Translation, cultural adaptation and psychometric validation of *The Employee Intrapreneurship Scale* in Ukraine

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Abstract. This study presents the adaptation and validation of *The Employee Intrapreneurship Scale (EIS)* for the Ukrainian context. The research was conducted during the period of large-scale social and economic transformations caused by the war in Ukraine, which highlighted the crucial role of employees' proactive and innovative behaviour for the resilience and sustainability of organisations. The study involved 324 respondents from different sectors and types of organisations. A rigorous process of linguistic translation and expert evaluation was followed by statistical analyses of reliability and validity. The results confirmed the high internal consistency of the Ukrainian version of the scale (Cronbach's α = .94; McDonald's ω = .94) and sufficient discriminant validity of all items. Factor analyses demonstrated that a shortened two-factor Ukrainian model best fits the data, with "strategic renewal behaviour" and "venture behaviour" as core components. Convergent validity was supported by significant correlations with entrepreneurial self-efficacy, creativity, need for achievement, and risk-taking. The adapted Ukranian version (EIS-UA) proved to be a reliable and valid instrument for measuring intrapreneurial behaviour of employees in Ukraine. The scale can be applied in organisational psychology research, HR practices, leadership development, particularly in contexts of crisis, innovation, and post-war recovery.

Keywords: employee intrapreneurship, scale, adaptation and validation, linguistic adaptation, strategic renewal behaviour, ventur behaviour.

Креденцер Оксана, Горгієвські Марьян, Домославська Юлія. Переклад, культурна адаптація та валідизація Шкали інтрапренерської поведінки працівників в Україні.

Анотація. Це дослідження представляє адаптацію та валідацію Шкали інтрапренерської поведінки працівників (EIS) для українського контексту. Дослідження тривало в

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період масштабних соціально-економічних трансформацій, спричинених війною в Україні, які підкреслили вирішальну роль проактивної та інноваційної поведінки працівників для стійкості та сталості організацій. У дослідженні взяли участь 324 респонденти з різних секторів та типів організацій. Ретельний процес лінгвістичного перекладу та експертної оцінки супроводжувався статистичним аналізом надійності та валідності. Результати підтвердили високу внутрішню узгодженість української версії шкали (α Кронбаха = 0,94; ω Макдональда = 0,94) та достатню дискримінантну валідність усіх пунктів. Факторний аналіз показав, що скорочена двофакторна українська модель найкраще відповідає даним, з «поведінкою стратегічного оновлення» та «венчурною поведінкою» як основними компонентами. Конвергентна валідність була підтверджена значними кореляціями з підприємницькою самоефективністю, креативністю, потребою в досягненнях та схильністю до ризику. Адаптована україномовна версія *Шкали інтрапренерської поведінки працівників* (EIS-UA) виявилася надійним та валідним інструментом для вимірювання внутрішньопідприємницької (інтрапренерської) поведінки працівників в Україні. Шкала може бути застосована в дослідженнях організаційної психології, практиці управління персоналом, розвитку лідерства, зокрема в контексті кризи, інновацій та післявоєнного відновлення.

Ключові слова: інтрапренерська поведінка працівників, шкала, адаптація та валідизація, лінгвістична адаптація, поведінка стратегічного оновлення, венчурна поведінка.

Introduction

The current socio-economic conditions in Ukraine, including a full-scale war, economic instability, labour market changes, and large-scale social transformations, significantly affect the functioning of organisations and the internal dynamics of labour collectives. In such conditions, the internal behaviour of staff becomes critical to ensuring the sustainability, adaptability, and efficiency of organisations. The behaviour of employees, their innovativeness, idea generation, propensity for entrepreneurship, and strategic development are directly related to the survival and growth of organisations in crisis conditions.

Despite the importance of this topic, there is still a lack of adapted, standardised measurement instruments in Ukraine that would allow for reliable and valid measurement of intra-organisational entrepreneurial behaviour in the context of Ukrainian realities. Most available methods were developed in other socio-cultural and economic contexts and, without appropriate adaptation, may not reflect the specifics of Ukrainian organisations, especially in times of war.

Thus, the adaptation and standardisation of methods for studying staff intra-organisational entrepreneurial behaviour in the Ukrainian context is a scientifically and practically relevant task. It will help improve the quality of

empirical research in organisational psychology and provide a tool for practical application in HR and management in organisations.

