

Sustaining Professional Military Service: Evidence from the Lithuanian Armed Forces

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Abstract

Sustaining professional military service is a critical challenge for small NATO member states facing prolonged security pressures and demographic constraints. This study examines the determinants of long-term professional military service sustainability in the Lithuanian Armed Forces, situating personnel retention within a broader defense sustainability and resilience framework. Using a quantitative research design, data were collected through a structured questionnaire administered to 207 professional military service soldiers serving in the Infantry Battalion. Hierarchical regression analysis was employed to assess the incremental contribution of structural, organizational, attitudinal, and personal factors to soldiers' intention to remain in long-term service. The results indicate that working environment quality provides an essential structural foundation for retention, while professional satisfaction significantly enhances commitment to continued service. Most notably, personal values and family influence emerged as the strongest predictor of long-term retention intentions, substantially increasing the explanatory power of the model. Organizational and career-related factors showed indirect effects when more proximal determinants were considered. The findings suggest that sustainable professional military service depends not only on favourable service conditions and organizational practices but, above all, on value alignment and family support. These results underscore the importance of integrating social sustainability considerations into defence human resource policies to strengthen long-term force resilience.

KEY WORDS: *professional military service; personnel retention; defence sustainability; family influence; organizational factors.*

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1. Introduction

Sustainability has emerged as a core principle in contemporary defence policy, extending beyond environmental considerations to encompass institutional resilience, human capital continuity, and responsible governance. Within NATO, resilience is defined as the ability of societies, institutions, and armed forces to withstand, adapt to, and recover from shocks and long-term stressors, including military aggression, hybrid threats, and demographic pressures [1,2]. In this framework, the sustainability of human resources is a critical pillar of defence resilience, as the long-term effectiveness of armed forces depends on stable, skilled, and motivated personnel [3,4].

For small and medium-sized NATO member states on the Alliance's eastern flank, such as Lithuania, professional military service (PMS) personnel represent a strategically irreplaceable resource. The ongoing Russian aggression against Ukraine and the normalization of hybrid warfare tactics—combining conventional force, cyber operations, information warfare, and economic pressure—have significantly increased the demand for continuously available and experienced military professionals [5]. Under such conditions, high personnel turnover undermines force sustainability by eroding institutional knowledge, weakening unit cohesion, and increasing the financial and organizational costs associated with repeated recruitment and training cycles [6].

From a sustainability and ESG-oriented governance perspective, personnel retention constitutes a core social and organizational sustainability challenge. The “social” dimension of ESG in the defence sector encompasses fair working

conditions, professional development, leadership quality, and the compatibility of military service with family and personal life. Empirical evidence from Lithuania indicates that PMS staffing remains below planned levels: in 2024, only 91% of the target strength was achieved, while annual turnover reached approximately 9% [7,8]. These figures signal systemic risks to long-term institutional resilience, particularly in a context of unfavourable demographic trends and a shrinking pool of eligible recruits.

At the European level, similar challenges have been identified across professional armed forces. Studies show that a substantial proportion of military personnel consider leaving service due to strained work–life balance, limited flexibility, and insufficient family support mechanisms [9]. Such findings align with NATO’s recognition that resilience is not solely a function of materiel and infrastructure, but also of personnel well-being, morale, and social cohesion [1]. Sustainable armed forces therefore require integrated human resource policies that address psychological, organizational, and social dimensions of service.

Academic research identifies psychological resilience as a foundational component of sustainable military service, enabling personnel to maintain performance and commitment under prolonged stress and uncertainty [10–12]. Organizational factors, including working conditions, leadership practices, and transparent career development systems, further shape retention by influencing perceived fairness, professional meaning, and trust in the institution [13–15]. In addition, value congruence and family stability increasingly determine whether military service is perceived as a sustainable life-course pathway rather than a temporary occupational phase [9,16–18].

Despite the growing emphasis on sustainability and resilience in NATO and EU defence policy discourse, empirical research examining the interaction of these factors at the unit level remains limited, particularly in the Lithuanian Armed Forces. Existing studies often address individual determinants in isolation, providing insufficient insight into how psychological resilience, organizational conditions, leadership support, and family considerations jointly influence long-term PMS retention [8].

