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Article

Can Strategic Agility Help Retain Public Sector Employees in Times of Uncertainty? A Longitudinal Study

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Abstract: The world is undergoing significant transformations that compel leaders to embrace more resilient and agile approaches to sustain positive organizational performance. While research concerning organizational strategic agility is growing, its value and application in the public sector are under-researched. This paper aims to explore the role of organizational strategic agility (OSA) in public sector organizations, how perceived OSA contributes to employee intentions to stay, and identify whether this effect is sustained over times of uncertainty. We use a longitudinal study and panel data from the public sector annual engagement survey before, during, and after the COVID-19 crisis, and perform a fixed-effect OLS regression to empirically analyze the impact of the employee perception of trust in leadership, supervisor support, and organizational strategic agility on employee intention to stay (ITS). The findings provide evidence of the value of organizational strategic agility for employees of the organization as a factor positively contributing to intentions to stay in times of uncertainty and identify trust in leadership as an essential contributor to developing OSA in the public sector. It contributes to understanding the value of organizational strategic agility for employees inside the organization in times of uncertainty. It captures the positive effect on employees over organizational and time effects, thus providing evidence of sustained impact.

Keywords: organizational agility; strategic agility; public sector; intention to stay



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1. Introduction

Increasing uncertainty and the complexity of the environment in line with continuous change are increasingly becoming the norm rather than the exception (Singh et al., 2013; Denning, 2018). Scholars argue that existing theories of organizational adaptation are insufficient in addressing life-threatening events such as natural disasters, war, terrorist attacks, and pandemics (Mithani, 2020). Given that the recent COVID-19 pandemic is unlikely to be the last global health crisis, and war has entered Europe, researchers argue that the level of organizational preparedness for such high-probability events is concerning low (Phan & Wood, 2020). This situation highlights the importance of adopting more dynamic and responsive strategies to withstand and thrive in unpredictable and challenging environments. In this dynamic environment, organizations need to develop strategic agility (Aloulou et al., 2024), which has now become a requirement that differentiates successful organizations from those that struggle (Bangura & Lourens, 2024).

Not surprisingly, the number of research papers on organizational agility is growing (Singh et al., 2013), and its importance is commonly recognized (Arteta & Giachetti, 2004). Organizational agility is a complex and multidimensional concept, with various dimensions

and frameworks used to analyze it (Zitkiene & Mindaugas, 2018). It is defined as a combination of flexibility, nimbleness, and speed (Singh et al., 2013). Similarly, resilience is characterized as the capacity to navigate adversity, endure shocks, and continuously adapt and accelerate in response to ongoing uncertainties and disruptions (Brende & Sternfels, 2022). Researchers argue that organizational agility, the ability to quickly sense and respond to environmental changes, is crucial for success in today's dynamic business environment. However, it is rarely associated with public sector organizations (Dowdy et al., 2017).

The current global environment presents a significant need and an opportunity for systemic and structural reform within public sector organizations. However, public sector organizations face several constraints that can limit their flexibility, efficiency, and overall performance. These constraints often stem from their unique mandates, structures, and accountability requirements, for example, political influence and the necessity of democratic decision-making, the requirement for public support, the absence of market pressures, and employment challenges, including lower salaries (Alford & Greve, 2017). Bureaucratic inertia and limited resources constrain the speed of action (Perry & Christensen, 2015). Additionally, measuring the outcomes of public sector organizations is inherently challenging due to the usually unclear relationship between inputs and outcomes (Mulgan, 2009). Traditional strategies which work well in a stable environment currently need adaptation (Hamalainen et al., 2012). Scholars suggest that adopting an agile approach could enable public sector leaders and decision-makers to manage better the increasing complexity and volatility they face (Doz et al., 2018). However, empirical evidence supporting these assertions remains limited. Moreover, becoming agile is more complex for public sector organizations.

Given these considerations, exploring how public sector organizations can integrate agility and resilience into their operations is imperative. This could involve rethinking traditional governance structures and decision-making processes for greater flexibility and responsiveness. Moreover, understanding the specific mechanisms through which agility and resilience can enhance public sector performance will be crucial for addressing the unique challenges these organizations face. Further research is needed to empirically validate the benefits of agility in the public sector, particularly regarding their impact on organizational effectiveness and the ability to deliver public value in an increasingly complex and uncertain world.

Despite the expanding research on organizational agility and resilience, studies focusing on public sector organizations are still scarce, particularly with the focus on strategic agility, which is a more forward-looking and proactive organizational capability, as well as on how organizational strategic agility benefits employees during times of change and uncertainty. When organizations are often forced to restructure or downsize, employees highly value organizational agility. It can foster a sense of security that the organization is resilient enough to withstand challenges. We argue that perceived organizational strategic agility will positively impact employee retention within the organization. Enhancing our understanding of these dynamics is crucial for developing strategies supporting organizational resilience and employee stability in uncertain times.

Given that existing studies on organizational agility that address mechanisms inside organizations are mainly cross-sectional and do not examine the effect over time, we raise the following question: Does perceived organizational strategic agility (OSA) influence employees' intention to stay during times of uncertainty? Does this effect hold over time, and what are the "enablers" of organizational strategic agility?

This paper aims to analyze the impact of organizational strategic agility in public sector organizations in times of uncertainty on employee intention to stay.

In formulating the theoretical framework, we apply social exchange theory (SET) and job embeddedness theory (JET) to explain why perceived organizational agility impacts employee intentions to stay. While SET highlights the transactional aspect (e.g., agility as a signal of investment in employees), job embeddedness theory explains how agility fosters relational and contextual factors that strengthen employees' decision to stay.

We empirically analyze the impact of perceived OSA on employee intention to stay using a longitudinal study and panel data drawn from public sector engagement surveys in Latvia, which took place in 2019 (T1), in 2021 (T2 during the third wave of COVID-19 after a strict lockdown), and 2023 (T3). The total number of respondents included in this study is 13,737, representing 58 public sector organizations. The results of this research suggest that when employees perceive their organizations as being agile, they are more willing to stay, and the positive effect of organizational agility holds over time and organizational effects.