The concept of "intrapreneurship" was first introduced into scientific circulation by G. Pinchot in 1978. The researcher understands intrapreneurship as the development of an entrepreneurial spirit within an existing organisation (Pinchot & Pinchot, 1978). A more focused definition of employee intrapreneurship is the actual proactive behaviour of employees aimed at creating new business for the organisation (i.e., venture behaviour) and improving the organisation's ability to respond to internal and external developments through restructuring processes, structures, roles and responsibilities (i.e., strategic renewal behaviour; Gawke et al., 2017).

Despite the recent surge of interest in the concept of "intrapreneurship" across both scientific and practical domains, studies of its components, features, and development factors are quite rare (Blanka, 2019). To stimulate more research on this topic, the "Employee Intrapreneurship Scale (EIS)" was developed by Gawke et al. (2019). The EIS, according to its developers, allows researchers to systematically study employees' intrapreneurial behaviour and improve understanding of its drivers and consequences at the individual and organisational levels.

"The Employee Intrapreneurship Scale (EIS) has already been adapted to a number of different national samples, including Vietnamese (Luu, 2020) and Romanian employees (Tisu et al., 2021). The results of this research showed that the instrument's factor structure could be reproduced across different samples: the actions of internal entrepreneurship are represented by two highly correlated latent indicators: strategic renewal and corporate venturing behaviour. These two sub-scales also show high Cronbach's alpha reliabilities. The authors of the Romanian adaptation emphasise that, from a practical perspective, their validated national version of the EIS provides consultants and human resource professionals with a scientifically sound tool for measuring and identifying intrapreneurship among employees. Identifying and measuring difficulties, problems, and dysfunctions in organisations can help to eliminate problems and negative aspects in practice, but complementing these indicators with measurements that correctly identify positive aspects, such as employee initiative and proactive contribution, can make a truly positive contribution to the functioning of the organisation (Tisu et al., 2021).

The purpose of the current study is to adapt the Employee Intrapreneurship Scale (EIS) to the Ukrainian population. By testing the reliability and discriminant validity of its translated statements in a Ukrainian sample of organisations' personnel, a valid and reliable standardised Ukrainian version of the EIS-UA measurement instrument will be created.

After a careful translation of the items, the following hypotheses will be tested: Hypothesis 1: the internal structure with two related latent factors (strategic renewal and venturing behaviour) can be replicated in the EIS-UA. We will also test if both factors correlate as expected with the other variables in the nomological network. Hence, we will contend that Strategic Renewal and Venturing Behaviour, as measured with the EIS-UA, will correlate positively with a) entrepreneurial self-efficacy, b) creativity, c) need for achievement, d) need for independence/autonomy, and f) (balanced) risk-taking (Hypothesis 2).

Method

Organisation and Procedure of the Survey

This study used a cross-sectional survey design and was conducted online as part of a comprehensive study of intra-organisational entrepreneurial behaviour among staff in business organisations and the factors influencing its development during the war. The survey was conducted via Google Forms and distributed via social media, messengers (Telegram, Viber), and email. Before the test, participants had to read and accept an online informed consent. Participation in the study was voluntary and free of charge; participants were informed of the study's scientific objectives. The survey results were not disclosed to the respondents.

Sample of the Study

The study involved 324 respondents working in organisations of various forms of ownership, sizes, and areas of activity. Women predominated among the participants – 66.7 % (n = 215)- while men accounted for 33.3 % (n = 107). The respondents ranged in age from 18 to 64 years; the average age was 34.4 years, and the median age was 34 years, indicating that both young professionals and experienced employees participated.

The educational level of the respondents varied: one completed higher education – 50.6 % (n = 164), several higher or specialised educations - 22.8 % (n = 74), a scientific degree – 7.4 % (n = 24), vocational education – 5.2 % (n = 17), secondary general education – 2.8 % (n = 9), secondary specialised education – 1.2 % (n = 4). In addition, 9.9 per cent (n = 32) of respondents are currently pursuing higher education.

The type of organisation where the participants work could be classified as private companies (71.3 %; n = 231), public institutions (21.6 %; n = 70), or international companies (7.1 %; n = 23). Thus, the sample predominantly reflects the private sector.

