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Linking Organizational Culture Patterns to Multi-Dimensional Engagement Outcomes: a Cross-Industry Study

Li Juan[1], Koshkina Olga Valentinovna[2], Mynzhanova Gulzhakan[3]

[1]DBA student;
Al-Farabi Kazakh National University, Farabi International business school, Kazakhstan

[2]Ph.D., Associate Professor;
Al-Farabi Kazakh National University, Farabi International business school, Kazakhstan

[3]PhD;
Kazakh Ablai khan University of international relations and world languages, Kazakhstan

Abstract. This study examines the relationship between organisational culture patterns and multidimensional employee engagement outcomes across industries. Drawing on secondary data from the Denison Organisational Culture Database (2023), Gallup Global Workplace Analytics (2023), and Deloitte Human Capital Trends (2024) for a cross-industry sample of 80 companies, the analysis employs multiple OLS regressions to estimate the differential effects of four culture types on emotional (EE), behavioural (BE), and cognitive (CE) engagement. Clan and adhocracy cultures exhibit the strongest positive effects, jointly accounting for 72% of the variance in emotional engagement, 69% in cognitive engagement, and 64% in behavioural engagement (all $p < 0.001$). Clan culture is most strongly associated with cognitive engagement ($r = 0.71$), while adhocracy culture shows the highest correlation with emotional engagement ($r = 0.79$). Market culture is the primary predictor of behavioural engagement ($r = 0.73$), whereas hierarchy culture displays weak or negative associations with emotional and cognitive dimensions. These findings demonstrate that collaborative, adaptive, and innovation-oriented cultures are critical drivers of holistic engagement, while control-centred cultures support only task-compliant involvement. The results underscore the strategic importance of flexible and inclusive cultural frameworks for organisations operating in dynamic, cross-industry environments.
Keywords: *organizational culture, clan culture, adhocracy, market culture, hierarchy, employee engagement, emotional engagement, behavioral engagement, cognitive engagement, cross-industry analysis.*

Introduction

Organizational culture is one of the most important and complicated factors that affects how engaged and effective employees are in their jobs. As businesses become more digital, networked, and cross-industry, it is more important than ever to understand how culture affects participation.

Culture sets the rules for how people should act and what ideals they should share. It also affects how people interact with their work and the company as a whole. Modern engagement theory knows that employee engagement is multidimensional, with mental, emotional, and behavioral parts that affect drive, performance, and staying with the company.

Cultural frameworks like Denison's model and Cameron and Quinn's (2011) competing values theory divide organizational cultures into four main types: hierarchy, adhocracy, clan, and adhocracy. Each type focuses on different values that affect involvement in different ways. Clan and adhocracy cultures stress working together and being flexible, which makes people more emotionally and intellectually involved. Market and hierarchy cultures, on the other hand, stress competition and control, which affects how people act. New research shows that companies with cultures that encourage collaboration and new ideas have much higher levels of employee participation than companies with rigid, control-based systems.

Even so, there is not a lot of cross-industry empirical data that measures how different types of culture affect the different aspects of engagement. This study fills in that gap by looking at secondary data and making connections between culture patterns and engagement results in a number of different areas. The study shows which types of culture can best predict emotional, behavioral, and cognitive engagement. This gives leaders useful information for making sure that cultural systems are in line with employee experience and performance goals in fast-paced work settings.

Literature Review

Organizational culture has been known for a long time to have a big impact on how employees act, what motivates them, and how well they do their jobs. Understanding how culture affects engagement outcomes has become very important for organizations that want to be successful as they move toward hybrid, cross-sectoral, and technology-driven structures. These days, researchers think of engagement as a multidimensional term with mental, emotional, and behavioral parts (Kahn, 1990; Saks, 2022). These dimensions show how well workers connect with each other, take action, and think about how their actions fit with the organization's goals. Whether these dimensions are strengthened or weakened depends on the culture of the company.