The rest of the article is organized as follows. The next section presents definitions of organizational agility, organizational strategic agility (OSA) focusing on the public sector, its antecedents and consequences, theoretical considerations, and hypotheses. The following section describes the survey design, research context, and approach to data analysis. The panel data analysis, results, and discussion follow this. Conclusions, implications, and future research directions are given in the final section.

2. Theoretical Foundations

2.1. Organizational Strategic Agility in Public Sector

Research and theorizing about agile organizations have significantly increased during the past decades (Azevedo et al., 2024). The concept of "agility" within organizational research encompasses attributes such as flexibility, nimbleness, and speed, and has increasingly been recognized as a source of survival in fast-paced and complex environments (Singh et al., 2013). While definitions of organizational agility share core elements like adaptability, speed, and competitive advantage, they differ in emphasis—some focus on agility as a response mechanism, while others highlight proactive innovation and strategic flexibility.

Agility is the organizational capability to move easily and quickly adapt to changes (Aloulou et al., 2024). Holbeche (2015) characterizes organizational agility as the ability to act swiftly, flexibly, and decisively. Similarly, organizational agility is also defined as a firm's capacity to perceive and respond to environmental shifts by deliberately altering the magnitude of variety and the rate at which it generates this variety relative to its competitors (Singh et al., 2013, p. 10). These definitions focus on speed and flexibility, foundational to strategic agility, but they do not explicitly address long-term strategic shifts.

Another perspective frames organizational agility as a core competency and a source of competitive advantage that necessitates strategic thinking, an innovative mindset, the ability to exploit change, and a constant drive to remain adaptable and proactive (Harraf et al., 2015). Researchers associate organizational agility with meta-capabilities (Doz & Kosonen, 2010) and dynamic capabilities (Teece et al., 2016). This work links agility to strategic competencies, aligning closely with strategic agility as a means of sustaining competitive advantage. The dynamic capabilities framework provides a unifying perspective, framing agility as a firm's ability to continuously sense and respond to environmental shifts effectively. Organizational agility, as a critical dynamic capability, is a firm's ability to sense environmental changes and respond efficiently and effectively to them (Felipe et al., 2016).

The context of the public sector poses some specifics on understanding the concept. Addressing organizational agility in the public sector, researchers refer to the capacity to proactively identify and respond to emerging policy challenges to avoid unnecessary crises and carry out strategic and structural changes in an orderly and timely manner (Doz & Kosonen, 2008). Organizational agility in the public sector refers to the ability of

government institutions and agencies to adapt quickly to changing policies, regulations, and the needs of citizens while maintaining accountability and transparency (Pollitt, 2013), as well as without compromising public trust (Janssen et al., 2017). In the resource-constrained environment of public sector organizations, researchers define organizational strategic agility (OSA) as an organization's ability to proactively identify and respond to emerging policy challenges to avoid unnecessary crises and carry out strategic and structural changes in an orderly and timely manner (Doz et al., 2018).

The various definitions of organizational agility align closely with strategic agility, but they differ in scope and emphasis. While organizational agility broadly refers to a firm's ability to adapt quickly to change, strategic agility focuses on a more deliberate, forward-looking capability that enables firms to proactively shape their future. Agility enables firms to operate efficiently in changing environments. Strategic agility allows them to shape the future, drive innovation, and create long-term success. Strategic agility is an extension of organizational agility, incorporating not just fast adaptation but also proactive transformation and strategic foresight. For the purpose of this research, organizational strategic agility (OSA) refers to an organization's ability to sense, respond, and adapt quickly to environmental changes, market dynamics, and emerging opportunities while maintaining long-term strategic goals.

2.2. Theoretical Framework and Hypotheses

To explain the internal value of organizational strategic agility (OSA), specifically its impact on employee intent to stay (ITS), we draw on social exchange theory (SET) and job embeddedness theory (JET). We argue that SET explains agility as a signal of investment in employees, and JET explains how strategic agility fosters relational and contextual factors that strengthen employees' decisions to stay.

Social exchange theory (SET) emphasizes the role of reciprocity in social and organizational relationships and states that employees assess the give-and-take relationship between themselves and their organization (Blau, 2017).

Employees who perceive their organization as agile (i.e., capable of sensing, adapting, innovating, and responding to change) may feel it is competitive, future-proof, and committed to long-term success. This fosters a sense of reciprocity: employees are likelier to stay and invest effort because they perceive the organization as offering stability, growth opportunities, and relevance in a changing market. While focusing on organizational support, researchers connect the core tenets of SET to employee retention by exploring the reciprocity between employees and their organization (Eisenberger et al., 1986). Cropanzano and Mitchell (2005) link SET to workplace behaviors, including employee commitment, job satisfaction, and retention. Consequently, perceiving an organization as strategically agile signals workforce investment and adaptability, enhancing employees' commitment.

One of the theories used by researchers exploring why employees decide to stay or leave organizations is the job embeddedness theory (JET) (Lee & Mitchell, 1994). Job embeddedness theory states that employees stay in an organization when they are embedded through links, fit, and sacrifices (Mitchell et al., 2001). JET is linked to organizational strategies aimed at increasing employee retention and social capital (Holtom et al., 2006). Since agile organizations promote collaboration, networking, and strong interpersonal connections, this strategic agility aligns with employees' desire for challenging, dynamic, and innovative work environments, making them feel they belong. Therefore, employees perceive leaving an agile organization as a more significant loss, especially if it means losing access to dynamic opportunities and resources. Perceptions of strategic agility enhance employees' sense of belonging and their embeddedness, thus reducing their intentions to turnover.