The analysis of the professional sphere of activity showed a significant diversity: trade/sales – 22.2 % (n = 72), accounting, finance, audit – 17.0 % (n = 55), education and science – 13.0 % (n = 42), media, PR, advertising – 8.0 % (n = 26), non-governmental and social organisations – 8.6 % (n = 28), IT – 5.9 % (n = 19), medicine – 4.9 % (n = 16). Other areas were represented by a smaller number of participants, which together provide a broad professional palette for the study.

Thus, the survey sample is statistically and socially representative for analysing organisational behaviour. It includes respondents of different genders, ages, levels of education, professional employment, and organisational hierarchy, which allows for intergroup comparative analysis. A significant proportion of the participants have medium or high levels of professional experience, as well as experience in organisations with different lengths of service and sizes. The sample structure provides a reliable basis for studying the relationships among organisational context, management practices, and employees' initiative behaviour. Of particular interest is the distribution of assessments of the practice of rewarding initiative, which demonstrates its presence in most organisations but indicates fragmentation and a lack of systematic recognition of employees' initiative.

Measurement Instruments

The intrapreneurial behaviour of employees was measured using the full version of the EIS scale (Gawke et al., 2019). The instrument consists of 15 items with response options ranging from 1 (never) to 7 (always). The scale includes two separate factors – strategic renewal behaviour (e.g., "I am engaged in creating new projects in my organisation") and venturing behaviour (e.g., "I am engaged in implementing changes in my organisation").

The Entrepreneurial Self-Efficacy Scale (De Noble et al., 1999), Ukrainian adaptation by Kredentser and Abdullayeva (2011), was used to measure entrepreneurial self-efficacy.

Personal characteristics related to employees' entrepreneurial inclinations were measured using the General Entrepreneurial Talent Test (GET TEST) (Pachkovsky, 2006). *GET TEST* makes it possible to determine the level of the following *entrepreneurial personal characteristics*: a) creativity, b) need for achievement, c) need for independence/autonomy, and d) (balanced) risk-taking. The measurement scale included 54 statements, to which respondents responded "yes" (I agree with this statement) or "no" (I disagree with this statement).

Statistical Analysis

Calculations were made using Jamovi software (version 2.3.28) and SPSS (version 26). To test the questionnaire's internal reliability, Cronbach's alpha and McDonald's omega were calculated. Ferguson's delta was used to test the discriminant validity of the statements. To test convergent validity, the correlations between the EIS scores and results from other methods assessing a person's entrepreneurial qualities were analysed. To determine the internal structure of the scales, an exploratory factor analysis using maximum likelihood and the Oblimin rotation was performed. To select the most appropriate model, confirmatory factor analysis and structural equation modelling were carried out. The model fit was assessed using Goodness-of-fit indices and recommended thresholds. An optimal model is characterised by a low χ^2, an acceptable χ^2/df ratio, an RMSEA (root mean square error of approximation) value < .08, as well as high CFI (Comparative Fit Index) and TLI (Tucker–Lewis Index) values (≥ .90, preferably ≥ .95).

The translation of the EIS methodology (linguistic adaptation) from English to Ukrainian was carried out in three stages. *At the first stage of* linguistic adaptation, the text of the scale was translated directly (from English into Ukrainian) by two translators: Translator 1 had a C1 level of English and a PhD in psychology; Translator 2 had a degree in English philology.

At the second stage of linguistic adaptation, the text of the methodology was translated backwards (from Ukrainian into English) by two translators: Translator 3 was a native English speaker, had a sufficient command of Ukrainian and a degree in psychology; Translator 4 had a pedagogical degree in English, had been living in the United States for a long time, and was fluent in Ukrainian.

At the third stage of linguistic adaptation, an expert committee was established, comprising a psychologist (Doctor of Psychology), an English-language philologist (PhD in Education), and a Ukrainian-language philologist (PhD in Philology). Each expert analysed the proposed translation and gave it a score from 1 to 5. Based on the scores and discussion of differences, a version was agreed upon that best reflects the author's original questions while accounting for the linguistic features of Ukrainian philology.

Results

Discriminant validity

The discriminative validity of the statements was assessed using Ferguson's delta index, which reflects the completeness of implementation across all

possible manifestations of the measured property. This indicator (index) has a maximum value of δ=1 (with a uniform distribution) and a minimum value of δ=0 (when all subjects received the same score). Based on the results of the test, no statements were excluded from the methodology. As shown in Table 1, all 15 items have sufficient distributional capacity (.78-.86).