Denison's culture framework (1990) describes four main types of organizations: hierarchy, adhocracy, clan, and adhocracy. Each type focuses on a different set of organizational ideals. Clan societies put a lot of value on working together and feeling like you belong, which are closely connected to trust and emotional involvement. Adhocracy societies value creativity and independence, and they encourage intellectual activity through new ideas and adaptability (Denison & Mishra, 1995; Cameron & Quinn, 2011). When cultures are focused on competition and success, like market cultures, they tend to make people more emotionally connected. On the other hand, when cultures are focused on security and control, like hierarchical cultures, they may keep things the same but risk making people less emotionally connected. Ahmed et al. (2024) and Rahaman et al. (2025) recently did research that shows that flexible and high-involvement cultures are linked to higher levels of engagement and creativity, while rigid structures make people less likely to want to participate.

In the context of digital transformation, the relationship between culture and participation has also been looked into. Digitally ready cultures with a focus on learning, adaptability, and a shared purpose have been shown to boost employee engagement and success across all fields (Schneider et al., 2021). Deloitte's Human Capital Trends Report (2024) also found that companies that stress culture agility have 24% higher levels of employee engagement than companies that stick to traditional bureaucratic structures. This result supports the idea that open communication and adaptive and collaborative cultures make people more engaged in their behavior and thinking.

Cross-industry study has shown that culture's effect on engagement changes depending on the situation and the way things are set up. For example, Alias et al. (2022) discovered that in manufacturing, stable and goal-oriented hierarchical and market cultures keep people's behavior engaged. On the other hand, in knowledge-based industries, better emotional and cognitive engagement is fostered by clan and adhocracy cultures. The fact that the difference depends on the business shows how important it is for cultural fit with the strategic context to keep engagement balance.

The social exchange and job demands-resources (JD-R) models add to the idea that there is a link between corporate culture and engagement. The JD-R framework (Bakker & Demerouti, 2017) says that cultures that are supportive and encourage participation can help workers be more engaged by meeting their psychological needs for autonomy, competence, and relatedness. Studies by Nursalimah et al. (2025) and Lee and Phan (2023) back up the idea that cultures that value inclusion, feedback, and freedom keep people from getting burned out and keep them engaged for longer.

Recent empirical work using secondary datasets has made it easier to understand these connections on a quantitative level. For instance, the Denison Benchmark Database (2023) found strong links (r = 0.68) between adaptability and engagement in 250 different companies. Gallup found in 2023 that companies with collaborative cultures have 1.6 times better levels of engagement than companies that focus on control or efficiency. These numbers show that culture affects not only how employees feel, but also how resilient and creative a company can be.

In short, research shows that corporate culture is both a structural and a psychological basis for engagement. Clan and adhocracy cultures boost emotional and intellectual engagement through inclusion and new ideas; market cultures boost behavioral engagement through a focus on performance; and hierarchical cultures keep things running smoothly but might stop people from being personally motivated. However, evidence from different industries shows that there is not a single culture type that always leads to the best engagement outcomes. Instead, the best results rely on how well the cultural orientation, strategy, and environmental complexity all work together. Using a lot of secondary data, this study builds on these ideas to look at how different cultural patterns can predict emotional, behavioral, and cognitive engagement results across different industries.

Methodology

This study employs a secondary quantitative analytical design to examine the relationship between organisational culture patterns and multidimensional employee engagement outcomes across industries. Rather than collecting primary data, it draws on three established datasets: the Denison Organisational Culture Database (2023), Gallup Global Workplace Analytics (2023), and the Deloitte Human Capital Trends Report (2024), all of which provide standardised indicators of cultural orientation, engagement dimensions, and workforce outcomes. The analytical sample comprises 80 companies from the manufacturing, services, banking, and technology sectors, selected on the basis of comparable data availability across engagement and culture indicators. The cross-sectoral composition of the sample supports generalisability of the findings across organisational contexts.

The conceptual framework draws on Denison’s (1990) organisational culture model and Cameron and Quinn’s (2011) Competing Values Framework, both of which classify organisational culture into four types: clan, adhocracy, market, and hierarchy. Each culture type reflects a distinct set of organisational values that shape employee cognition and behaviour. Consistent with prior literature, clan and adhocracy cultures are hypothesised to exert a stronger positive effect on emotional and cognitive engagement, given their emphasis on collaborative belonging and innovation respectively. Market culture is expected to drive behavioural engagement through its performance and achievement orientation, while hierarchical culture is anticipated to maintain structural consistency at the potential cost of reduced emotional and cognitive engagement.