Indeed, several studies have found that organizational strategic agility tends to decrease employee retention in the organization (Tripathi & Sankaran, 2021; Bangura & Lourens, 2024; Breu et al., 2001; Felipe et al., 2016). Based on the above considerations, we formulate the following hypothesis (see Figure 1):

H1: *Organizational strategic agility positively relates to employee intention to stay during environmental turbulence.*

2.3. Enablers and Consequences of Organizational Strategic Agility in Public Sector

While internal mechanisms of organizational strategic agility in the public sector remain under-researched, researchers include internal dimensions, and refer to agility in public sector organizations as the ability to collaborate across departments and with external stakeholders to deliver services that are responsive to the rapidly evolving expectations of citizens (Osborne et al., 2013). Researchers identify a list of agility enablers, including processes, knowledge management, and human resources, that contribute to organizational agility (Marhraoui & Manouar, 2017). Organizational strategic agility, which allows employees to perform in rapidly changing contexts, is influenced by factors such as workplace belongingness and willingness to embrace organizational change (Prieto & Talukder, 2023). This indicates that a more agile work environment positively impacts employee resilience and performance, potentially influencing their intention to stay. Moreover, when there is a strong alignment between an individual's job and their psychological needs, which fosters optimism and well-being, employees tend to exhibit higher levels of job satisfaction, commitment, and intention to stay with the organization (Shalley et al., 2000).

A number of recent studies exploring agility in public sector organizations have emphasized the role of leadership (Holbeche, 2015). Researchers consider leadership as central to creating agile organizations, emphasizing strategic and operational dimensions (Joiner, 2019). The leader's role is to promote an agility culture to the staff at all levels of the organization (Ludviga & Kalvina, 2023).

Since OSA is characterized by strategic foresight and bold decision-making, trust in leaders is essential (Doz & Kosonen, 2010). Bachmann and Inkpen (2011) found that trust reduces the need for bureaucratic oversight, enabling faster decision-making in dynamic environments (Bachmann & Inkpen, 2011). Trust is defined as "the willingness of a party to be vulnerable to the outcomes of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (Mayer et al., 1995, p. 712).

According to Dirks and Ferrin (2002), trust in leadership refers to the confidence and belief that employees have in their leaders' competence, integrity, and intentions. It involves the expectation that leaders will act in the best interest of the organization and its people, demonstrating consistency, transparency, fairness, and ethical behavior. Trust in leadership fosters psychological safety, encouraging employees to engage, take risks, and align with the organization's vision and strategic goals (Dirks & Ferrin, 2002). Trust in leadership facilitates extra-role behaviors like organizational citizenship behavior (Burke et al., 2007).

Research suggests that organizational justice and commitment positively influence the intention to stay (Mahfouz et al., 2022). This implies that a fair and just work environment, which also aligns with the principles of workplace agility, can contribute to higher employee retention. More specifically, Burke et al. (2007) propose that trust in leadership will decrease employee turnover. Similarly, multiple studies have identified the impact of trust in leadership on employee intention to stay (Amitabh & Rachana, 2019). Therefore, we hypothesize the following:

H2: *Trust in leadership positively impacts employee intention to stay.*

H3: *Trust in leadership positively impacts organizational strategic agility.*

Human capital is increasingly recognized as strategically fostering organizational agility (Saha et al., 2017). Consequently, this should relate to all levels of managers, from top leadership to direct supervisory support.

According to Holbeche (2015), supervisors play a key role in building trust, providing guidance, and empowering employees, all of which contribute to agility. Organizational agility is influenced by organizational practices and employee psychological empowerment (Muduli, 2017). Supervisory support enables strategic agility by fostering a culture of experimentation, adaptation, and rapid decision-making (Doz & Kosonen, 2010). Similarly, Fritz and Sonnentag (2009) conclude that employees are more adaptable when they receive emotional and instrumental support from their supervisors during organizational transitions.

Supervisory support is essential for organizational strategic agility because it fosters trust, psychological safety, proactive behavior, and adaptability, enabling employees and teams to respond quickly and effectively to change. Managers who empower and support their teams play a direct role in reducing resistance to change, encouraging learning, and facilitating an agile mindset (Funk, 2024).

Researchers conclude that employees view their supervisor's support as indicative of the organization's support (Eisenberger et al., 1986), and supervisors are directly responsible for employee performance, shaping employees' attitudes and thus influencing their intention to stay (Aguirre et al., 2015). Therefore, the following hypotheses are proposed:

H4: *Perceived supervisory support positively impacts employee intention to stay.*

H5: *Perceived supervisory support positively impacts organizational strategic agility.*

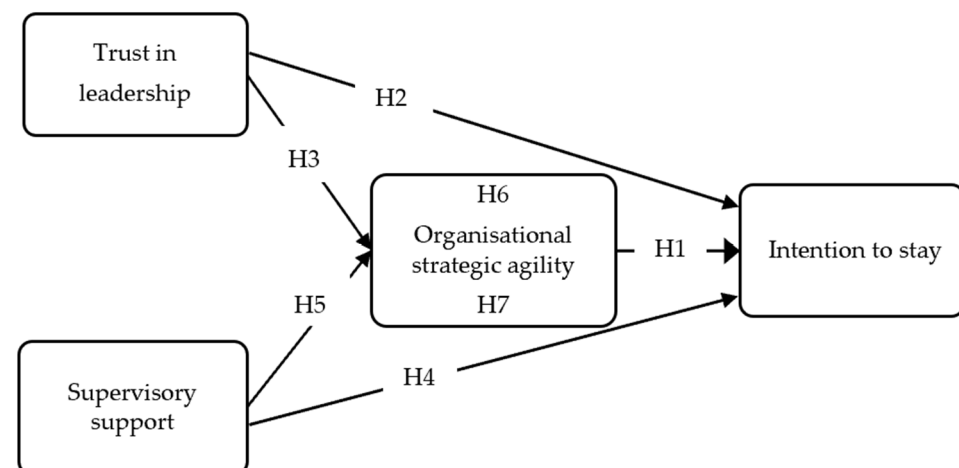


Figure 1. Research model.