Reliability analysis

The next step was to assess *the reliability* of the Employee Internal Entrepreneurship Scale. To assess the internal consistency of the methodology, Cronbach's α and McDonald's ω coefficients were calculated. The indicators indicate high reliability for the scale: Cronbach's α is .940, and McDonald's ω is .942. Both coefficients exceed the generally accepted threshold of .90, indicating excellent internal consistency of the test items and the scale's homogeneity (Table 1).

Table 1
Statistical indicators of item reliability

Item number	M	SD	Correlation	Delta of Ferguson	If item dropped	
					Cronbach α	McDonald's ω
1	4.58	1.62	.76	.82	.93	.94
2	4.35	1.72	.76	.85	.93	.94
3	4.49	1.67	.80	.85	.93	.94
4	4.10	1.67	.77	.85	.93	.94
5	3.77	1.55	.62	.82	.94	.94
6	3.64	1.79	.74	.86	.93	.94
7	4.15	1.65	.79	.85	.93	.94
8	3.69	1.68	.66	.85	.94	.94
9	2.83	1.81	.68	.82	.94	.94
10	3.98	1.69	.32	.85	.95	.95
11	2.60	1.73	.61	.78	.94	.94
12	3.41	1.76	.69	.86	.94	.94
13	3.95	1.90	.73	.86	.93	.94
14	4.30	1.80	.69	.86	.94	.94
15	3.39	1.95	.75	.85	.93	.94

At the next stage, the empirical data were used to conduct a ***confirmatory factor analysis*** to test Hypothesis 1, which posited that the EIS-UA would have the same 2-factor structure as the original EIS. In addition, alternative

models were tested to find the best-fitting model for the Ukrainian sample. We tested 4 models: Model 1, "Original"; Model 2, "Short original form"; Model 3, "Short UA form"; and Model 4, "Short UA balanced form" (Table 2).

Table 2
Correspondence indices of the questionnaire models with different factor structures (based on the results of confirmatory factor analysis)

Model	**Chi-sq. (df), p**	**CMIN/df**	**RMSEA**	**LO90 - NO90**	**PCLOSE**	**CFI**	**TLI**
Model 1. "Original"	532 (89), .000	5.97	.12	.11 – .13	.000	.87	.85
Model 2. "Short original form" 1 scale: questions 1, 2, 3, 4 2 scale: questions 9, 10, 11, 14	136 (19), .000	7.17	.14	.12 – .16	.000	.92	.89
Model 3. "Short UA form" 1 scale: questions 1, 2, 3 2 scale: questions 11, 12, 13, 14, 15	73 (19), .000	3.83	.09	.07 –.12	.001	.97	.95
Model 4 "Short UA balanced form" 1 scale: Questions 1, 2, 3, 4 2 scale: questions 11, 13, 14, 15	107 (19), .000	5.67	.12	.10 – .14	.000	.95	.93

Notes: Chi-sq. – empirical value of Chi-square statistic; df – the degrees of freedom; p – significance level; LO90-NI90 – value of RMSEA confidence interval.

As shown in Table 4, the best-fit indices were obtained for *Model 3 ("Short UA Form")*, which includes two scales: the first based on items 1, 2, and 3; the second on items 11-15. This model demonstrated a satisfactory level of fit: $\chi^2(19) = 73$, $p < .001$; CMIN/df = 3.83; RMSEA = .09 (90% CI: .071-.117); PCLOSE = .001;

CFI = .97; TLI = .95. The high CFI and TLI values indicate a good model fit, and the RMSEA is within an acceptable range.

Model 4 ("Short UA Balanced Form") had somewhat lower but still satisfactory results. Each scale has four items. The values were: $\chi^2(19) = 107$, $p < .001$; CMIN/df = 5.67; RMSEA = .120 (90% CI: .099.143); CFI = 0.95; TLI = .93. Although RMSEA was slightly high, the indices overall showed an acceptable fit.

In contrast, *Models 1 ("Original") and 2 ("Short Original") both showed poorer fit compared to other models, as reflected in the following statistics:* for Model 1, $\chi^2(89) = 532$, $p < .001$; RMSEA = .124; CFI = .869; TLI = .846; and for Model 2, $\chi^2(19) = 136$, $p < .001$; RMSEA = .14; CFI = .92; TLI = .89. These results indicate that both models fit the empirical data less well than the alternatives.