In response to this gap, the present study examines the sustainability of professional military service through an integrated analytical lens, focusing on the Lithuanian Armed Forces. The research addresses the following question: Which factors determine the sustainability of long-term professional military service in the Lithuanian Armed Forces? The object of the study is PMS personnel retention, and the aim is to identify key psychological, organizational, and social factors influencing sustained service. By aligning empirical findings with NATO resilience principles and ESG-oriented defence governance, the study seeks to contribute to the development of more sustainable and resilient military human resource management practices.

2. Literature Review

2.1. Military Personnel Retention as a Component of Defence Sustainability

In the contemporary security environment, particularly for small NATO member states such as Lithuania, military personnel retention is increasingly conceptualized as a cornerstone of national defence sustainability rather than merely a human resource management function. Retention ensures continuity of operational readiness, preservation of institutional knowledge, and the achievement of long-term force development objectives under conditions of persistent hybrid threats [5,19]. Scholars emphasize that sustainable military organizations depend on the ability to maintain experienced professional soldiers, reservists, and officers, especially as armed forces transition from conscription-based systems toward professionalized force structures [19].

Within the Lithuanian context, personnel retention is directly linked to the development of division-level capabilities and the implementation of the total defence concept. Studies indicate that stagnation among professional military service (PMS) personnel and declining volunteer participation pose tangible risks to defence resilience, particularly on NATO’s eastern flank [5]. Although public trust in the Lithuanian Armed Forces remains high, existing research underscores the need for integrated and long-term retention strategies that extend beyond patriotic motivation alone [19].

2.2. Psychological Determinants of Long-Term Service

Psychological factors especially stress resilience, intrinsic motivation, and emotional commitment are consistently identified as critical determinants of soldiers’ intentions to remain in service. Empirical evidence from Lithuania demonstrates that psychological resilience explains a substantial proportion of reservists’ and soldiers’ commitment to continued service, mediated through self-efficacy, competence development, and perceived control over challenging situations [10]. Resilience also functions as a moderating variable, mitigating the negative effects of stress and burnout following intensive training cycles or operational demands.

Patriotism has been identified as a particularly strong psychological motivator within the Lithuanian Armed Forces, with a significant majority of soldiers reporting a willingness to defend the state [19]. However, the literature also highlights structural psychological stressors such as ambiguous instructions, inconsistent decision-making, and limited predictability which increase anxiety and erode motivation, particularly among younger service members [10]. Despite recognition of these dynamics, prior studies tend to examine psychological factors in isolation, offering limited insight into how they interact with organizational and social conditions over the long term.

2.3. Organizational and Social Factors Influencing Retention

Organizational conditions and social dynamics represent a second major cluster of retention determinants. Leadership quality, perceived organizational support, career structures, and unit cohesion are repeatedly identified as central to sustaining long-term military engagement [11]. Transformational leadership and collegial support strengthen organizational commitment and reduce turnover intentions, while unclear promotion criteria or perceived injustice such as favouritism and nepotism accelerate voluntary exit from service [11].

Research focusing on the Lithuanian Armed Forces indicates that friendly interpersonal relationships and strong battalion-level traditions significantly contribute to soldiers' willingness to remain in service [10]. At the same time, non-competitive remuneration levels and attractive post-service employment opportunities abroad create strong pull factors, undermining retention despite existing social guarantees such as pensions and housing compensation [11]. Comparative analyses within the Baltic region further suggest that demographic decline and population aging intensify reliance on retention rather than recruitment as a sustainability strategy.

While organizational and social factors are well documented, the existing literature often treats them descriptively, without integrating them into broader sustainability or resilience frameworks aligned with NATO or ESG-oriented governance principles.

2.4. Motivation, Career Development, and Professional Growth

Motivation is widely recognized as a multidimensional construct encompassing financial and non-financial incentives, career prospects, leadership support, working conditions, personal values, and family considerations [20]. Studies in the Lithuanian context identify patriotism, professional development opportunities, clear leadership guidance, and remuneration as core motivational drivers, alongside persistent demotivators such as outdated equipment, insufficient rest periods, high workload, and limited work–life balance [21].

