The Influence Of Hierarchy Culture And Workforce Agility On Organizational Agility In The Local Government Of Dairi Regency

Sukardi W. Hasugian[1], Vivi G. Pohan[2], Gustiarti Leila[3]

Master's Program in Psychological Science,
Faculty of Psychology, University of North Sumatra
Medan, Indonesia
Corresponding Author: Sukardi W. Hasugian

Abstract: This study aims to examine the influence of hierarchy-type organizational culture and workforce agility on organizational agility in the context of local government. The background of this research is based on the need for public sector organizations to transform quickly and adaptively to face the challenges of the VUCA (Volatility, Uncertainty, Complexity, and Ambiguity) era and technological disruption. The research was conducted at the Dairi Regency Government with 204 Civil Servants (Pegawai Negeri Sipil) respondents who have worked for at least two years at the current agency. The sampling technique used was convenience sampling. The research instrument consists of the Organizational Culture Assessment Instrument (OCAI) scale, workforce agility, and organizational agility. The results of regression analysis show that both hierarchy culture and workforce agility have a positive and significant effect on organizational agility. This finding indicates that although hierarchical culture is synonymous with rigid bureaucracy, adaptive and flexible management can actually encourage the agility of public sector organizations. The practical implications of this research provide strategic recommendations for local governments in building structures and work cultures that support agile bureaucratic reform.

Keywords: Hierarchical Culture, Workforce Agility, Organizational Agility, Local Government, Civil Servants

1. INTRODUCTION

Public sector organizations are currently facing significant pressure to transform due to technological advances, high public expectations, and the need to act quickly and adaptively. In the Indonesian context, bureaucratic reform has become a national priority to create a more agile and responsive government administration. Local governments, as the frontline of public service delivery, need to develop organizational capabilities known as organizational agility. Organizational agility refers to an organization's ability to respond to environmental changes quickly, efficiently, and while maintaining the effectiveness of achieving its objectives (Sharifi & Zhang, 2001). In other words, the current public sector organizational environment is required to be more adaptive, responsive, and innovative in facing complex changes. The concept of organizational agility is important in responding to the challenges of the VUCA (Volatility, Uncertainty, Complexity, and Ambiguity) era, which also affects government institutions (Bennett & Lemoine, 2014).

However, implementing agility in the public sector is not straightforward because the dominant organizational culture is a hierarchy culture, which emphasizes control, stability, and compliance with procedures (Cameron & Quinn, 2011). The hierarchical nature of bureaucratic structures is seen as a barrier to achieving agility (Weber, 1947; Park & Jo, 2018).

On the other hand, the role of civil servants as drivers of bureaucracy requires workforce agility to support the achievement of organizational agility. Workforce agility, or human resource agility, is an important determinant for enhancing organizational agility through employees who can adapt, learn quickly, and collaborate (Muduli, 2013; Braun et al., 2017). This study was conducted in Dairi Regency, considering the importance of bureaucratic reform and the demand for agile government organizational performance. Focusing on the influence of hierarchy culture and workforce agility on organizational agility, this study is expected to provide theoretical and practical contributions to the development of more adaptive public sector organizations.

Therefore, this study aims to examine the contribution of hierarchy culture and workforce agility to organizational agility in the Dairi Regency Government.

2. TINJAUAN PUSTAKA

Organizational Agility:

Organizational agility is defined as an organization's capacity to respond quickly and effectively to environmental changes (Doz & Kosonen, 2010; Teece et al., 2016). Agility in the context of the public sector includes the ability to respond to national policies, community needs, and developments in digital technology (Mergel, 2016).

Hierarchy Culture:

Hierarchy culture is one dimension of the Competing Values Framework characterized by formal structures, strict control, and standard procedures (Cameron & Quinn, 2011). This culture is important for stability and predictability, but tends to limit flexibility and individual initiative (O'Reilly & Chatman, 1996).

Workforce Agility:

Workforce agility refers to the ability of individuals within an organization to adapt to change, develop new skills, and work collaboratively in conditions of uncertainty (Breu et al., 2002; Pulakos et al., 2000). Several dimensions are examined, including adaptability, rapid learning, and flexible decision-making (Muduli, 2016).

3. PURPOSE AND METHODS

Purpose:

The purpose of this study is to examine the contribution of hierarchy culture and workforce agility to organizational agility in the Dairi Regency Local Government.