Research indicates that agility plays a crucial role in mediating between organizational practices and outcomes (Aloulou et al., 2024), like employee empowerment (Muduli, 2017). This suggests that organizational strategic agility may be a critical mechanism through which leaders and supervisors can help employees feel safe and stay in an organization, especially in times of dynamism and crisis. Therefore, we hypothesize the following (see Figure 1):

H6: *Organizational strategic agility mediates the relationship between trust in leadership and employee intention to stay.*

H7: *Organizational strategic agility mediates the relationship between supervisor support and employee intention to stay.*

3. Materials and Methods

3.1. Participants and Procedures

This research was part of an ongoing longitudinal study (employee engagement survey), conducted in public sector organizations in Latvia in 2019 (T1) before the COVID-19 crisis, in 2021 (T2) during the third wave of COVID-19 after a strict lockdown, and in 2023 (T3). The survey was designed by the authors of this paper. The number of organizations involved in the survey was 154 each year, and the total number of respondents in three waves was 16028. A high level of uncertainty is a characteristic feature of this time period. The first round of the survey (T1) represents the situation before the COVID-19 crisis, which was a relatively stable period. The second round (T2) took place in the fall of 2021. By then, employees had experienced all types of COVID-19-related restrictions, including lockdown. Social distancing in the time of COVID-19 has forced public sector organizations to reorganize work in the virtual environment (Phan & Wood, 2020). By then, employees of public sector organizations for more than a year have experienced uncertainty and turbulence, including remote or virtual work and job and personal insecurity, which makes this timing appropriate for achieving the aim of this research. The third round (T3) was executed when the sector started to recover after restrictions.

The original survey was organized online, and the possibility of a common method bias (CBM) was recognized in the design and execution of the survey (Podsakoff et al., 2003). A psychological separation was used in the survey design as an ex ante control (Kock et al., 2021), and the demographic data were placed between the survey items measuring the dependent variable and those measuring the antecedent variables. Survey participants were assured that the survey was anonymous, that there were no right or wrong answers, and that they should answer questions as honestly as possible (MacKenzie & Podsakoff, 2012). Respondents were granted anonymity and the right to withdraw their participation at any point.

In a panel data study, where data are collected over multiple time periods for the same entities, common method bias (CMB) is generally less of a concern compared to cross-sectional studies. Moreover, data were aggregated at the organizational level. Still, as a post doc measure, Hartman's one-factor test was performed for each year's data. According to it, Factor 1 accounted for 38.5% (T1), 37.9% (T2), and 36.2% (T3) of the variance, indicating that CBM is unlikely to affect the data. However, the limitations of Hartman's test should be acknowledged. Even if a single factor does not explain most of the variance, it does not confirm the absence of common method bias. Still, according to Podsakoff et al. (2003), multi-wave and multi-source data collection helps mitigate CMB by reducing the dependency on a single respondent or a single point in time. Multi-wave studies, where variables are measured at different time periods, help break the artificial covariance that arises when all variables are measured simultaneously. Additionally, these approaches improve causal inference by reducing concerns about reverse causality.

The survey, conducted in three rounds, resulted in 16028 valid responses. A total of 76.4% of the respondents were female, 22.7% were male (this corresponds to the gender distribution in public sector organizations in Latvia), and 0.9% did not indicate their gender. The most represented age group was 35–44 years (31%), followed by 45–54 (26%). A total of 26.4% of the respondents were managers, 66.4% were specialists, and the remaining 7.2% indicated their positions as administrative support functions. Respondents' average tenure in the public sector was 8.3 years, while the average tenure in the organization was 5.5 years.

Data were aggregated at the organizational level for this research, and average values for all research variables were calculated. Only those organizations in which the number of respondents exceeded 30% in all three rounds were retained. The final sample for this paper consists of 59 organizations with a total of 13,737 respondents. The average number of respondents per year per organization ranges from 9 to 731, corresponding to the size of the organizations.

3.2. Measures

Organizational strategic agility (OSA) was measured using [Park \(2011\)](#) and [Nafei \(2017\)](#), who proposed a nine-item scale that includes three dimensions of organizations' strategic agility: sensing, decision-making, and acting agility. This aligns with the agility resilience combination proposed by [Holbeche \(2015\)](#) and the dynamic capabilities view introduced by [Teece et al. \(2016\)](#). We use three items to measure each of the strategic agility's sub-dimensions. The sample item for sensing agility is 'My institution is able to identify changes in the external environment that affect its operations in a timely manner'; for decision-making agility, it is 'My organization analyzes important events concerning customers and technology without any delay'; and for measuring acting agility, it is 'My organization can re-adjust operations carried out in a timely manner'. The internal consistency (Cronbach's alpha) was 0.89, 0.82, and 0.94 at T1, T2, and T3, respectively.

Staff turnover is a widely used metric in managing the current workforce. It is measured using the intention to leave (ITL) or recently popular intention to stay (ITS) metric. The use of the ITS metric is based on the assumption that it is a more positive construct ([Nancarrow et al., 2014](#)). Still, several similar tools exist to measure the ITS ([Graham, 2013](#)) ([Shalley et al., 2000](#)). We measured the intention to stay with five items; the following are examples: 'I would gladly recommend the institution I work for to friends and acquaintances as a good place to work' and 'I am proud to work in this institution'. The scale produced internal consistency (α), ranging from 0.82 to 0.89 at all three rounds.

As management factors, we measure trust in leadership and supervisor support. Several validated tools and scales exist to measure trust in leadership, often assessing factors like competence, integrity, benevolence, transparency, and reliability. For example, Adams developed the trust in leaders scale ([Adams et al., 2008](#)) and Shay and Dolan proposed the trust me scale to measure manager–employee trust ([Shay & Dolan, 2004](#)). The leadership trust scale, proposed by [Shockley-Zalabak et al. \(2000\)](#), focuses on leadership transparency, competence, and communication within organizations. The trust in leadership scale by [Gillespie and Mann \(2004\)](#) focuses on employee perceptions of trust in their immediate supervisors and senior leadership, measuring openness, delegation, and ethical behavior. Härenstam and colleagues developed an eight-item tool to measure organizational trust and supervisory trust, specifically in public sector organizations ([Härenstam et al., 2024](#)).