Motivation theories, including Maslow's hierarchy of needs, Herzberg's two-factor theory, and the SCARF model, have been applied to military service to explain retention behaviour and design personnel management interventions [21]. These frameworks highlight the importance of satisfying both basic security needs and higher-order needs such as recognition, autonomy, fairness, and belonging. Empirical findings suggest that while the Lithuanian Armed Forces employ elements of these models through training systems and hierarchical career paths, structural constraints limit their full implementation, particularly with regard to autonomy and work–life balance [20].

Career development and professional growth are also identified as decisive retention factors. Structured promotion systems, access to specialized training, and participation in international missions enhance professional identity and commitment [22]. However, limited resources and uneven access to development opportunities contribute to dissatisfaction and increased intentions to leave service, especially among younger soldiers.

2.5. Financial, Family, and Value-Based Influences

Financial incentives remain an essential, but insufficient, condition for long-term retention. Although salary increases, pensions, and social guarantees improve baseline satisfaction, they do not fully offset the attractiveness of the private sector, which offers greater flexibility and higher earnings potential [23]. Consequently, non-financial motivators such as recognition, meaningful service, and value congruence play an increasingly important role in retention decisions [21].

Personal values, including patriotism, duty, and loyalty, are deeply embedded in the Lithuanian military culture and strongly influence soldiers' commitment [21]. Family support has likewise emerged as a critical determinant of sustainable service, particularly under conditions of prolonged absence, intensive training schedules, and international deployments [24]. Notably, a large proportion of European soldiers report considering leaving service due to difficulties balancing military duties with family life, highlighting a structural challenge for defence sustainability [23].

2.6. Identified Research Gap

Overall, the literature provides extensive insights into individual determinants of military personnel retention; however, several critical gaps remain. First, the majority of empirical studies focus on psychological, organizational, motivational, or family-related factors in isolation, which limits understanding of their combined and interactive effects on long-term service decisions [25–27]. Although such single-factor approaches have contributed valuable insights, they do not adequately capture the complexity of retention behaviour in contemporary military organizations, where multiple determinants interact simultaneously.

Second, relatively few empirical investigations adopt a sustainability- or resilience-oriented analytical perspective explicitly aligned with NATO resilience principles or ESG-informed defence governance frameworks [1,28,29]. While NATO doctrine emphasizes human capital as a core component of societal and military resilience, this policy orientation has not yet been systematically operationalized in retention-focused empirical research. As a result, the linkage between personnel retention, institutional sustainability, and resilience remains underdeveloped in the scholarly literature.

Third, unit-level and battalion-specific empirical studies, particularly within the Lithuanian Armed Forces and comparable Baltic or small-state military contexts, remain scarce [30]. Existing research tends to adopt national-level or cross-service perspectives, offering limited insight into how retention determinants manifest within specific operational units characterized by distinct leadership practices, organizational cultures, and service demands.

Taken together, these gaps indicate a clear need for integrative, empirical research that simultaneously examines psychological resilience, organizational conditions, leadership support, motivation, career development, and family factors, while situating military personnel retention within a broader defence sustainability and resilience framework [1,25–30]. The present study addresses these shortcomings by focusing on Lithuanian professional military service personnel at the unit level and by conceptualizing retention as a key dimension of sustainable and resilient defence capability development.

3. Study Methodology

3.1. Research Design

This study employs a quantitative, cross-sectional research design aimed at identifying and empirically evaluating the factors influencing the sustainability of long-term professional military service. A survey-based approach was selected as the most appropriate method for systematically capturing soldiers' perceptions, attitudes, and experiences related to retention-relevant psychological, organizational, and social factors. The design enables the examination of relationships between multiple independent variables and the dependent variable, intention to continue long-term professional military service, within a real-world military organizational context.

The research is grounded in a positivist epistemological approach, assuming that retention-related phenomena can be measured, analysed, and interpreted through observable indicators. This methodological choice is consistent with prior empirical research in military personnel studies and sustainable human resource management, where standardized instruments are widely used to assess attitudes and behavioural intentions.

3.2. Data Collection Procedure

Primary data were collected using a structured, anonymous questionnaire administered to professional military service (PMS) soldiers serving in the Lithuanian Armed Forces. The questionnaire was distributed in electronic format, ensuring accessibility, standardized administration, and confidentiality. Participation in the survey was voluntary, and respondents were informed about the purpose of the study, data protection measures, and their right to withdraw at any time without consequences.

