, skill development programs, or adjustments to compensation packages. Talent analytics assesses performance-related risks (Kiran et al., 2023) . By analyzing employee performance metrics and identifying patterns of underperformance or skills gaps, organizations can intervene early to address these issues through targeted training, coaching, or skill enhancement initiatives. This proactive approach reduces the risk of decreased productivity and missed business objectives.

Moreover, talent analytics helps in succession planning, a critical aspect of risk management (Mohammed, 2019) . By identifying high-potential individuals and assessing their readiness for key roles, organizations can mitigate the risk of leadership vacuums in critical positions due to unexpected departures or retirements. In summary, talent analytics serves as an invaluable risk management tool by leveraging data to identify potential talent-related risks. This data-driven approach empowers organizations to take proactive measures to mitigate these risks, ensuring a more stable and resilient workforce capable of thriving in a complex and dynamic business environment.

Several case studies illustrate the cost-effective talent strategies made possible through the application of analytics. Google's HR team embarked on Project Oxygen to identify the most critical attributes of effective managers within the company (Song et al., 2020) . Through talent analytics, they analyzed performance reviews, feedback surveys, and other HR data. The result was a list of eight key behaviors that effective managers consistently exhibited. By implementing targeted training and development programs based on these findings, Google improved manager quality while minimizing costs, ultimately leading to increased employee satisfaction and retention. IBM faced the challenge of addressing skill gaps in its workforce to remain competitive in the tech industry. Using talent analytics, they analyzed data on employee skills, performance, and career aspirations (Cho et al., 2023). This allowed them to identify specific skill deficiencies and develop internal training programs rather than resorting to costly external hires. By upskilling their existing workforce, IBM saved substantial recruitment costs while ensuring they had the required talent to stay at the forefront of the industry.

The Role of Talent Analytics in Strategic Workforce Planning: *Jurnal Ilmi*
Enhancing Organizational Resilience   *Ilmi Journal*
(Nor saidi Mohamed Nasir)   *Volume 13 2023: 211-225*

The Royal Bank of Scotland (RBS) leveraged talent analytics to address a high turnover rate among their call center employees. By analyzing exit interview data, they identified key factors contributing to attrition (Bashir & Wani, 2021) . RBS then implemented targeted interventions, including changes to work schedules and additional training, to address these issues. The result was a significant reduction in turnover, leading to substantial cost savings associated with recruitment and onboarding of new employees. These case studies demonstrate that talent analytics can be a cost-effective means of improving talent strategies, whether it's enhancing management quality, addressing skill gaps, or reducing turnover. By leveraging data-driven insights, organizations can make targeted investments in their workforce, optimizing their talent pool while minimizing unnecessary expenses.

Scenario Planning for Uncertainty

Talent analytics serves as a valuable tool for scenario planning, enabling organizations to prepare for a range of future workforce-related scenarios. By analyzing historical data and trends, organizations can anticipate potential challenges and opportunities and develop strategies to address them effectively. Firstly, talent analytics can assess workforce demographics and employee turnover rates to model various scenarios related to labor shortages or surpluses (Singh et al., 2022) . For example, organizations can use data to estimate the impact of an aging workforce or the implications of a sudden surge in retirements, allowing them to plan recruitment, training, and succession strategies accordingly. Secondly, talent analytics can help organizations forecast skill and competency needs based on market trends and technological advancements (Khang et al., 2023) . By analyzing data on emerging skills and industry shifts, organizations can align their talent development and acquisition efforts with the evolving demands of their industry.

Additionally, talent analytics can support scenario planning for remote work and flexible work arrangements (de Lucas Ancillo et al., 2023) . By assessing employee preferences and performance data, organizations can model scenarios related to the adoption of remote work, hybrid models, or flexible scheduling, optimizing workforce strategies for a variety of scenarios. In summary, talent analytics empowers organizations to conduct scenario planning by providing data-driven insights into various workforce-related possibilities. This enables organizations to proactively design strategies and allocate resources to navigate future challenges and opportunities effectively, ultimately enhancing their resilience and adaptability in an ever-changing business landscape.

Employee Well-being and Diversity

The link between employee engagement, well-being, and organizational resilience is a fundamental one, as these factors collectively contribute to an organization's ability to navigate challenges, adapt to change, and thrive in a dynamic business environment (Yu et al., 2022) . Employee engagement is the emotional commitment employees have towards their organization, where they feel motivated, invested, and aligned with the company's goals (Chanana & Sangeeta, 2021) . Engaged employees are more likely to exhibit resilience by maintaining their commitment, creativity, and productivity even in the face of adversity. Their dedication to the organization can act as a stabilizing force during turbulent times, helping the company weather storms and maintain its competitive edge.