Methods:

This type of research is quantitative correlational. The population in this study is civil servants in various Regional Apparatus Organizations (OPD) of the Dairi Regency Government who have worked for at least 2 years in the same agency. The sampling technique used is convenience sampling, which is considered appropriate for the bureaucratic context due to the ease of access to respondents who meet the inclusion criteria (Etikan et al., 2016).

The reason for selecting this sampling technique is efficiency in terms of time and cost. This technique allows researchers to reach respondents quickly and cost-effectively, especially in a bureaucratic environment with limited administrative access (Etikan et al., 2016). Additionally, this technique was chosen due to the homogeneity of the population. All respondents were civil servants with similar employment status and worked within the same bureaucratic structure, thus the assumption of relative homogeneity was met (Golzar et al., 2022). Another reason was the flexibility in data collection. This technique facilitates the distribution of questionnaires across various government agencies, especially for researchers with limited access or facing administrative constraints (Etikan et al., 2016). This technique is also commonly used in public sector organizational research, particularly in exploratory studies aimed at identifying initial relationships between variables (Etikan et al., 2016; Verywell Mind, 2023). Since the population in this study is relatively homogeneous, convenience (accidental) sampling is methodologically acceptable (Golzar et al., 2022).

The selection of civil servant respondents with a minimum of two years of service in the same OPD ensures a consistent understanding of organizational culture and experience with the organizational context. A minimum of two years of service ensures that respondents have sufficient understanding of the organization's values, structure, and processes, which are crucial in measuring perceptions of organizational culture and agility (Pulakos et al., 2000). Additionally, psychological stability and adaptation have already been established. Employees who have worked for two years or more have generally passed the adaptation phase and begin to show more consistent work engagement (Griffin & Hesketh, 2003). Other studies conducted by Pulakos et al. (2002) and Fisher et al. (2024) indicate that perceptions of organizational change and adaptive performance are more stable among individuals who have worked for at least two years.

Studies in the education and government sectors show that a two-year period of employment is the benchmark for ensuring that respondents understand organizational culture and structural changes (Fisher et al., 2024; Dwiyanto, 2011). Etikan, Musa & Alkassim (2016) recommend length of service as an inclusion criterion to enhance the credibility and relevance of data in public organization surveys. In other words, work experience criteria can improve the internal validity of organizational research because respondents have a deeper understanding of internal organizational processes (Etikan et al., 2016).

The instruments used consist of three scales: (1) Organizational Culture Assessment Instrument (OCAI) to measure hierarchy culture, (2) Workforce agility scale based on proactive, adaptive, and resilient dimensions (Sherehiy & Karwowski, 2014), and (3) Organizational agility scale based on four main capabilities: responsiveness, competency, flexibility, and speed (Sharifi & Zhang, 2001). The research instruments were developed based on the theoretical constructs of each variable and validated through validity and reliability tests. Data analysis techniques used multiple linear regression to determine the simultaneous and partial effects between variables. Data were analyzed using multiple linear regression.

4. RESULT AND DISCUSSION

Result:

The results of the analysis show that: 1. Hierarchy culture has a positive and significant effect on organizational agility ($p < 0.05$). 2. Workforce agility also has a positive and significant effect on organizational agility ($p < 0.05$). 3. The regression model shows that both independent variables simultaneously explain more than 52% of the variation in organizational agility. These findings reinforce previous studies that a strong bureaucratic structure can still support organizational agility when combined with adaptive performance management and human resource systems (Xu & Shen, 2021; Fachridian et al., 2024). In additional analysis of the study, the level of organizational agility maturity is at level 2: agility transition.

The results of the study can be seen in the following explanation:

Table 1

T-test Results

Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	20.670	10.587		1.952	.052
	Hierarchy Culture	4.952	.468	.615	10.570	.000
	Workfore *Agility*	.409	.141	.169	2.904	.004

a. Dependent Variable: Organizational *Agility*

Based on Table 1, it can be seen that the significance value for the influence of hierarchy culture on organizational agility is 0.000 < 0.05 and the calculated t-value is 10.570 > t-table 1.652. The significance value for the influence of workforce agility on

organizational agility is 0.004 < 0.005 and the calculated t-value is 2.904 > 1.652. Therefore, it can be concluded that both hierarchy culture and workforce agility individually have a positive effect on organizational agility.