Anonymity was emphasized to reduce social desirability bias and encourage honest responses, particularly given the hierarchical nature of military organizations. The data collection process was conducted in accordance with ethical principles applicable to social research involving uniformed personnel, including informed consent and the protection of personal data.

3.3. Sample and Research Context

The empirical study was conducted within the Infantry Battalion of the Lithuanian Armed Forces, selected due to its operational relevance and representation of professional military service conditions at the tactical unit level. Focusing on a single battalion enables a more precise examination of unit-specific organizational and leadership characteristics, which are often obscured in large-scale, national-level studies. The research population consisted of active-duty PMS soldiers serving in the battalion at the time of data collection. A non-probability convenience sampling strategy was employed, reflecting practical access constraints typical in military research environments. Despite this limitation, the sample included soldiers of varying ranks, lengths of service, and occupational roles, allowing for a diversified representation of professional experiences.

Was collected 207 questionnaires, the sample size was sufficient to conduct descriptive and inferential statistical analyses, supporting the identification of patterns and relationships among the studied variables.

3.4. Measurement of Variables

The dependent variable of the study is intention to continue long-term professional military service, conceptualized as an individual's self-reported willingness and commitment (**COM**) to remain in professional military service in the foreseeable future. This variable serves as a representation for retention sustainability and was measured using multiple Likert-type items assessing service continuation intentions, commitment to military career, and perceived likelihood of remaining in service, with internal consistency reaching an acceptable level (Cronbach's $\alpha = 0.800$).

Based on the literature review and the identified research gaps, the study examines several independent variables, grouped into thematic dimensions reflecting defence sustainability and resilience perspectives:

- **Working environment quality (WEQ)** was measured using four statements capturing perceptions of service safety, availability of appropriate equipment, physical workload, and the balance between work and rest. This scale demonstrated acceptable internal consistency (Cronbach's $\alpha = 0.718$).
- **Professional development (PRD)** was also measured by four statements and reflects opportunities for career advancement, access to training and courses, clarity of career pathways, and recognition of individual effort; the reliability of this scale was good (Cronbach's $\alpha = 0.792$).
- **Organizational and social support (ORS)** was assessed through four statements measuring leadership motivation, interpersonal relations with colleagues, unit cohesion, and openness to feedback, with internal consistency reaching an acceptable level (Cronbach's $\alpha = 0.750$).
- **Professional satisfaction (PRS)**, measured by eight statements, integrates both financial and non-financial aspects of work, including remuneration, social guarantees, financial incentives, pride in military service,

and intention to remain in professional military service over the long term; this scale demonstrated high reliability (Cronbach's $\alpha = 0.822$).

- Finally, **personal values and family influence (PVE)** were measured by three statements capturing family support, alignment of military service with personal values, and the perceived impact of service on personal life, showing acceptable internal consistency (Cronbach's $\alpha = 0.711$).

Specifically, the research examines how the soldiers' intention to remain in long-term professional military service. Independent variables were grouped into four analytical categories reflecting defence sustainability dimensions: structural factors (working environment quality), organizational factors (professional development opportunities and organizational and social support), attitudinal factors (professional satisfaction), and personal factors (personal values and family influence). Conceptual model background is presented in Fig.1.

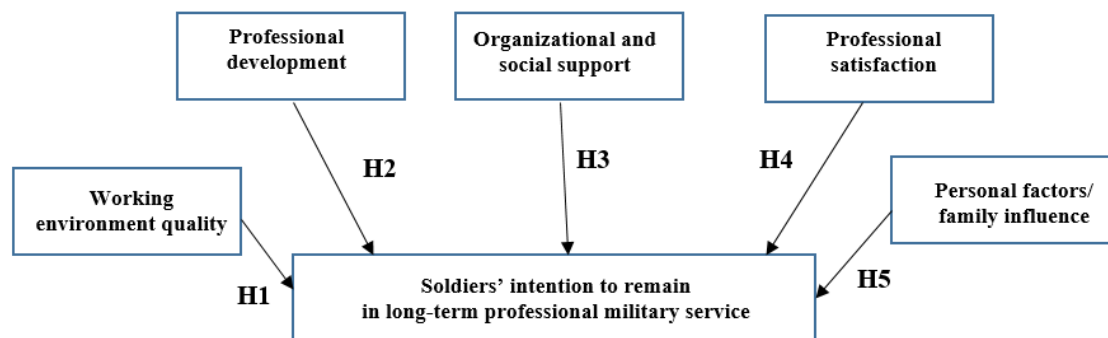


Fig. 1. Theoretical background.