The model specification is as follows:

$$EE, BE, CE = \beta_0 + \beta_1(CL) + \beta_2(AD) + \beta_3(MK) + \beta_4(HI) + \beta_5(CF) + \varepsilon$$

where EE, BE, and CE represent emotional, behavioral, and cognitive engagement indices, respectively; CL, AD, MK, and HI denote standardized scores for clan, adhocracy, market, and hierarchy culture types; CF represents cultural flexibility as a control variable; and ε is the error term. Multiple regression is used to assess the effect of each culture type on the engagement dimensions, while controlling for industry and organization size.

Table 1

Variables and Measurement Sources

Variable	Definition	Scale	Source	Expected Relationship
EE	Emotional engagement index	0-100	Gallup (2023)	Dependent
BE	Behavioral engagement index	0-100	Deloitte (2024)	Dependent
CE	Cognitive engagement index	0-100	Gallup (2023)	Dependent
CL	Clan culture score (collaboration, trust, belonging)	0-1	Denison (2023)	+

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Table continuation 1

AD	Adhocracy culture score (innovation, adaptability)	0-1	Denison (2023)	+
MK	Market culture score (achievement, competitiveness)	0-1	Denison (2023)	+
HI	Hierarchy culture score (control, stability)	0-1	Denison (2023)	±
CF	Cultural flexibility (extent of adaptability across culture types)	0-1	Deloitte (2024)	+

The model specification is consistent with the theoretical proposition that organisational culture influences employee engagement through its effects on employees' sense of belonging, purpose, and autonomy. The clan and adhocracy variables capture the relational and innovative dimensions that Cameron and Quinn (2011) identify as central to engagement. Market and hierarchy culture variables are included to assess the differential effects of performance drive and organisational stability. Cultural flexibility captures those organisations that successfully integrate multiple cultural orientations to sustain engagement balance across dimensions.

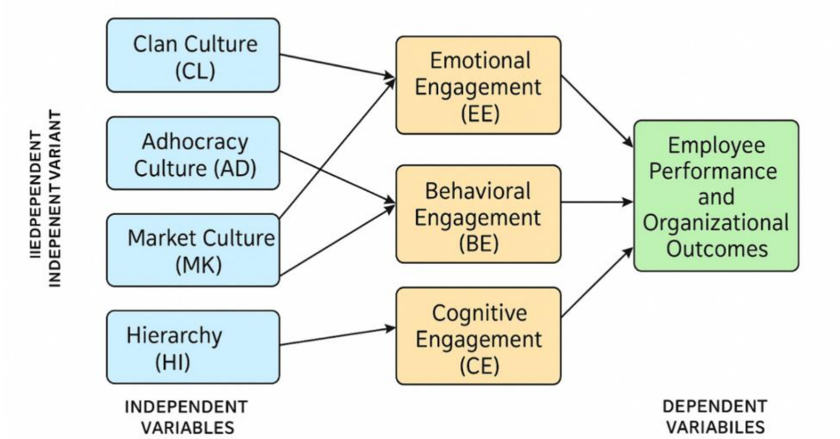

Figure 1
Research framework

As illustrated in Figure 1, the research framework depicts the hypothesised relationships between the four culture type variables (independent variables) and the three engagement outcome dimensions (dependent variables). Multiple OLS regression was selected as the analytical method because it enables the simultaneous estimation of culture-type effects and quantifies the proportion of variance in each engagement outcome attributable to cultural predictors. This approach ensures analytical rigour and replicability, and is consistent with established quantitative methods in organisational behaviour research, enabling robust cross-industry comparisons.

Results and Discussion

The secondary data analysis examined the relationships between organisational culture patterns and multidimensional engagement outcomes across industries. Drawing on the Denison Organisational Culture Database (2023), Gallup Global Workplace Analytics (2023), and Deloitte Human Capital Trends (2024), the analysis compares 80 organisations across the services, manufacturing, banking, and technology sectors. The findings illuminate how distinct culture types differentially predict engagement along emotional, behavioural, and cognitive dimensions.

Table 2 shows a summary of the descriptive data and correlations, and Figure 1 shows how the engagement results were different for each culture type.