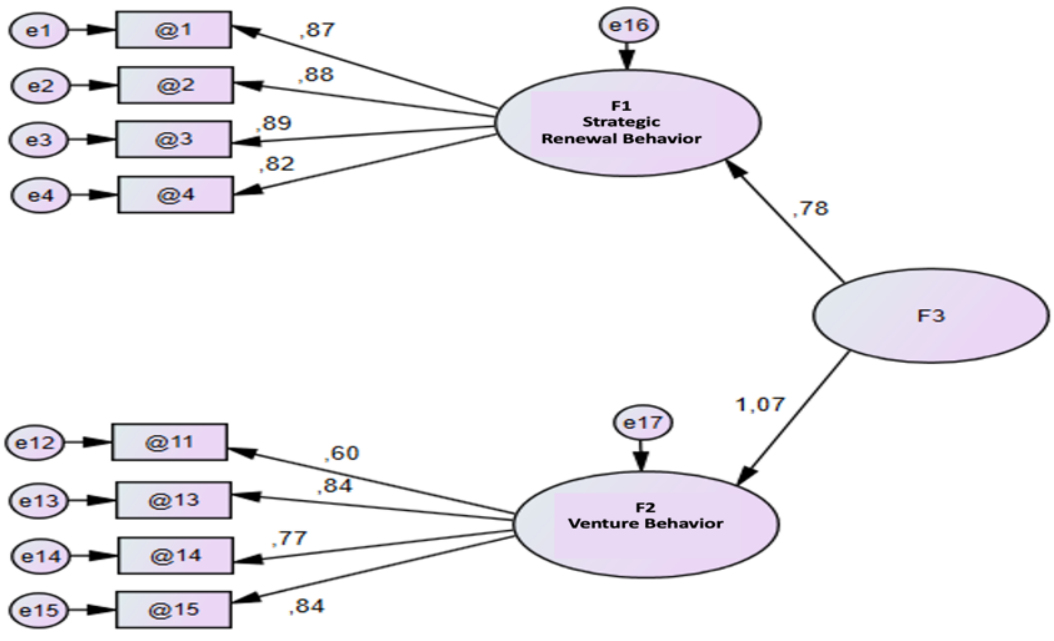
To further verify the internal structure of the measurement scale, we conducted an exploratory factor analysis of the data using the maximum likelihood method with an oblique rotation (Table 3). According to our study's data, the factor structure of the authors' proposed scale in its full version is not confirmed. The results of the exploratory factor analysis showed that the short Ukrainian version of the scale found in our study most closely reproduces the two-factor model of the author's English-language version. As a robustness check of the questionnaire's latent structure, exploratory factor analysis was conducted for three modified versions of the scale: Model 2 "Short Original Form", Model 3 "Short UA Form", and Model 4 "Short UA Balanced Form".

As shown in Table 3, *Model 2*, the *"Short original form"* of the methodology, accounts for 60.7% of the variance and forms 2 factors with loadings of 37.3% and 23.5%, respectively. *Model 3 "Short UA form"*,which includes questions 1, 2, and 3 (1 factor - 27.7% of variance) and 11, 12, 13, 14, and 15 (2 factor - 37.8% of variance), covers a total of 65.5% of variance and has better scale consistency. Factor loadings range from.556 to 0.982, with the highest values for questions 1 (.982) and 2 (.864). *Model 4, "Short UA Balanced Form"*, which includes questions 1, 2, 3, 4 (1 factor - 31.6% of variance) and 11, 13, 14, and 15 (2 factor – 36.4% of variance), covers a total of 68% of variance. Factor loadings were stable and high (in particular, question 1 – .976; question 13 – .867), except for questions 3 and 4, which had lower loadings but were still within acceptable levels. All three modifications demonstrate an acceptable factor structure, but Model 4, "Short UA Balanced Form", was best in terms of explained variance (68.0%) and factor loading stability. To conclude, Hypothesis 1 is confirmed, and the 2-factor structure can be replicated in the Ukrainian version of the EIS. However, the instruments are not completely equivalent because the item factor loadings differ. Fig. 1 shows the internal structure of the two-factor shortened model of the Ukrainian-language version of the Employee Intrapreneurial Behaviour Scale (EIS-UA), which includes two factors: F1 “Strategic Renewal Behaviour” and F2 “ Venture Behaviour”.