Tabel 2

F-test Results

ANOVAᵃ

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	60363.913	2	30181.957	108.886	.000ᵇ
	Residual	55715.067	201	277.189		
	Total	116078.980	203			

a. Dependent Variable: Organizational *Agility*

b. Predictors: (Constant), Workfore *Agility*, Hierarchy Culture

Based on Table 2, it can be seen that the calculated F value is 108.886 and the significance value is 0.000 ($p < 0.05$). Meanwhile, the F table value obtained from df1 = 2 and df2 = 201 with a significance value of $p = 0.05$ is 3.04. Thus, the calculated F value is greater than the table F value (108.886 > 3.04). It can be concluded that hierarchy culture and workforce agility have a significant influence on organizational agility, meaning the hypothesis is accepted.

The influence of the hierarchy culture and workforce agility variables on organizational agility can be seen in the following determination test results:

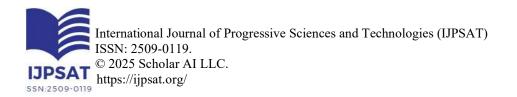Tabel 3

Determination Results Test

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.721ᵃ	.520	.515	16.649

a. Predictors: (Constant), Hierarchy Culture (X1), Workforce *Agility* (X2)

Based on Table 3, it can be seen that the R value is 0.721 and is positive, which means that the relationship between the variables of organizational agility, hierarchy culture, and workforce agility is direct. This means that the higher the hierarchy culture within the organization and the higher the workforce agility of employees, the higher the organizational agility.

In the R Square column, it is noted that the coefficient of determination is 0.520. Based on this result, it can be stated that the ability of the independent variables (hierarchy culture and workforce agility) to explain or predict the variance in the dependent variable (organizational agility) is 52%. The total variance of the dependent variable that can be predicted by the independent variables is 51.5% to 52%. The remaining 48% is explained by other factors not accounted for in the regression model. From this interpretation, we can conclude that the research hypothesis is accepted, that hierarchical culture and workforce agility together have a positive effect on organizational agility.

Furthermore, from the analysis conducted, based on Table 1, the t-values and their significance were also obtained, which can be used to determine the weight of the independent variables on the dependent variable. A multiple regression analysis was conducted using the enter method. It can be seen that the significance level of the workforce agility variable is 0.004 and that of hierarchy culture is 0.000 (< 0.05). This means that these variables have a significant effect on organizational agility.

Discussion:

The results of the data analysis indicate that the hypothesis is accepted (Fcount = 108.886 with a significance value of 0.000 ($p < 0.005$) with an adjusted Rsquare value of 0.500. This means that hierarchy culture and workforce agility together have a positive effect on organizational agility in an organization, contributing 50%. The values obtained tend to be large, so it can be concluded that the higher the hierarchy culture in an organization and the higher the workforce agility, the greater the organizational agility in an organization. Together, these findings indicate that hierarchy culture and workforce agility are important and influential characteristics in organizations in creating agile organizations, in this case public organizations or local government organizations.
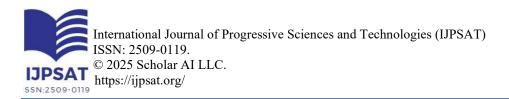
This hypothesis is supported by previous research, which found a positive and significant relationship between organizational culture and organizational agility. Wicaksana & Isfania (2022) found that organizational culture strengthens the influence of knowledge sharing on agility. In the non-departmental government agency segment, knowledge sharing significantly increases organizational agility, and this effect is amplified when supported by a positive organizational culture. Fachridian, Ramli, & de Araujo (2024) also found that an organizational culture responsive to innovation and leadership that promotes agility are crucial in supporting agility in government. In another study conducted by Sunatar (2023), it was found that organizational culture significantly influences agility and civil servant performance, and a supportive culture has a positive effect on bureaucratic adaptive responses.

In this study, organizational culture is specifically focused on hierarchical culture. Hartnell et al. (2022) found that hierarchical culture significantly has a positive coefficient on performance and bureaucratic logistics agility in public administration in Greece, with a positive β coefficient of $p < .05$. In a study conducted by Park & Jo (2018) in the public sector in Korea, it was found that a hierarchical structure supported by adaptive leadership style and strong internal communication contributes positively to government organizational agility.