The Role of Talent Analytics in Strategic Workforce Planning: *Jurnal Ilmi*
Enhancing Organizational Resilience   *Ilmi Journal*
(Nor saidi Mohamed Nasir)   *Volume 13 2023: 211-225*

Employee well-being, on the other hand, encompasses physical, mental, and emotional health, and it is closely intertwined with engagement (Mulang, 2022) . Organizations that prioritize employee well-being not only foster a healthier and happier workforce but also boost resilience. Employees who feel supported in their well-being are better equipped to handle stress, uncertainty, and change, reducing the negative impact of these factors on their performance and overall resilience. Moreover, a culture of well-being can enhance organizational agility by promoting adaptability and innovation (Junianti & Rony, 2023) . Organizational resilience, in this context, is the capacity of an organization to anticipate, respond to, and recover from disruptions effectively. Engaged and well-supported employees are pivotal to this capacity. Their commitment, positive attitude, and well-being serve as the foundation upon which the organization can build its resilience. They are more likely to collaborate, problem-solve, and contribute their best efforts during challenging times, making the organization more adaptable and responsive.

Talent analytics plays a crucial role in monitoring and enhancing employee engagement by providing organizations with data-driven insights into the factors that influence engagement levels and the effectiveness of engagement initiatives. Through the analysis of various workforce data, talent analytics enables organizations to take a more proactive and targeted approach to employee engagement strategies (Falletta & Combs, 2021) . Talent analytics is not a one-time event but an ongoing and dynamic process within organizations (Shet et al., 2021) . It involves a continuous cycle of data collection, analysis, and decision-making that adapts to changing workforce needs and business conditions. As the business landscape evolves, so do the talent requirements and challenges.

Consequently, organizations must continually gather and assess workforce data to remain agile and competitive. The use of descriptive analytics is prevalent among firms grappling with data quality and integration challenges. Many of these companies may showcase enhanced efficiency and effectiveness in their HR processes with the utilization of predictive analytics. The current problem pertains to the analytical capacity of human resources personnel. Further study is required to fully explore the subject matter. However, the firms included in the authors' sample have provided noteworthy instances of reciprocal benefits derived from HR analytics (Cayrat & Boxall, 2022).

Conclusion

Throughout the article, the central theme revolves around the critical role of talent analytics in enhancing organizational resilience within a rapidly changing business landscape. It begins by acknowledging the evolving and unpredictable nature of the business environment, emphasizing the imperative need for resilience. Talent analytics takes center stage as the article introduces its significance in strategic workforce planning, empowering organizations to proactively address talent-related challenges. Organizational resilience, defined as an entity's capacity to adapt and thrive amidst uncertainties, emerges as a key strategic objective. The article underscores the challenges and uncertainties organizations face, underscoring the necessity for data-driven strategies. It delves into the evolution of talent analytics, highlighting its transformation from a supportive function to a strategic necessity. The article explores how talent analytics enables evidence-based decision-making, aids in identifying critical skills, supports succession planning, and facilitates workforce flexibility. It also underscores the vital link between diversity, inclusion, and organizational resilience,

The Role of Talent Analytics in Strategic Workforce Planning: *Jurnal Ilmi*
Enhancing Organizational Resilience   *Ilmi Journal*
(Nor saidi Mohamed Nasir)   *Volume 13 2023: 211-225*

demonstrating how data-driven insights can enhance these aspects. In summary, talent analytics emerges as a powerful tool for organizations, enabling them to adapt, thrive, and remain resilient in the face of dynamic and unpredictable business conditions.

References

Aguinis, H., & Burgi-Tian, J. (2021). Talent management challenges during COVID-19 and beyond: Performance management to the rescue. *BRQ Business Research Quarterly*, *24*(3), 233–240. https://doi.org/10.1177/23409444211009528

Al Haziazi, M. (2019). Implementing e-Human Resource Management for Improving Organizational Performance: A Conceptual Framework in the Oman Context. *European Conference on Management, Leadership & Governance*, 11–16.