Based on the work of these authors, we initially developed twelve items focusing on specifics of the public sector to measure trust in leadership, such as 'I believe that the leaders of my institution generally manage the institution well' and 'I trust the political leadership of my institution'. The items were discussed in interviews with sector professionals, and the number was reduced to eight to decrease the total number of items in a survey. The scale produced a Cronbach's alpha of 0.87 to 0.93 at the three rounds.

We measured supervisory support on a six-item scale developed following ([Greenhaus et al., 1990](#); [McGilton, 2010](#); and [Caillier, 2014](#)). The items were developed based on previous research and modified based on interviews with representatives of organizations to measure the processes specific to the public sector organizations. Sample items are 'My direct manager helps me understand my contribution to achieving the institution's goals'

and ‘My supervisor gives me helpful feedback about my performance’. The scale produced Cronbach’s alpha coefficients ranging from 0.89 to 0.94 at T1 to T3, respectively.

Items were scored on a 5-point Likert-type scale ranging from 1 (completely disagree) to 5 (completely agree).

3.3. Data Analysis Approach

This paper uses an aggregated data set on 59 organizations with more than a 30% response rate in each of the three rounds, including 13,737 respondents over three years. Our final balanced panel includes 177 organization-year observations.

Panel data regression was chosen as a method of data analysis because it allows for controlling for the omitted variable bias, which can occur when important unobserved variables are not considered (Stock & Watson, 2012). A fixed-effects regression was used, which is an extension of OLS multiple regression. This approach allows us to control for unobserved variables that differ from one entity to another, such as the area of responsibility or organization size, but do not change over time. It also allows us to control for variables that vary over time, such as the COVID-19 impact, but do not vary across organizations. A combined organization and time effects model was created. Since time and entity variables are both nominal, dummy variables were created. A balanced panel with all observations for each entity and time period (Stock & Watson, 2012) was made, and only those organizations with data for all three time periods and all variables were retained.

4. Results

Before hypothesis testing, the descriptive statistics for perceived strategic agility and intention to stay were calculated. Table 1 provides mean values and standard deviations calculated for T1, T2, and T3.

Table 1. Descriptive statistics and mean comparisons.

Variable	Mean (STDEV)			Difference T1/T2			Difference T2/T3		
	T1	T2	T3	t-Statistic	p	Cohen’s d	t-Statistic	p	Cohen’s d
Organizational strategic agility	3.37 (0.39)	3.62 (0.339)	3.56 (0.353)	−6.29	<0.001	−0.819	2.79	0.007	0.363
Intention to stay	3.46 (0.276)	3.83 (0.312)	3.74 (0.332)	−11.76	<0.001	−1.531	3.06	0.003	0.398

A paired sample *t*-test reveals key differences across periods. During T2, perceived strategic agility and intention to stay increased; however, both measures slightly decreased in T3. Cohen’s *d* (*d* = 0.363 and 0.498) represents a small to medium effect size. This indicates that while the difference between the time pairs is not very large, it is noticeable and statistically significant.

To test the hypotheses, we perform two fixed-effect (FE) regression models with fixed organization and time effects (see Tables 2 and 3) using two independent variables (intention to stay and strategic agility). This method was chosen because of the aim to analyze how strategic agility affects the intention to stay over time while controlling for other effects (Stock & Watson, 2012). A fixed-effect regression is recommended over a random-effect regression because it allows for controlling for differences between organizations and over time (Wooldridge, 2010). The aim of this research was not to study differences in strategic agility between organizations; we still assume that these exist. As well as the timing of the study, before, during, and after COVID-19, assume that there could be time effects. A fixed-effect regression allows us to control for variables that differ across organizations as well as those that vary across time.

Collinearity statistics revealed that VIF values ranged from 1.03 to 3.88 and were less than 5, thus indicating that collinearity was not a problem for the model. Tolerance values range from 0.258 to 0.971, indicating that multicollinearity is generally not a concern. The Durbin–Watson (DW) test for autocorrelation was performed with research variables, and the results showed a DW statistic = 2.62 and p -value = 0.82. The high p -value implies the DW statistic's deviation from 2 is likely due to chance, not systematic autocorrelation. Still, the regression residuals appear to meet the assumption of independence (Gujarati & Porter, 2015). Even though the DW statistic of 2.62 suggests potential negative autocorrelation, the p -value of 0.82 indicates that this result is not statistically significant. Therefore, we conclude that no substantial evidence of autocorrelation exists in the residuals.

Table 2 shows the results of fixed-effect regression models predicting employee intention to stay. Model 1 presents the results of the regression of strategic agility on the intention to stay without additional explanatory variables and without time and organizational fixed effects. As the coefficient is positive and statistically significant ($\beta = 0.69$, $p < 0.001$) and the model explains 55% of the outcome, we conclude that organizational strategic agility has a strong positive effect on employee intention to stay.

When additional explanatory variables, including trust in leadership and supervisory support, are entered, the model's predictive power increases by 6% (see Model 2). The effect of leadership is positive and statistically significant ($\beta = 0.37$, $p < 0.001$), whereas the impact of perceived supervisor support is not significant. Including leadership and supervisor support reduces the estimated effect of organizational strategic agility from 0.69 to 0.39.

The following two models include the fixed effects. Model 3 adds organization dummies and increases the predicting power by 23%. Including the organizational effect reduces the effect of leadership, making it statistically insignificant; however, the effect of organizational strategic agility increases to 0.75. We explain this by arguing that employee reactions towards perceived organizational strategic agility develop after experiencing it and over time.