Furthermore, research on how an agile workforce affects organizational agility has also been discussed in previous studies. In a study conducted by Ragin-Skorecka (2016) on agile companies from a human perspective, the results covered two aspects: internal organizational identity features determine agility, and human life values are a potential for building organizational agility. In the past, companies believed that becoming agile, having a quick response to change, and being flexible could be achieved through advanced technology (Youndt et al., 1996), but other research found that flexible companies rely more on an agile workforce than on technology (Sherehiy, 2007).

Another study also found that in a survey of 440 airport operator employees (public/government sector), workforce agility significantly predicted organizational agility (R = 0.083, $p < .05$) and demonstrated substantial contributions from workforce agility even in organizations with high formal structures (Pina Panduwinarsih & Rahmadani, 2024). Fisher et al. (2024) state that a study involving three cities in Sweden revealed workforce agility as the key to the success of public digital transformation, which is a central aspect of organizational agility in modern government sectors. The results indicate that the ability of workers to be proactive and responsive effectively facilitates technological and structural adaptation.

In an additional analysis to see which independent variables most influence organizational agility, it was found that hierarchy culture is the most dominant variable in creating organizational agility, with a value of 50% compared to workforce agility at 20%. This is one of the few new findings that hierarchy culture can enhance organizational agility. Previous studies have mostly found that hierarchy culture hinders the creation of organizational agility in organizations. This contrasts with the study conducted by Carmen et al. (2017), which stated that all dimensions of organizational culture have a positive and significant effect on organizational agility, including hierarchy culture, which also has a positive and significant effect on organizational agility. Additionally, research by Park & Jo (2018) in the public sector in Korea stated that hierarchical structures positively contribute to government organizational agility with the support of adaptive leadership styles and strong internal communication. This was proven in Indonesia during the COVID-19 pandemic, where Indonesia, with its flexible hierarchical culture, was one of the countries with the best COVID-19 management.

Based on the results of the organizational agility maturity model, it can be seen that the organizations studied in this research have reached level 2 of organizational agility maturity: Agility Transition, where organizations are managing to spread agility values in an effort to build an appropriate foundation in most parts of the organization. This can be observed directly through efforts in technology development, improved services reaching the village level, enhanced services at district hospitals (*RSUD*), community health centers (*Puskesmas*), auxiliary community health centers (*Puskesmas Pembantu*), agricultural extension programs, and in most other sectors, as well as the implementation of bureaucratic reform in accordance with the "directives" of the Central Government.

Changes in business are largely welcomed and handled appropriately. In many cases, organizations undertake activities to support and promote teamwork and establish more flexible organizational structures to address upcoming changes through policies on the restructuring of Regional Government Agencies and functional job transfers. However, organizations at this stage of maturity are characterized by weaknesses in one or two sub-dimensions of the model, while others are already at a relatively high level of agility. Therefore, they are still in the transition phase toward full organizational agility (Wendler, 2014).

Based on the data obtained, civil servants at the Staff/Executive and Functional Staff/Executive levels obtained the highest scores in terms of organizational agility maturity, with an average score of 3. 91, while the Head of OPD, Secretary of OPD, and Head of Division/Head of Department positions, as well as the Head of Subdivision/Head of Section positions and Functional Equivalent to Head of Subdivision/Head of Section positions, all had a score of 3.90. However, this difference is not significant as the average scores differ by only 0.01. This indicates that both leadership positions, department/division/subdivision/section heads, and staff positions have relatively similar levels of organizational agility maturity. This is assumed by the researcher to be due to the average age of the study respondents being 41 years old, which is considered to have sufficient adaptability to change, including the ability to use information technology.

An organization cannot become a truly agile organization because agility is a continuous process that leads to continuous improvement (Alzoubi et al., 2011). Although in this study, the Dairi Regency Local Government has reached the agility transition maturity level, in line with the vision of the Administrative Reform, it should not stop at this level. The Central Government and Local Governments need to swiftly implement continuous improvements to enhance the best possible services and achieve societal well-being. Every organization must understand the circumstances it faces, the threats it receives from the environment, and the opportunities that will lead the organization to prosperity and success. Therefore, based on this study, public organizations, in this case government organizations, need to implement a sufficiently flexible hierarchy culture in the workplace and create agile human resources if they want to achieve organizational agility.