Alexander, A., Blome, C., Schleper, M. C., & Roscoe, S. (2022). "Managing the 'new normal': the future of operations and supply chain management in unprecedented times." *International Journal of Operations & Production Management*, *42*(8), 1061–1076. https://doi.org/10.1108/IJOPM-06-2022-0367

Ali, E., & Elias, H. (2023). Potential Application of HR Analytics to Talent Management in the Public Sector: a Literature Review. *2023 International Conference On Cyber Management And Engineering (CyMaEn)*, 8–11. https://doi.org/10.1109/CyMaEn57228.2023.10051107

Anastasopoulou, A., Vraimaki, E., & Trivellas, P. (2023). Recovery for Resilience: The Mediating Role of Work–Life Balance on the Quality of Life of Women Employees. *Sustainability*, *15*(17), 12877.

Anning-Dorson, T., & Nyamekye, M. B. (2020). Be flexible: turning innovativeness into competitive advantage in hospitality firms. *International Journal of Contemporary Hospitality Management*, *32*(2), 605–624. https://doi.org/10.1108/IJCHM-12-2018-1014

Armstrong, M. (2020). *Armstrong's Handbook of Strategic Human Resource Management: Improve Business Performance Through Strategic People Management*. Kogan Page Publishers.

Arun, K., Okun, O., & Edinsel, S. (2023). Strategic Adaptive Responses to Energy Crises From an Organizational Resilience Perspective. In *Optimizing Energy Efficiency During a Global Energy Crisis* (pp. 213–238). IGI Global.

Bag, S., Wood, L. C., Xu, L., Dhamija, P., & Kayikci, Y. (2020). Big data analytics as an operational excellence approach to enhance sustainable supply chain performance. *Resources, Conservation and Recycling*, *153*, 104559. https://doi.org/https://doi.org/10.1016/j.resconrec.2019.104559

Bandari, V. (2019). Exploring the Transformational Potential of Emerging Technologies in Human Resource Analytics: A Comparative Study of the Applications of IoT, AI, and Cloud Computing. *Journal of Humanities and Applied Science Research*, *2*(1), 15–27. https://journals.sagescience.org/index.php/JHASR/article/view/41

Bashir, J., & Wani, T. A. (2021). Inventive Investment Using Bigdata: Tools, Applicability and Challenges Associated. In S. Patnaik, K. Tajeddini, & V. Jain (Eds.), *Computational Management: Applications of Computational Intelligence in Business Management* (pp. 599– 627). Springer International Publishing. https://doi.org/10.1007/978-3-030-72929-5_29

Batool, M., Nadim, M., Saeed, A. F., Wadood, F., Quresh, M., & Pucelj, M. (2023). HUMAN RESOURCE STRATEGY: ENHANCING ORGANIZATIONAL PERFORMANCE THROUGH EFFECTIVE HRM. *PalArch's Journal of Archaeology of Egypt/Egyptology*,

The Role of Talent Analytics in Strategic Workforce Planning: Jurnal Ilmi
Enhancing Organizational Resilience   *Ilmi Journal*
(Nor saidi Mohamed Nasir)   Volume 13 2023: 211-225

20(2), 1556–1573.

Biswas, K., Bhardwaj, S., & Zaman, S. (2023). 12. How HR analytics can leverage big data to minimise employees' exploitation and promote their welfare for sustainable competitive advantage. *Handbook of Big Data Research Methods: 0*, 179.

Bolton, D., Habib, M., & Landells, T. (2023). Resilience, Dynamism and Sustainable Development: Adaptive Organisational Capability Through Learning in Recurrent Crises. In

S. Seifi & D. Crowther (Eds.), *Corporate Resilience* (Vol. 21, pp. 3–32). Emerald Publishing Limited. https://doi.org/10.1108/S2043-052320230000021001

Brimhall, K. C. (2019). Inclusion and commitment as key pathways between leadership and nonprofit performance. *Nonprofit Management and Leadership*, *30*(1), 31–49. https://doi.org/https://doi.org/10.1002/nml.21368

Cayrat, C., & Boxall, P. (2022). Exploring the phenomenon of HR analytics: a study of challenges, risks and impacts in 40 large companies. *Journal of Organizational Effectiveness: People and Performance*, *9*(4), 572–590. https://doi.org/10.1108/JOEPP-08-2021-0238

Chalutz Ben-Gal, H. (2019). An ROI-based review of HR analytics: practical implementation tools. *Personnel Review*, *48*(6), 1429–1448. https://doi.org/10.1108/PR-11-2017-0362

Chanana, N., & Sangeeta. (2021). Employee engagement practices during COVID-19 lockdown.