The final regression model, Model 4, extends the analysis by including the time effect. The time effect alone accounts for 7% of the explanatory power. This model has two statistically significant results. The estimated effect of the leadership factor again becomes statistically significant and positive ($\beta = 0.32$, $p < 0.001$), and the effect of organizational strategic agility remains positive and significant ($\beta = 0.28$, $p = 0.007$).

Table 2. Results from fixed-effect regression analysis on intention to stay.

Predictor	Model 1		Model 2		Model 3		Model 4	
Intercept	1.26 ***	(0.16)	1.06	(0.23)	0.71 *	(0.32)	1.61 ***	(0.26)
Perceived strategic agility	0.69 ***	(0.05)	0.39 ***	(0.07)	0.75 ***	(0.12)	0.28 **	(0.10)
Supervisory support			−0.02	(0.09)	0.01	(0.09)	−0.06	(0.07)
Trust in leadership			0.37 ***	(0.08)	0.10	(0.10)	0.32 ***	(0.08)
Fixed effect of organization (n = 58)	no		no		yes		yes	
Fixed Time effect:					yes		yes	
T2–T1	no		no		no		0.26 ***	(0.03)
T3–T1	no		no		no		0.21 ***	(0.03)
R ²	0.55		0.61		0.84		0.91	
ΔR ²			0.06		0.23		0.07	
F			13.05		2.77		44.71	
p			<0.001		<0.001		<0.001	

Standard errors are in parenthesis. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

We interpret our results related to H1, H2, and H4 based on the final model, since multicollinearity was not a problem. Hypothesis 1 predicts that organizational strategic agility is positively associated with employee intention to stay during environmental uncertainty. Our results support H1, since the effect of OST remains positive and highly significant over organizational and time effects ($\beta = 0.28, p < 0.007$). Hypothesis 2 predicts that trust in leadership positively impacts employee intention to stay. Model 4 shows a positive and significant effect ($\beta = 0.32, p < 0.001$); therefore, we support H2. Hypothesis 4 predicts that perceived supervisor support positively impacts employee intention to stay. Model 2, Model 3, and Model 4 illustrate that the impact of supervisor support is nonsignificant (Model 4: $\beta = -0.06, p = 0.4$). Therefore, H3 is not supported.

To test H3 and H5, we use organizational strategic agility as a dependent variable in the fixed-effect regression (see Table 3).

Model 1 in Table 3 presents the results of leadership and supervisor support on organizational strategic agility without the time and organizational fixed effects. As both coefficients are positive and statistically significant (trust in leadership $\beta = 0.68, p < 0.001$; supervisor support $\beta = 0.18, p = 0.0049$) and the model explains 66% of the outcome, we conclude that both variables positively affect organizational strategic agility. However, the effect of leadership is stronger. Model 2 adds organizational fixed effects, adding 26% of the predicting power. Evidently, organizations differ significantly according to the level and mechanisms of strategic agility. When time effects are added in Model 3, leadership's positive and significant impact remains ($\beta = 0.58, p < 0.001$). However, the effect of supervisor support decreases and becomes insignificant ($\beta = 0.13, p = 0.06$). Hypothesis 3 predicted that trust in leadership positively impacts organizational strategic agility, and our results support H3. Hypothesis 5 states that perceived supervisor support positively impacts organizational strategic agility, but our results reject H5.

Table 3. Results from fixed-effect regression analysis on perceived organizational strategic agility.

Predictor	Model 1		Model 2		Model 3	
Intercept	0.38	(0.24)	0.17	(0.26)	0.58 *	(0.24)
Supervisory support	0.18 *	(0.09)	0.20 **	(0.07)	0.13	(0.07)
Trust in leadership	0.68 ***	(0.06)	0.63 ***	(0.06)	0.58 ***	(0.05)
Fixed effect of organization (n = 58)	no		yes		yes	
Fixed Time effect:	no		no		yes	
T2–T1					0.14 ***	(0.02)
T3–T1					0.10 ***	(0.02)
R ²	0.66		0.91		0.93	
ΔR^2			0.26		0.02	
F			5.77		19.11	
p			<0.001		<0.001	

Standard errors are in parenthesis. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

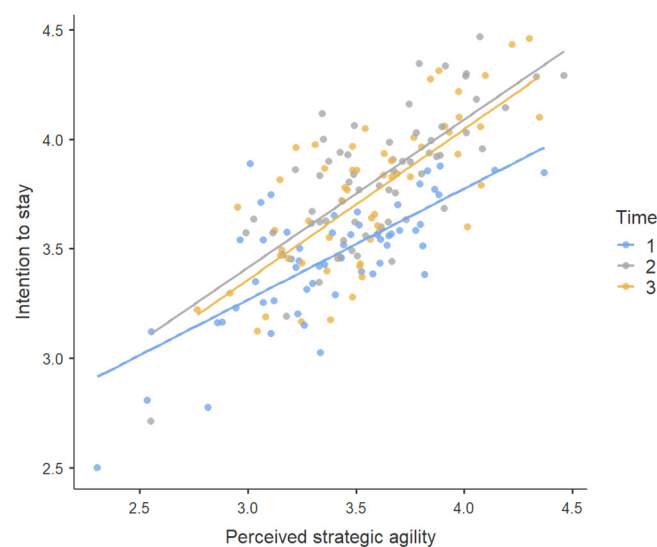
We used a mediation analysis to test hypotheses H6 and H7, following Baron and Kenny's (1986) analysis. The mediation analysis reveals the mediating role of strategic agility in the relationship between trust in leadership and supervisory support, as presented in Table 4. To determine the strength of mediation, the variance accounted for (VAF), as suggested by Hair et al. (2014), is calculated. Our result shows that a partial statistical mediation of strategic agility was observed for both relationships (variance accounted for VAF = 0.33 and 0.40) (Hair et al., 2014). Thus, these findings confirm H6 and H7. We acknowledge that causality cannot be established from the current design; our results still highlight that organizational strategic agility is an important mediator in translating trust in leadership and supervisory support into employee intention to stay in the organization.