Based on the literature review and the conceptualization of professional military service retention as a sustainability- and resilience-oriented outcome, the following hypotheses were formulated:

- H1.** Working environment quality (structural factors) has a positive and statistically significant effect on soldiers' intention to remain in long-term professional military service.
- H2.** Organizational factors (professional development opportunities and organizational and social support) have a positive effect on soldiers' intention to remain in long-term professional military service, beyond the effect of working environment quality.
- H3.** Professional satisfaction (attitudinal factors) has a positive and statistically significant effect on soldiers' intention to remain in long-term professional military service and increases the explanatory power of the model beyond structural and organizational factors.
- H4.** Personal values and family influence (personal factors) have a positive and statistically significant effect on soldiers' intention to remain in long-term professional military service and provide the largest incremental contribution to explaining retention intentions.
- H5.** Structural, organizational, attitudinal, and personal factors collectively explain a substantial proportion of variance in soldiers' intention to remain in long-term professional military service.

3.5. Data Analysis

The statistical analysis followed a systematic, multi-stage procedure designed to ensure the reliability and analytical validity of the measurement instruments prior to examining relationships among the study variables. Such an approach is consistent with established best practices in quantitative military and social science research, where robust substantive inference depends on the psychometric quality of the constructs under investigation. All statistical analyses were performed using IBM SPSS Statistics software.

In the first stage, data screening and preparatory analyses were conducted. This included checking for missing data, response consistency, and potential outliers, as well as assessing the suitability of the data for further statistical analysis. Descriptive statistics, means, standard deviations, frequencies, and distributions, were calculated to characterize the sample and to provide an initial overview of the central tendencies and variability of all measured variables.

In the second stage, the measurement properties of the multi-item scales were evaluated. Internal consistency reliability was assessed using Cronbach's alpha coefficients, applying the commonly accepted threshold of $\alpha \geq 0.70$ for acceptable reliability in social science research, while recognizing that slightly lower values may be acceptable in exploratory research contexts involving complex social constructs. This procedure ensured that each scale consistently measured its underlying construct and that individual items contributed meaningfully to the overall measurement model.

In the third stage, inferential statistical analyses were conducted to examine relationships between the independent variables: working environment quality, professional development, organizational and social support, professional satisfaction, and personal values, and the dependent variable, intention to continue long-term professional military service.

Correlation analysis was used to assess the strength and direction of associations among variables, while the hierarchical regression analysis as further statistical technique was applied to evaluate the relative contribution of individual factors to long-term service intentions. For the hierarchical regression analysis, independent variables were introduced in theoretically grounded blocks to assess their incremental explanatory power for long-term professional military service retention. In the first step, working environment quality (WEQ) was entered as a foundational structural factor. In the second step, professional development (PRD) and organizational and social support (ORS) were added to capture organizational and career-related resources. In the third step, professional satisfaction (PRS) was included as a proximal attitudinal determinant of retention intention. Finally, personal values and family influence (PVE) were entered to account for individual-level and social context factors. This sequencing reflects established retention models and allows evaluation of how organizational and personal variables incrementally contribute to explaining sustainable long-term professional military service.

This structured analytical strategy enabled the identification of statistically significant patterns and relationships among psychological, organizational, and social determinants of retention, thereby providing an empirical basis for interpreting professional military service sustainability within the studied unit.

4. Results

The initial analysis focused on evaluating the descriptive statistics and validity measures for all constructs included in the theoretical model. Analysis showed that correlation coefficients between constructs were generally low to moderate, with significant relationships ($p < 0.01$). No evidence of multicollinearity was detected, as correlation values remained below critical thresholds (Shrestha, 2020). These statistical results (Table 1) confirm that the measurement model constructs accomplish the reliability and validity requests, ensuring appropriateness to test conceptual study model.

Table 1.
Preliminary data investigation results.