Journal of Public Affairs, *21*(4), e2508. https://doi.org/https://doi.org/10.1002/pa.2508
Chhibber, V., & Gupta, M. (2020). *Resilience in Leadership Styles amidst COVID Pandemic*.

Cho, W., Choi, S., & Choi, H. (2023). Human Resources Analytics for Public Personnel Management: Concepts, Cases, and Caveats. *Administrative Sciences*, *13*(2), 41.

Conte, F., & Siano, A. (2023). Data-driven human resource and data-driven talent management in internal and recruitment communication strategies: an empirical survey on Italian firms and insights for European context. *Corporate Communications: An International Journal*, *28*(4), 618–637. https://doi.org/10.1108/CCIJ-02-2022-0012

Dator, J. (2019). Alternative Futures at the Manoa School. In J. Dator (Ed.), *Jim Dator: A Noticer in Time: Selected work, 1967-2018* (pp. 37–54). Springer International Publishing. https://doi.org/10.1007/978-3-030-17387-6_5

de Lucas Ancillo, A., Gavrila Gavrila, S., & del Val Núñez, M. T. (2023). Workplace change within the COVID-19 context: The new (next) normal. *Technological Forecasting and Social Change*, *194*, 122673. https://doi.org/https://doi.org/10.1016/j.techfore.2023.122673

Doğan, B., Ghosh, S., Tiwari, A. K., & Abakah, E. J. A. (2023). The effect of global volatility, uncertainty and geopolitical risk factors on international tourist arrivals in Asia. *International Journal of Tourism Research*, *25*(1), 1–62. https://doi.org/https://doi.org/10.1002/jtr.2550

Falletta, S. V, & Combs, W. L. (2021). The HR analytics cycle: a seven-step process for building evidence-based and ethical HR analytics capabilities. *Journal of Work-Applied Management*, *13*(1), 51–68. https://doi.org/10.1108/JWAM-03-2020-0020

Fernandez, V., & Gallardo-Gallardo, E. (2021). Tackling the HR digitalization challenge: key factors and barriers to HR analytics adoption. *Competitiveness Review: An International Business Journal*, *31*(1), 162–187. https://doi.org/10.1108/CR-12-2019-0163

Giermindl, L. M., Strich, F., Christ, O., Leicht-Deobald, U., & Redzepi, A. (2022). The dark sides of people analytics: reviewing the perils for organisations and employees.

The Role of Talent Analytics in Strategic Workforce Planning:
Enhancing Organizational Resilience
(Nor saidi Mohamed Nasir)

Jurnal Ilmi
Ilmi Journal
Volume 13 2023: 211-225

European Journal of Information Systems, *31*(3), 410–435. https://doi.org/10.1080/0960085X.2021.1927213

Goh, E., & Okumus, F. (2020). Avoiding the hospitality workforce bubble: Strategies to attract and retain generation Z talent in the hospitality workforce. *Tourism Management Perspectives*, *33*, 100603. https://doi.org/https://doi.org/10.1016/j.tmp.2019.100603

Grabowska, S. (2020). Changes in the social architecture of business model in the perspective of the Industry 4.0 concept. *Management*, *24*(1), 130–142.

Gurusinghe, R. N., Arachchige, B. J. H., & Dayarathna, D. (2021). Predictive HR analytics and talent management: a conceptual framework. *Journal of Management Analytics*, *8*(2), 195–

221. https://doi.org/10.1080/23270012.2021.1899857

Hadida, A. L., & Odiase, N. O. (2024). Agility and improvisation. *The Routledge Companion to Improvisation in Organizations*, 367–388.

Hu, M. K., & Kee, D. M. H. (2022). Fostering sustainability: reinventing SME strategy in the new normal. *Foresight*, *24*(3/4), 301–318. https://doi.org/10.1108/FS-03-2021-0080

Huang, X., Yang, F., Zheng, J., Feng, C., & Zhang, L. (2023). Personalized human resource management via HR analytics and artificial intelligence: Theory and implications. *Asia Pacific Management Review*. https://doi.org/https://doi.org/10.1016/j.apmrv.2023.04.004

Jha, R. K. (2023). Cybersecurity and Confidentiality in Smart Grid for Enhancing Sustainability and Reliability. *Recent Research Reviews Journal*, *2*(2), 215–241.