Table 4. Results of the mediation analysis of strategic agility.

Independent Variable	Direct Effect	Indirect Effect	Total Effect	VAF	Mediation
Trust in leadership	0.32 ***	$0.58 *** \times 0.28 ** = 0.16 **$	0.48 **	0.33	Partial mediation
Supervisory support	−0.06	$0.13 \times 0.28 ** = 0.04 **$	0.10 *	0.40	Partial mediation

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Figure 2 visualizes the correlation between employee intention to stay and organizational strategic agility, split by three time periods. The slopes for Time 1, Time 2, and Time 3 indicate how the relationship between these variables evolves over time. A flatter slope at T1 (before COVID-19) indicates a weaker relationship. In contrast, steeper slopes at T2 and T3 suggest a stronger relationship between the two variables—a more significant change in intention to stay for a unit change in perceived organizational agility. Differences in slopes could reflect external or organizational changes affecting the dynamics between the two variables. We conclude that the relationship between organizational strategic agility and intention to stay strengthens over times of uncertainty. Since the slope becomes steeper at later time points (during and after COVID-19), this could suggest that perceived strategic agility has an increasing influence on the intention to stay over times of uncertainty and unpredictability.

**Figure 2.** Correlation between strategic agility and intention to stay.

5. Discussion

This research aimed to explore the role of strategic agility in public sector organizations in times of uncertainty and how perceived organizational strategic agility (OSA) contributes to employee intention to stay. Using panel data drawn from an annual engagement survey of public sector organizations in Latvia, we investigated the relationship between perceived OST, trust in leadership, perceived supervisory support, and employee intention to stay.

We conclude that perceived organizational strategic agility positively impacts employee intentions to stay. Moreover, it partially mediates the relationship of trust in leadership and supervisor support to employee intention to stay. Thus, we find evidence of strategic agility as a partial, statistically significant mediator in times of uncertainty. These findings are aligned with the social exchange theory (SET) and job embeddedness theory (JET). SET posits that workplace relationships are based on reciprocity, where employees evaluate the benefits they receive (Cropanzano & Mitchell, 2005), for example, organizational support, development opportunities, or a positive work environment, and adjust

their commitment accordingly. In this context, OSA is perceived as a support that enhances employees' sense of value and trust. In the public sector, where bureaucratic structures and rigid processes often dominate, perceived OSA signals to employees that their organization can adapt to challenges and address evolving societal needs. This may be related to adaptation to policy changes or the ability to innovate. Researchers link organizational strategic agility to employee empowerment (Muduli, 2017; Sajuyigbe et al., 2023). In the public sector, employees may feel empowered when they perceive that their organization can effectively handle shifting government priorities. Similarly, agility allows organizations to remain relevant in addressing societal demands, which can increase employees' pride in their work. This reciprocal relationship fosters a sense of obligation and loyalty among employees. When employees perceive that their organization is agile and responsive, they may feel a greater sense of obligation to reciprocate by remaining committed. This is particularly important in the public sector, where intrinsic motivations such as serving the public good often play a central role.

This public service motivation is related to the job embeddedness theory. JET explains employee retention by focusing on three key dimensions—fit, links, and sacrifice (Mitchell et al., 2001). OSA in the public sector can improve the alignment between employees' personal values and organizational goals. Employees who value innovation, responsiveness, and impact may feel a stronger fit with an organization that is perceived as strategically agile. Agility fosters stronger professional networks within and outside the organization by promoting collaboration, cross-departmental initiatives, and partnerships. These links increase employees' attachment to the organization.

In an agile organization, employees may perceive greater opportunities for growth, skill development, and meaningful work. Researchers found that agile organizations create opportunities for learning and skill development (Tripathi & Sankaran, 2021), innovation, and adaptability in employees (Breu et al., 2001). Leaving such an organization would involve sacrificing these opportunities, which may deter turnover in the public sector, where job security and benefits traditionally anchor retention and organizational strategic agility adds a layer of psychological attachment. Employees may perceive that their organization is not just a stable employer but also one that fosters innovation and growth. This perception strengthens their embeddedness, making it harder for them to leave.

While agility is often associated with private sector efficiency, it is equally important in the public sector. Perceived organizational strategic agility may counteract the frustrations of hierarchical and slow-moving decision-making, offering employees hope that their efforts contribute to timely and meaningful outcomes. Since public service motivation is essential for employees, OSA can amplify their sense of purpose by effectively demonstrating the organization's ability to deliver on its public mission. For example, a public sector agency that quickly adapts to crises (e.g., pandemics, natural disasters, military incidents) may instill pride and reinforce employees' intention to stay, as they see their work directly impacting societal well-being.

We found that leadership is a driver of public-sector organizational strategic agility. These findings align with Gallup's (2018) report, which indicates that organizations can only be agile with great leaders. Similarly, Joiner (2019) highlights the importance of leadership agility in creating agile organizations. Researchers have advocated for the relationship between organizational agility and organizational learning strategy (e.g., Saha et al., 2017), highlighting the importance of leadership.

Our analysis shows that the effect of perceived supervisor support on strategic agility and intention to stay was not statistically significant in the public sector. We explain our findings in light of the unique nature of public sector employment, where structural and institutional factors may outweigh the influence of supervisor support.

One reason might be public sector organizations' bureaucratic structure and rigidity (Doz et al., 2018). Public sector organizations often have hierarchical decision-making processes, rigid policies, and strict regulations, which can limit employees' ability to act with agility, regardless of their supervisor's support. Indeed, Rainey (2009) describes how bureaucratic constraints limit individual and organizational adaptability. Strategic agility often requires flexibility and quick decision-making, which may not be influenced at the supervisory level but rather at higher organizational or policy levels, such as leadership. Organizational policies and procedures often take precedence over individual relationships. Employees may feel that institutional factors dictate their retention more than their supervisors (Rosenbloom et al., 2015).