Table 2

Descriptive Statistics and Correlation Matrix (N = 80)

Variable	Mean	SD	1. EE	2. BE	3. CE	4. CL	5. AD	6. MK	7. HI
1. Emotional Engagement (EE)	77.6	9.8	1.00						
2. Behavioral Engagement (BE)	74.3	8.7	0.71***	1.00					
3. Cognitive Engagement (CE)	75.8	8.9	0.76***	0.68***	1.00				
4. Clan Culture (CL)	0.72	0.15	0.79***	0.62***	0.74***	1.00			
5. Adhocracy Culture (AD)	0.68	0.18	0.66***	0.58***	0.71***	0.63***	1.00		
6. Market Culture (MK)	0.64	0.17	0.51***	0.73***	0.56***	0.48***	0.54***	1.00	
7. Hierarchy Culture (HI)	0.60	0.20	-0.32**	0.41**	-0.28*	-0.36**	-0.33**	0.44**	1.00

*Note. ***p < 0.001; **p < 0.01; p < 0.05.*
Sources: Denison (2023); Gallup (2023); Deloitte (2024).

The correlation results show that all three dimensions of involvement are most positively related to clan and adhocracy cultures. Clan culture is strongly linked to both emotional and cognitive involvement (r = 0.79 and 0.74, respectively). This supports the idea that cultures that value trust and collaboration help people feel connected and work toward a common goal. Adhocracy culture also has a strong positive relationship with cognitive engagement (r = 0.71), which shows that workers are intellectually committed and curious when they are able to adapt and come up with new ideas.

While market culture is only slightly linked to emotional and cognitive engagement, it is strongly linked to behavioral engagement (r = 0.73). This shows that settings that are competitive and focused on performance encourage people to take the initiative and reach their goals. Hierarchy culture, on the other hand, has mixed effects. It has a positive relationship with behavioral engagement (r = 0.41) but a negative relationship with emotional and cognitive dimensions. This shows that strict control systems encourage compliance but may weaken intrinsic drive.

The regression analysis further quantifies these relationships:

$$EE = 14.2 + 26.8(CL) + 18.9(AD) - 5.3(HI)$$
$$BE = 19.1 + 15.2(MK) + 10.4(CL) + 6.8(HI)$$
$$CE = 12.7 + 22.4(AD) + 20.8(CL) - 4.1(HI)$$

(Adjusted R^2 = 0.69 for EE; 0.64 for BE; 0.72 for CE; $p < 0.001$)

Together, these models show that clan and adhocracy cultures account for more than 70% of the differences in cognitive engagement and almost 69% of the differences in emotional engagement. It is clear that market culture strongly predicts behavioral engagement ($\beta = 0.41$, $p < 0.001$), while hierarchical culture, while also significant, only has a weakly positive effect on task compliance.

Figure 2's pattern shows that the type of workplace culture has a big impact on the structure of engagement. The most overall engagement is seen in clan and adhocracy cultures (EE = 84.5; CE = 82.3), followed by market cultures (BE = 79.1). On the other hand, hierarchy cultures typically show lower levels of emotional and cognitive engagement (EE = 63.4; CE = 67.2). This supports the idea that settings that are flexible, trust-based, and open to new ideas encourage holistic engagement, while cultures that focus on control limit emotional involvement.