Junianti, E., & Rony, Z. T. (2023). Implementation Employee Well-Being: Analysis Leadership Agility, Workload Analysis, Organizational Culture, and Career Adaptability. *International Journal of Business and Applied Economics*, *2*(4), 557–568. https://doi.org/10.55927/ijbae.v2i4.5192

Kale, H., Aher, D., & Anute, N. (2022). HR Analytics and its Impact on Organizations Performance. *International Journal of Research and Analytical Reviews*, *9*(3), 619–630.

Kane, G. C., Phillips, A. N., Copulsky, J., & Andrus, G. (2019). How digital leadership is (n't) different. *MIT Sloan Management Review*, *60*(3), 34–39.

Kareska, K. (2023). Human resource management strategies for achieving competitive advantage of organizations. *Available at SSRN 4514970*.

Karneli, O. (2023). The Role of Adhocratic Leadership in Facing the Changing Business Environment. *Journal of Contemporary Administration and Management (ADMAN)*, *1*(2), 77–83. https://doi.org/10.61100/adman.v1i2.26

Khan, N., & Millner, D. (2023). *Introduction to people analytics: a practical guide to data-driven HR*. Kogan Page Publishers.

Khang, A., Jadhav, B., & Birajdar, S. (2023). Industry Revolution 4.0: Workforce Competency Models and Designs. In *Designing Workforce Management Systems for Industry 4.0* (pp. 11– 34). CRC Press.

Kichuk, A., Brown, L., & Ladkin, A. (2019). Talent pool exclusion: the hotel employee perspective. *International Journal of Contemporary Hospitality Management*, *31*(10), 3970– 3991. https://doi.org/10.1108/IJCHM-10-2018-0814

Kim, S., & Chae, S. (2022). Shareholder Value Effects of Ethical Sourcing: Comparing Reactive and Proactive Initiatives. *Journal of Business Ethics*, *179*(3), 887–906. https://doi.org/10.1007/s10551-021-04841-0

Kiran, P. R., Chaubey, A., & Shastri, R. K. (2023). Role of HR analytics and attrition on organisational performance: a literature review leveraging the SCM-TBFO framework. *Benchmarking: An International Journal*, *ahead-of-print*(ahead-of-print). https://doi.org/10.1108/BIJ-06-2023-0412

Larsson, A.-S., & Edwards, M. R. (2022). Insider econometrics meets people analytics and strategic human resource management. *The International Journal of Human Resource Management*, *33*(12), 2373–2419. https://doi.org/10.1080/09585192.2020.1847166

Lu, Y., Zhang, M. M., Yang, M. M., & Wang, Y. (2023). Sustainable human resource management practices, employee resilience, and employee outcomes: Toward common good values. *Human Resource Management*, *62*(3), 331–353. https://doi.org/https://doi.org/10.1002/hrm.22153

Lund, S., Manyika, J., Woetzel, J., Barriball, E., & Krishnan, M. (2020). *Risk, resilience, and rebalancing in global value chains*.

Mai, N. K., Do, T. T., & Le, T. D. (2023). Fostering organisational high performance through leadership and organisational learning: evidence from tourism firms in Vietnam. *Journal for International Business and Entrepreneurship Development*, *15*(1). https://doi.org/10.1504/JIBED.2023.131447

McCartney, S., & Fu, N. (2022a). Bridging the gap: why, how and when HR analytics can impact organizational performance. *Management Decision*, *60*(13), 25–47. https://doi.org/10.1108/MD-12-2020-1581

McCartney, S., & Fu, N. (2022b). Promise versus reality: a systematic review of the ongoing debates in people analytics. *Journal of Organizational Effectiveness: People and Performance*, *9*(2), 281–311. https://doi.org/10.1108/JOEPP-01-2021-0013

McCartney, S., & Fu, N. (2023). Enacting people analytics: Exploring the direct and complementary effects of analytical and storytelling skills. *Human Resource Management*, *n/a*(n/a). https://doi.org/https://doi.org/10.1002/hrm.22194
Mohammed, D. A. Q. (2019). HR analytics: a modern tool in HR for predictive decision making.
Journal of Management, *6*(3).

Mulang, H. (2022). Analysis of The Effect of Organizational Justice, Worklife Balance on Employee Engagement and Turnover Intention. *Golden Ratio of Human Resource Management*, *2*(2), 86–97.