Variable	Descriptive		Discriminant Validity		Relationships					
	M	±SD	CR	AVE	COM	WEQ	PRD	ORS	PRS	PVE
COM	3,38	0.769	0.867	0.665	0.815					
WEQ	3,46	0.765	0.871	0.639	0.574**	0.799				
PRD	3,63	0.673	0.851	0.647	0.498**	0.671**	0.804			
ORS	3,54	0.797	0.839	0.621	0.382**	0.421**	0.607**	0.788		
PRS	3,44	0.959	0.866	0.659	0.526**	0.536**	0.478**	0.306**	0.812	
PVE	3,68	0.825	0.843	0.616	0.741**	0.501**	0.470**	0.318**	0.394**	0.784

Notes: Continue long-term professional military service (COM), working environment quality (WEQ), professional development (PRD), organizational and social support (ORS), professional satisfaction (PRS), personal values and family influence (PVE).
** correlation is significant at $p < 0.01$ level (2-tailed). Square roots of the AVEs (diagonal values).

4.2. Results of Hierarchical Regression Analysis

A hierarchical multiple regression analysis was conducted to examine the extent to which working environment quality, organizational and career-related factors, professional satisfaction, and personal values incrementally explain commitment to long-term professional military service (COM). The variables were entered in four theoretically grounded steps.

Step 1: Working Environment Quality (WEQ). In the first model, working environment quality (WEQ) was entered as the sole predictor. The model was statistically significant ($F(1, 184) = 90.46$, $p < 0.001$) and explained 33.0% of the variance in commitment to long-term service ($R^2 = 0.330$). WEQ demonstrated a strong and positive effect on commitment ($\beta = 0.574$, $p < 0.001$), indicating that perceptions of safe service conditions, adequate equipment, acceptable physical workload, and work–rest balance constitute a foundational determinant of professional military service sustainability (H1 was supported).

Step 2: Professional Development (PRD) and Organizational and Social Support (ORS). In the second step, professional development (PRD) and organizational and social support (ORS) were added to the model. Their inclusion produced a statistically significant increase in explained variance ($\Delta R^2 = 0.032$, $F\text{-change}(2, 182) = 4.52$, $p = 0.012$), raising the total explained variance to 36.1% ($R^2 = 0.361$).

In this model, WEQ remained a statistically significant predictor ($\beta = 0.434$, $p < 0.001$), whereas PRD ($\beta = 0.135$, $p = 0.140$) and ORS ($\beta = 0.118$, $p = 0.116$) did not reach statistical significance when controlling for working environment quality. This finding suggests that while career development opportunities and leadership-related support are correlated with commitment, their direct effects are weaker once basic service conditions are accounted for.

Step 3: Professional Satisfaction (PRS). In the third step, professional satisfaction (PRS) was added to the regression model. This resulted in a substantial and statistically significant improvement in explanatory power ($\Delta R^2 = 0.054$, $F\text{-change}(1, 181) = 16.71$, $p < 0.001$), increasing the total explained variance to 41.5% ($R^2 = 0.415$).

In this model, both WEQ ($\beta = 0.324$, $p < 0.001$) and PRS ($\beta = 0.280$, $p < 0.001$) emerged as significant predictors, whereas PRD and ORS remained non-significant. This pattern indicates that professional satisfaction, encompassing financial and non-financial rewards, pride in service, and attitudinal commitment, acts as a proximal determinant of long-term service intention that partially mediates the influence of structural and organizational factors.

Step 4: Personal Values and Family Influence (PVE). In the final step, personal values and family influence (PVE) were introduced into the model. The inclusion of this variable led to a very large and statistically significant increase in explained variance ($\Delta R^2 = 0.223$, $F\text{-change} (1, 180) = 111.18$, $p < 0.001$). The final model explained 63.9% of the variance in commitment to long-term professional military service ($R^2 = 0.639$; Adjusted $R^2 = 0.629$), indicating a strong overall model fit.

In the final model, PVE emerged as the strongest predictor of commitment ($\beta = 0.564$, $p < 0.001$). Professional satisfaction ($\beta = 0.201$, $p < 0.001$) and working environment quality ($\beta = 0.165$, $p = 0.013$) remained statistically significant, while professional development and organizational support were no longer significant predictors. These findings highlight that value alignment with military service and family support play a decisive role in sustaining long-term professional military careers, beyond organizational and material conditions.