Hierarchy culture is considered a rigid type of organizational culture and is thought to hinder organizational agility, but based on the results of this study, that assumption has been somewhat refuted and is supported by several recent studies that show the same results in both the private and public sectors. In fact, the implementation of a flexible hierarchical culture can greatly assist government organizations in becoming agile, as government organizations are large and complex entities that require a flexible hierarchical structure—not the rigid traditional hierarchical structure.

In terms of enhancing workforce agility, the human resources function within an organization must be given a fundamental and strategic role. This means not only recognizing human resources as the primary resource needed by the organization but also supporting this recognition with concrete actions. The government must be able to change its practical approach to human resources, as the position of human resources within an organization typically aligns with the organization's strategic policies. This supports previous research indicating that workforce agility is a key factor in achieving organizational agility.

Organizational agility is impossible without an agile workforce (Muduli, 2018). Workforce agility refers to a workforce that is proactive, adaptable, and flexible. The workforce needs a positive attitude toward learning and self-development; good problem-solving skills; readiness to face change, new ideas, and new technologies; and the ability to generate innovative ideas and take on new responsibilities at any time. Human resources must be considered as a scarce, important, difficult to replicate, and irreplaceable resource. By creating agile resources, organizations will automatically be able to achieve organizational agility.

Hierarchy culture and workforce agility together contribute 52% to achieving organizational agility, while 48% is influenced by other variables that cannot be explained in this study. Variables influencing organizational agility in other studies include: organizational structure, information technology, organizational learning, readiness to change, and others (Aghina et al., 2015; Lee et al., 2015; Menon, S., and Suresh, 2020), thus further research is needed to determine the research model for organizational agility.

5. CONCLUSION

Hierarchy culture and workforce agility are significant predictors of organizational agility in the public sector. Local governments need to adaptively manage their organizational structure and culture and develop the capacity of civil servants to create an agile bureaucracy. This research contributes to the literature on agility in the context of public organizations and offers an empirical foundation for agile bureaucratic reform.

REFERENCES

[1]. Bennett, N., & Lemoine, G. J. (2014). What VUCA really means for you. Harvard Business Review, 92(1/2), 27.

[2]. Braun, T. J., Hayes, B. C., De Pater, I. E., & Boeck, F. A. (2017). Individual Agility: Development and validation of a measure. Human Performance, 30(5), 243–263.

[3]. Breu, K., Hemingway, C. J., Strathern, M., & Bridger, D. (2002). Workforce agility: The new employee strategy for the knowledge economy. Journal of Information Technology, 17(1), 21–31.

[4]. Cameron, K. S., & Quinn, R. E. (2011). Diagnosing and changing organizational culture: Based on the competing values framework (3rd ed.). Jossey-Bass.

[5]. Carmen, M. F., Jose, L. R., & Antonio, L. LR. (2017). Impact of Organizational Culture Values on Organizational Agility. Department of Business Administration and Marketing, Universidad de Sevilla.

[6]. Doz, Y. L., & Kosonen, M. (2010). Embedding strategic agility: A leadership agenda for accelerating business model renewal. Long Range Planning, 43(2–3), 370–382.

[7]. Dwiyanto, A. (2011). Manajemen Pelayanan Publik. Yogjakarta. Gadjah Mada University Press.

[8]. Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. American Journal of Theoretical and Applied Statistics, 5(1), 1–4.

[9]. Fachridian, A., Ramli, A. H., & de Araujo, L. M. (2024). Implementation of organizational agility strategies to meet the challenges of digital transformation in government organizations. Media Ekonomi dan Manajemen, 39(2).

[10]. Fisher, M., Imgrund, F., Janiesch, C., & Winkelmann, A. (2024). Workforce agility and digital transformation in the public sector. In Proceedings of the 2024 Computers and People Research Conference.

[11]. Golzar, F., Ahmadi, M., & Riahi, A. (2022). Evaluating sampling techniques in public sector organizational research. Journal of Management and Policy Studies, 19(2), 33–47.

[12]. Griffin, B., Hesketh, B., (2003). Adaptable behaviours for successful work and career adjustment. Australian Journal of Psychology 55(2), 65–73. https://doi.org/10.1080/00049530412331312914.