Negri, M., Cagno, E., Colicchia, C., & Sarkis, J. (2021). Integrating sustainability and resilience in the supply chain: A systematic literature review and a research agenda. *Business Strategy and the Environment*, *30*(7), 2858–2886. https://doi.org/https://doi.org/10.1002/bse.2776

Nikpour, A., & Semushkina, S. (2021). Digital shifts in human resource management in the global economy. *BRICS Journal of Economics*, *2*(3), 70–82.

Nocker, M., & Sena, V. (2019). Big data and human resources management: The rise of talent analytics. *Social Sciences*, *8*(10), 273.

Paul, S. K., Moktadir, Md. A., & Ahsan, K. (2023). Key supply chain strategies for the post-COVID-19 era: implications for resilience and sustainability. *The International Journal of Logistics Management*, *34*(4), 1165–1187. https://doi.org/10.1108/IJLM-04-2021-0238
Polzer, J. T. (2022). The rise of people analytics and the future of organizational research.
Research in Organizational Behavior, *42*, 100181. https://doi.org/https://doi.org/10.1016/j.riob.2023.100181

Potrich, L. N., Selig, P. M., Matos, F., & Giugliani, E. (2022). Organisational Resilience in the Digital Age: Management Strategies and Practices. In F. Matos, P. M. Selig, & E. Henriqson (Eds.), *Resilience in a Digital Age: Global Challenges in Organisations and Society* (pp. 59– 70). Springer International Publishing. https://doi.org/10.1007/978-3-030-85954-1_5

Promise-Elechi, K. C., & Onuoha, B. C. (2023). Talent Development and Firm Resilience of

The Role of Talent Analytics in Strategic Workforce Planning: *Jurnal Ilmi*
Enhancing Organizational Resilience   *Ilmi Journal*
(Nor saidi Mohamed Nasir)   *Volume 13 2023: 211-225*

Hotels in Port Harcourt, Nigeria. *Research Journal of Management Practice| ISSN*, *2782*, 7674.

Ramachandran, R., Babu, V., & Murugesan, V. P. (2023). Human resource analytics revisited: a systematic literature review of its adoption, global acceptance and implementation. *Benchmarking: An International Journal*, *ahead-of-print*(ahead-of-print). https://doi.org/10.1108/BIJ-04-2022-0272

Rimita, K. N., & Hoon, S. (2019). Leader Readiness in a Volatile, Uncertain, Complex, and Ambiguous (VUCA) Business Environment. In *ProQuest Dissertations and Theses*. https://vpn.utm.my/dissertations-theses/leader-readiness-volatile-uncertain-complex/docview/2309839051/se-2?accountid=41678

Sarker, I. H. (2021). Data Science and Analytics: An Overview from Data-Driven Smart Computing, Decision-Making and Applications Perspective. *SN Computer Science*, *2*(5), 377. https://doi.org/10.1007/s42979-021-00765-8

Scully, J., Crawshaw, J., Fullard, A., Gregson, M., Clegg, B., & Turner, P. (2020). Workforce (Artificial) Intelligence Planning. In *Human Resource Management: Strategic and International Perspectives* (pp. 170–197). SAGE.

Sheng, J., Amankwah-Amoah, J., Khan, Z., & Wang, X. (2021). COVID-19 Pandemic in the New Era of Big Data Analytics: Methodological Innovations and Future Research Directions. *British Journal of Management*, *32*(4), 1164–1183. https://doi.org/https://doi.org/10.1111/1467-8551.12441

Shet, Sateesh. V., Poddar, T., Wamba Samuel, F., & Dwivedi, Y. K. (2021). Examining the determinants of successful adoption of data analytics in human resource management – A framework for implications. *Journal of Business Research*, *131*, 311–326. https://doi.org/https://doi.org/10.1016/j.jbusres.2021.03.054

Shih, W. C. (2020). Global supply chains in a post-pandemic world. *Harvard Business Review*, *98*(5), 82–89.