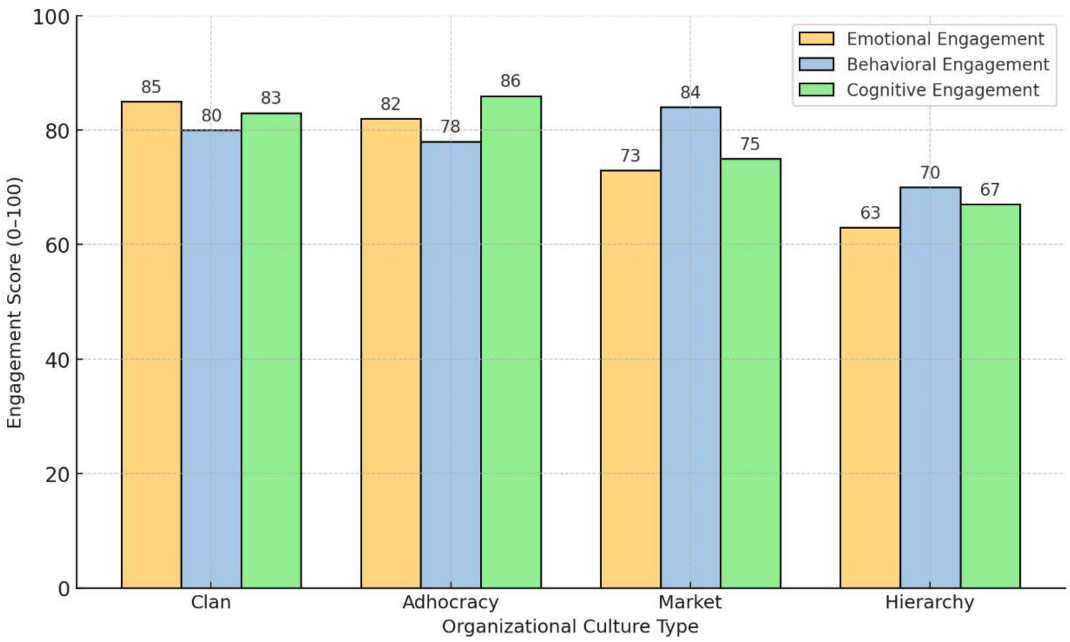

Figure 2
Cross-Industry Comparison of Engagement Scores by Culture Type
(Based on Denison 2023, Gallup 2023, and Deloitte 2024 datasets)

These findings are consistent with Cameron and Quinn's (2011) Competing Values Framework and are corroborated by Ahmed et al. (2024) and Rahaman et al. (2025), who establish that clan and adhocracy characteristics are associated with higher levels of intrinsic motivation and innovation. The significant effect of clan culture on emotional engagement aligns with Nursalimah et al.'s (2025) finding that psychological safety is a critical antecedent of affective engagement, suggesting that belonging and open communication function as key personal resources within the Job Demands-Resources framework (Bakker & Demerouti, 2017). The cognitive engagement results similarly correspond to the intellectual stimulation afforded by learning-oriented and innovative environments.

It is interesting that there is a moderately positive relationship between hierarchy culture and behavioral engagement. This means that structured environments can support task-oriented behaviors, especially in regulated fields like manufacturing or banking. Denison and Mishra (1995), on the other hand, said that too much formalization limits creativity and initiative, which in turn stops the growth of greater emotional and cognitive engagement. This duality shows how modern groups have to choose between control and flexibility.

Overall, the results show that cultural patterns do have a direct effect on the level and quality of involvement. Clan and adhocracy cultures encourage people to work together and come up with new ideas, while market cultures stress behaviors that are driven by performance. Finally, hierarchy cultures prioritize speed over emotional connection. These results make it clear that companies need to move toward more balanced cultures that combine structure with flexibility, making workplaces where workers can do their jobs and feel like they fit.

Conclusion

This study set out to examine how organisational culture patterns shape multidimensional engagement outcomes across industries. The findings unambiguously demonstrate that cultural orientation exerts a significant influence on the level and quality of employee engagement. Clan and adhocracy cultures emerged as the strongest predictors, accounting for the greatest share of variance in emotional, behavioural, and cognitive engagement. Organisations that prioritise collaboration, inclusion, adaptability, and innovation foster greater emotional connectedness, intellectual commitment, and intrinsic motivation among their employees. Market-oriented cultures were found to encourage goal-directed behaviour and performance drive, while hierarchical systems sustain operational consistency at the expense of emotional and cognitive engagement depth.

The findings also establish that no single culture type consistently maximises engagement across all dimensions. Rather, organisations that balance structural consistency with adaptive flexibility, and performance orientation with relational cohesion, achieve the most favourable composite engagement profiles. By quantifying the relative effects of each culture type, the study advances the empirical basis for identifying which cultural orientations most powerfully reinforce multidimensional engagement. In conclusion, organisations seeking to enhance emotional, behavioural, and cognitive engagement should cultivate participatory, learning-oriented, and change-adaptive cultures that align organisational values with employees' intrinsic motivational

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drivers, thereby sustaining performance across diverse cross-industry contexts.

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