Table 2.
Results of Hierarchical Regression Analysis Predicting Long-Term PMS Commitment

Step	Predictor Variables Entered	β	R^2	ΔR^2	F-change	p (ΔR^2)
1	Working Environment Quality (WEQ)	0.574***	0.330	–	90.46	<0.001
2	Working Environment Quality (WEQ)	0.434***	0.361	0.032	4.52	0.012
	Professional Development (PRD)	0.135				
	Organizational & Social Support (ORS)	0.118				
3	WEQ	0.324***	0.415	0.054	16.71	<0.001
	PRD	0.098				
	ORS	0.084				
	Professional Satisfaction (PRS)	0.280***				
4	WEQ	0.165*	0.639	0.223	111.18	<0.001
	PRD	0.059				
	ORS	0.041				
	PRS	0.201***				
	Personal Values & Family Influence (PVE)	0.564***				

Notes: β = standardized regression coefficient; R^2 = coefficient of determination; ΔR^2 = change in explained variance; statistical significance: $p < 0.05$ (*), $p < 0.001$ (***).

Model diagnostics was assessed by collinearity measurement that indicated no multicollinearity concerns, as tolerance values remained above acceptable thresholds and variance inflation factors (VIF) ranged approximately between 1.0 and 2.5 across models. This confirms the statistical stability and interpretability of the regression coefficients. The analysis results of hierarchical regression predicting long term commitment are presented in Table 2.

Conducted study let us to identify that professional development and organizational and social support did not reach statistical significance in the model (H2 and H3 were not supported). This finding can be explained both theoretically and empirically. Notable, PRD and ORS function as indirect or distal determinants of long-term commitment. Career opportunities, leadership quality, and social cohesion primarily shape soldiers' experiences by influencing job satisfaction, motivation, and value alignment, rather than directly determining the decision to remain in long-term service. When professional satisfaction (PRS) and personal values and family influence (PVE) were entered into the model, they absorbed much of the variance previously associated with PRD and ORS, rendering their direct effects non-significant. Moreover, within professional military contexts, particularly at the battalion level, organizational practices and leadership behaviours tend to be institutionalized and standardized. As a result, variability in perceived professional development opportunities and leadership support may be insufficient to independently explain differences in long-term service intention once fundamental conditions and personal-level factors are accounted for. This pattern is consistent with retention research suggesting that organizational resources matter most insofar as they are translated into subjective satisfaction and life-course compatibility, rather than acting as standalone predictors. Importantly, the no significance of PRD and ORS does not mean that these factors are unimportant. Rather, it shows that their influence operates mainly through mediation mechanisms, especially job satisfaction and value congruence.

The H4 was supported, the introduction of personal values and family influence (PVE) produced the largest increase in explained variance ($\Delta R^2 = 0.223$) and emerged as the most powerful predictor of long-term professional military service commitment ($\beta = 0.564$, $p < 0.001$). This finding has substantial theoretical and practical implications for defence sustainability. The dominance of PVE underscores the importance of social sustainability, corresponding to the "S" dimension of ESG frameworks and NATO's resilience doctrine. Human capital resilience depends not only on organizational efficiency but also on the capacity of personnel and their families to absorb and adapt to prolonged stress. The findings suggest that defense institutions seeking sustainable force structures must extend retention strategies beyond internal HR

policies to include family-oriented support measures, value-based leadership communication, and predictable service pathways.

Overall, the hierarchical regression results demonstrate that sustainable long-term professional military service is most strongly determined by the interaction between favourable service conditions, meaningful professional satisfaction, and strong value- and family-based support (H5 was confirmed). Among these, personal values and family influence constitute the central stabilizing mechanism, anchoring retention decisions in broader life-course considerations rather than short-term organizational incentives.

5. Discussion

5.1. Implications for ESG Frameworks in Defence Organizations

The findings of this study have significant implications for the application of Environmental, Social, and Governance (ESG) frameworks within defence institutions, particularly with respect to the “Social” (S) and “Governance” (G) dimensions. While ESG discourse originated in the private sector, recent scholarship increasingly emphasizes its relevance for public and security organizations, where sustainability depends heavily on human capital stability and institutional legitimacy [31,32].