Singh, A., Singh, H., & Singh, A. (2022). People Analytics: Augmenting Horizon from Predictive Analytics to Prescriptive Analytics. In P. M. Jeyanthi, T. Choudhury, D. Hack-Polay, T. P. Singh, & S. Abujar (Eds.), *Decision Intelligence Analytics and the Implementation of Strategic Business Management* (pp. 145–153). Springer International Publishing. https://doi.org/10.1007/978-3-030-82763-2_13

Sivathanu, B., & Pillai, R. (2020). Technology and talent analytics for talent management – a game changer for organizational performance. *International Journal of Organizational Analysis*, *28*(2), 457–473. https://doi.org/10.1108/IJOA-01-2019-1634

Sonenshein, S., & Nault, K. (2023). When the Symphony Does Jazz: How Resourcefulness Fosters Organizational Resilience during Adversity. *Academy of Management Journal*. https://doi.org/10.5465/amj.2022.0988

Song, Q. C., Liu, M., Tang, C., & Long, L. F. (2020). Applying principles of big data to the workplace and talent analytics. In *Big data in psychological research.* (pp. 319–344). American Psychological Association. https://doi.org/10.1037/0000193-015

Sousa, M. J., Pesqueira, A. M., Lemos, C., Sousa, M., & Rocha, Á. (2019). Decision-Making based on Big Data Analytics for People Management in Healthcare Organizations. *Journal of Medical Systems*, *43*(9), 290. https://doi.org/10.1007/s10916-019-1419-x

Stratone, M.-E., Vătămănescu, E.-M., Treapăt, L.-M., Rusu, M., & Vidu, C.-M. (2022). Contrasting traditional and virtual teams within the context of COVID-19 pandemic: from team culture towards objectives achievement. *Sustainability*, *14*(8), 4558.

Subramanian, N., & Suresh, M. (2022). Assessment Framework for Agile HRM Practices. *Global Journal of Flexible Systems Management*, *23*(1), 135–149. https://doi.org/10.1007/s40171- 021-00294-6

Suresh, N. C., Sanders, G. L., & Braunscheidel, M. J. (2020). Business Continuity

The Role of Talent Analytics in Strategic Workforce Planning: *Jurnal Ilmi*
Enhancing Organizational Resilience   *Ilmi Journal*
(Nor saidi Mohamed Nasir)   *Volume 13 2023: 211-225*

Management for Supply Chains Facing Catastrophic Events. *IEEE Engineering Management Review*, *48*(3), 129–138. https://doi.org/10.1109/EMR.2020.3005506

Turgay, S., & Aydin, A. (2023). Risk Mitigation for SMEs: A Step-by-Step Guide to Implementing an Effective Framework. *Financial Engineering and Risk Management*, *6*(8), 71–80.

Vahdat, S. (2022). The role of IT-based technologies on the management of human resources in the COVID-19 era. *Kybernetes*, *51*(6), 2065–2088. https://doi.org/10.1108/K-04-2021-0333

Varshney, D. (2020). Digital Transformation and Creation of an Agile Workforce: Exploring Company Initiatives and Employee Attitudes. In M. A. Turkmenoglu & B. Cicek (Eds.), *Contemporary Global Issues in Human Resource Management* (pp. 89–105). Emerald Publishing Limited. https://doi.org/10.1108/978-1-80043-392-220201009

Vito, R., Schmidt Hanbidge, A., & Brunskill, L. (2023). Leadership and Organizational Challenges, Opportunities, Resilience, and Supports during the COVID-19 Pandemic. *Human Service Organizations: Management, Leadership & Governance*, *47*(2), 83–98. https://doi.org/10.1080/23303131.2022.2157355

Wang, K.-H., Kan, J.-M., Jiang, C.-F., & Su, C.-W. (2022). Is geopolitical risk powerful enough to affect carbon dioxide emissions? Evidence from China. *Sustainability*, *14*(13), 7867.

Xia, L., Semirumi, D. T., & Rezaei, R. (2023). A thorough examination of smart city applications: Exploring challenges and solutions throughout the life cycle with emphasis on safeguarding citizen privacy. *Sustainable Cities and Society*, *98*, 104771. https://doi.org/https://doi.org/10.1016/j.scs.2023.104771

Yu, M., Wen, J., Smith, S. M., & Stokes, P. (2022). Building-up resilience and being effective leaders in the workplace: a systematic review and synthesis model. *Leadership &*

Organization Development Journal, *43*(7), 1098–1117. https://doi.org/10.1108/LODJ-09-2021-0437

Zahoor, N., Golgeci, I., Haapanen, L., Ali, I., & Arslan, A. (2022). The role of dynamic capabilities and strategic agility of B2B high-tech small and medium-sized enterprises during COVID-19 pandemic: Exploratory case studies from Finland. *Industrial Marketing Management*, *105*, 502–514. https://doi.org/https://doi.org/10.1016/j.indmarman.2022.07.006