The absence of a statistically significant effect of supervisory support on intention to stay may also be explained by job security and reduced sensitivity to turnover. Lewis and Frank (2002) observed that, typically, public sector jobs provide strong job security, benefits, and pensions, reducing the impact of supervisor support on employees' intention to stay. Employees may stay due to external job market conditions or personal reasons rather than direct workplace support. Moreover, alternative factors can influence the intention to stay, which plays a stronger role in retention than supervisor support, such as public service motivation. If employees are committed to serving the public good, their decision to stay is value-driven rather than dependent on immediate supervisor support (Perry & Wise, 1990). This leads to the conclusion that in public sector organizations, employees' decisions to stay are often influenced more by organizational-level factors, such as job stability, benefits, mission alignment, and even perceived organizational strategic agility, than by interpersonal relationships with supervisors.

The nonsignificant effect of supervisory support on strategic agility may be attributed to the nature of public sector leadership. Employees may view supervisors as administrative managers rather than strategic leaders, reducing the impact of their support. Van Wart (2013) argues that leadership in the public sector is more compliance-driven than agility-oriented. Consequently, supervisors in public institutions often lack discretionary power to implement meaningful changes that enhance agility. Indeed, while strategic agility in the private sector frequently depends on employee initiative and adaptability, which can be influenced by supportive leadership, in the public sector, agility is often driven by policy changes, political decisions, and institutional mandates, making individual supervisor support less relevant (Doz & Kosonen, 2010).

The first empirical contribution of the present paper concerns the drivers of organizational strategic agility specific to public sector organizations. Our analyses found that to increase strategic agility, public sector organizations need leaders' involvement and commitment to creating an agile culture. Organizations can use these findings to foster their strategic agility. Our results indicate that being agile has a positive impact not only on organizational-level outcomes but also within the organization, as it increases employee intentions to stay. By applying SET and JET, we conclude that perceived organizational strategic agility in the public sector strengthens employees' sense of reciprocity and enhances their embeddedness through improved fit, links, and sacrifice. These dynamics are particularly critical in the public sector, where employees often navigate bureaucratic constraints and are driven by intrinsic motivations to serve the public. An agile organization signals a commitment to innovation, responsiveness, and employee well-being, thus fostering a stronger intention to stay. Therefore, we contribute to understanding the value of strategic agility, with a focus on the unique dynamics of public sector organizations.

In the context of SET, our results reframe trust in leadership as a macro-level exchange that goes beyond individual supervisors. Evidently, public sector employees may prioritize exchanges with the organization and society over supervisors, requiring a refinement of

how social exchange works in public sector settings. Strategic agility is an outcome of trust-based exchanges, demonstrating that social exchanges not only drive commitment but also shape organizational adaptability.

Moreover, our results indicate that strategic agility and leadership credibility can serve as job-embeddedness factors, suggesting that employees remain when they trust that their organization can evolve successfully. Trust in leadership enhances the 'fit' dimension of job embeddedness, particularly in hierarchical organizations, such as those in the public sector. Thus, our findings contribute to JET, suggesting that structural and mission-driven embeddedness may be more important than supervisory relationships and thus calling for an expansion of JET to include policy-driven job attachment factors.

6. Conclusions

The analysis validated the positive impact of perceived organizational strategic agility on employee intention to stay within the public sector context and that this impact is likely to be sustained in times of uncertainty. Since environmental uncertainty and turbulence will likely continue (Phan & Wood, 2020), governments and public sector organizations need to develop strategic agility to deal with unexpected uncertainties and adapt continuously. There is a need to create a shared understanding of the drivers of agility (Brende & Sternfels, 2022). One of the conclusions of this research is related to leaders as primary drivers of the strategic agility of public administration organizations. The results indicate that leaders should embrace agile mindsets and create agile cultures. Doing so will contribute to employee retention.

Trust in leadership is indeed pivotal for enabling strategic agility, especially in the complex and bureaucratic environment of the public sector. Building on these findings, we suggest some managerial and policy actions that go beyond simply advocating for an "agile mindset". Public sector organizations could support long-term thinking and adaptive capacity in rapidly changing policy environments by establishing strategic foresight units (Caldwell, 2005). As Teece et al. (2016) advocated, institutionalized cross-functional collaboration could reduce siloed thinking, accelerate information flow, and build interpersonal trust across units. Moreover, leaders of public sector organizations should encourage calculated risk-taking and learning from experimentation, which is crucial for agility (Ansell & Gash, 2008). They should send a clear signal that adaptive behavior is valued, thereby reducing fear-based rigidity. This could be accomplished by adjusting performance appraisal systems to reward experimentation, learning from failure, and responsiveness to emerging challenges (Van der Voet et al., 2016).

Finally, we acknowledge that this study has some limitations. First, it should be acknowledged that causality cannot be definitely established due to the observational design. Our fixed-effects regression model controlled for organization and time effects but cannot control for omitted variables that vary across entities over time (Stock & Watson, 2012). For example, such a factor could be related to technological advancements. The adoption of new technologies might affect organizations unevenly and evolve over time. Organizations investing in cutting-edge technology might experience increased agility and employee engagement. Also, regulatory or organizational policy changes (e.g., restructuring, changes in benefits) might impact organizations unevenly and across different time periods. For example, an organization introducing flexible work arrangements might see an increase in intention to stay. Our model has a limited number of predictor variables.

There is also a limitation concerning generalizability. Our findings are based on public sector organizations within Latvia, which may limit the applicability of the results to other regions with differing characteristics.

Future studies may extend the model by incorporating additional independent variables and examining their contribution to organizational strategic agility. For example, future research could examine higher-level leadership, policy flexibility, and public service motivation as key drivers of strategic agility and retention. A deeper analysis on how leaders could contribute to increasing OSA could bring additional insights. Extending the study to other regions and countries and comparing it with the business sector could also provide essential insights.

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