From a social sustainability perspective, the strong predictive role of personal values and family influence underscores that military personnel retention cannot be achieved solely through material incentives or organizational efficiency. Instead, sustainable defence organizations must account for the social embeddedness of military service, recognizing that soldiers’ decisions are shaped by family expectations, value alignment, and life-course considerations. This aligns with ESG’s emphasis on employee well-being, social cohesion, and fair treatment as prerequisites for long-term organizational sustainability [32,33].

In governance terms, the results indicate that retention outcomes depend on how effectively defence institutions design policies that balance operational demands with soldiers’ social realities. Transparent career systems, predictable service trajectories, and family-friendly governance arrangements contribute to trust and legitimacy, which are central pillars of the “G” dimension of ESG [31]. Consequently, integrating ESG principles into defence human resource governance requires expanding the focus from compliance-driven personnel management toward value-based and family-inclusive retention strategies.

5.2. The Role of Personal Values and Family Influence (PVE) in Retention

The regression analysis demonstrates that personal values and family influence (PVE) represent the most powerful determinant of long-term professional military service retention. This finding is consistent with broader retention literature, which conceptualizes commitment not merely as a function of job satisfaction, but as an outcome of identity alignment and social support [16].

First, value congruence between the individual and the organization plays a central role in sustaining long-term commitment. When military service aligns with deeply held personal values—such as duty, patriotism, or service to society—soldiers perceive occupational challenges as meaningful rather than alienating. Value congruence strengthens affective commitment and buffers against dissatisfaction arising from high demands or constrained resources [34,35]. In this sense, PVE operates as a psychological stabilizer, anchoring retention decisions in identity and moral purpose rather than short-term utility calculations.

Second, family support emerges as a decisive factor shaping retention outcomes. Military service imposes distinctive strains on family life, including prolonged absences, irregular schedules, and geographic mobility. Empirical studies consistently show that perceived family support enhances coping capacity and reduces intentions to exit service, whereas family strain accelerates attrition regardless of organizational incentives [9,16]. The strong effect of PVE observed in this study confirms that retention decisions are not purely individual but are embedded within family systems, making retention a shared, socially negotiated outcome.

Finally, the dominance of PVE highlights the importance of social resilience, a core element of NATO’s understanding of resilience, which emphasizes societal and familial capacity to support military effectiveness over time [2]. Soldiers’ families function as informal resilience providers, absorbing the social costs of service and enabling sustained professional commitment. When such support is absent, organizational efforts to improve working conditions or career opportunities are likely to have limited long-term impact.

Taken together, these findings suggest that effective retention policies in professional armed forces must move beyond traditional human resource instruments and embrace ESG-informed, human-centered governance approaches. Personal values and family support are not peripheral considerations but central mechanisms through which long-term military service sustainability is achieved. Integrating these dimensions into defence policy design is therefore essential for building resilient, socially sustainable armed forces.

6. Conclusions

This study demonstrates that the sustainability of long-term professional military service is shaped by a combination of structural, organizational, and personal factors rather than by isolated determinants. The findings confirm that working

environment quality provides a necessary structural foundation for retention, while professional satisfaction acts as a key proximal mechanism translating organizational conditions into long-term commitment. Most critically, personal values and family influence emerged as the strongest predictor of sustained service, highlighting that retention decisions are deeply embedded in value alignment and family support rather than driven solely by institutional incentives.

From a conceptual perspective, the results support a sustainability- and resilience-oriented understanding of military personnel retention, consistent with NATO resilience principles and ESG-informed governance approaches. Long-term defence capability depends not only on effective human resource management but also on social sustainability, encompassing value-based commitment and family well-being. These findings underline the need for retention strategies that integrate service conditions, professional meaning, and family-oriented support.

Future research should extend this analysis beyond a single battalion to include multiple units and service branches, enabling broader generalization across the Lithuanian Armed Forces. Longitudinal research designs would be particularly valuable for examining how retention intentions evolve over time and for identifying causal mechanisms. Further studies could also test mediating and moderating effects, such as the role of professional satisfaction in linking organizational factors to retention, and explore family-oriented policies as strategic instruments for enhancing defence sustainability.

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