[13]. Hartnell, C. A., et al. (2022). The impact of strong cultures on organisational performance in public organisations: The case of the Greek public administration. Social Sciences, 11(10), 486. https://doi.org/10.3390/socsci11100486.

[14]. Muduli, A. (2013). Workforce agility: A review of literature. The IUP Journal of Management Research, 12, 55–65.

[15]. Muduli, A. (2016). Exploring the facilitators and mediators of workforce agility: An empirical study. Management Research Review, 39(12), 1567–1586.

[16]. Muduli, A. (2017). Workforce agility: Examining the role of organizational practices and psychological empowerment. Global Business and Organizational Excellence, 36(5), 46–56.

[17]. Mergel, I. (2016). Agile innovation management in government: A research agenda. Government Information Quarterly, 33(3), 516–523.

[18]. Meyer, P. (2015). The Agility Shift: Creating Agile and Effective Leaders, Teams and Organizations. Bibliomotion.

[19]. O'Reilly, C. A., & Chatman, J. A. (1996). Culture as social control: Corporations, cults, and commitment. In B. M. Staw & L. L. Cummings (Eds.), Research in Organizational Behavior (Vol. 18, pp. 157–200). JAI Press.

[20]. Panduwinarsih, P., & Rahmadani, V. G. (2024). Organizational agility predicted by adhocracy culture and workforce agility. In Proceedings of the 2023 Brawijaya International Conference (BIC 2023) (pp. 462–469). Atlantis Press. https://doi.org/10.2991/978 94 6463 525 6_53

[21]. Park, Y., & Jo, Y. (2018). Bureaucratic structure and organizational agility: The case of the Korean public sector. International Journal of Public Administration, 41(11), 870–878.

[22]. Pulakos, E. D., Arad, S., Donovan, M. A., & Plamondon, K. E. (2000). Adaptability in the workplace: Development of a taxonomy of adaptive performance. Journal of Applied Psychology, 85(4), 612–624.

[23]. Pulakos, E.D., dkk., (2002). Predicting adaptive performance: further tests of a model of adaptability. Human Performance, 15(4), 299–323. https://doi.org/10.1207/S15327043HUP1504_01.

[24]. Ragin Skorecka, K. (2016). Agile enterprise: A human factors perspective. Human Factors and Ergonomics in Manufacturing & Service Industries, 26(1), 5–15. https://doi.org/10.1002/hfm.

[25]. Sharifi, H., & Zhang, Z. (2001). Agile manufacturing practice: application of a methodology. International Journal of Operations & Production Management, 21(5/6), 772–794.

[26]. Sherehiy, B., Karwowski, W., & Layer, J. K. (2007). A review of enterprise agility: Concepts, frameworks, and attributes. International Journal of Industrial Ergonomics, 37(5), 445–460. https://doi.org/10.1016/j.ergon.2007.01.007

[27]. Sherehiy, B., & Karwowski, W. (2014). The relationship between work organization and workforce agility in small manufacturing enterprises. International Journal of Industrial Ergonomics, 44(3), 466–473.

[28]. Sunatar, B. (2023). The influence of leadership agility, motivation, and organizational culture on job satisfaction and the State Civil Apparatus (SCA) performance at the Office of the Ministry of Religion in West Papua Province. Journal Research of Social Science, Economics, and Management, 2(8), 1661. https://doi.org/10.59141/jrssem.v2i08.361

[29]. Teece, D., Peteraf, M., & Leih, S. (2016). Dynamic capabilities and organizational agility: Risk, uncertainty, and strategy in the innovation economy. California Management Review, 58(4), 13–35.

[30]. Weber, M. (1947). The theory of social and economic organization. Free Press.

[31]. Wendler, R. (2014). Development of the Organizational Agility Maturity Model.

a. Computer Science and Information Systems, 11(3), 1197–1206. https://doi.org/10.2298/CSIS131220051W.

[32]. Youndt, M. A., Dean, J. W., & Lepak, D. P. (1996). Human resource management, Strategy, and firm performance. Academy of Management Journal, 39(4), 836–866. https://doi.org/10.5465/256718.

[33]. Xu, P., & Shen, Y. (2021). Improving agility in organizations with a hierarchical culture: Leadership strategies. Rutgers Business Review, 7(3), 309–317.