Table 3
Results of Exploratory Factor Analysis

Model 2 "Short original form"			**Model 3 "Short UA form"**			**Model 4 "Short UA balanced form"**		
Question	Factor loadings		Question	Factor loadings		Question	Factor loadings	
1	.934		1		.982	1		.976
2	.950		2		.864	2		.874
3	.769		3		.556	3	.370	.554
4	.617		11	.585		4	.442	.427
9		.837	12	.619		11	.534	
10	.186	.132	13	.848		13	.867	
11		.727	14	.829		14	.815	
14		.617	15	.762		15	.749	
%	37.3	23.5	%	37.8	27.7	%	36.4	31.6
disp.	60.7		disp.	65.5		disp.	68.0	

Figure 1
The Internal Structure of the Two-Factor Abbreviated Model of the Ukrainian-Language Methodology "Employee Intrapreneurial Behaviour Scale (EIS-UA)"



A detailed description of the content of each model is presented in Table 4.

Table 4
Comparison of Scale Items in Different Models

Model 1. "Original"	**Model 2. "Short original form"**	**Model 4. "Ukraine Short balanced form"**
F1 «Strategic renewal behavior»	**F1 «Поведінка стратегічного оновлення»**	
1. I undertake activities to realize change in my organization.	1. I undertake activities to realize change in my organization.	1.Я вживаю заходів щодо здійснення змін в моїй організації.
2. I undertake activities to change the current products/services of my organization.	2. I undertake activities to change the current products/services of my organization.	2.Я вживаю заходів щодо здійснення змін у поточних продуктах/послугах моєї організації.
3. I contribute ideas for strategic renewal for my organization.	3. I contribute ideas for strategic renewal for my organization.	3.Я пропоную ідеї стратегічного оновлення для моєї організації.
4. I conceptualise new ways of working for my organization.	4. I conceptualise new ways of working for my organization.	4.Я розробляю нові способи роботи для моєї організації.
5. I utilise insights of other experts to innovate in my organization.	-	-
6. I undertake activities that change the structure of my organization.	-	-
7. I undertake activities that change the work practices of my organization.	-	-
8. I exploit opportunities in the labor market or society to renew my organization.	-	-

F2 «Venture behavior»	**F2 «Венчурна поведінка»**	
9. I undertake activities to set up new business units.	9. I undertake activities to set up new business units.	-
10. I undertake activities to reach a new market or community with my organization.	10. I undertake activities to reach a new market or community with my organization.	-
11. I undertake activities that result in new departments outside of my organization.	11. I undertake activities that result in new departments outside of my organization.	11. Я вживаю заходів, які призводять до створення нових департаментів поза межами моєї організації.
12. I conceptualise new ways of service for my organization.	-	-
13. I undertake activities that result in new projects within my organization.	-	13. Я вживаю заходів, результатом яких є нові проєкти у моїй організації.
14. I actively establish new collaborations with experts outside of my own profession.	14. I actively establish new collaborations with experts outside of my own profession.	14. Я активно налагоджую співпрацю з експертами в інших професіях.
15. I conceptualise new products for my organization.	-	15. Я розроблю концепції нових продуктів/послуг для моєї організації.

To test the validity of the scales, we used the procedure for determining ***convergent validity***, which involves analysing the correlation coefficients obtained when establishing relationships between indicators of *intra-organisational entrepreneurial behaviour of employees* (strategic and venture behaviour) and indicators from other psychodiagnostic techniques that measure related psychological phenomena. We used the following methods for testing: the "Entrepreneurial Self-Efficacy Scale" (De Noble et al., 1999, adapted by Kredenzer & Abdullayeva, 2011) and the GET TEST (Pachkovsky, 2006). In line with Hypothesis 2, statistically significant positive correlations were found between the scales of "strategic behaviour" and "venture behaviour" and the corresponding scales of all related constructs,

except one (need for autonomy, H2), which confirms the convergent validity of the scale based on the theoretised nomological network (see Table 5).

Table 5
Results of the Convergent Validity of the EIS Indicators (r, Pearson)

Variable	**1**	**2**	**3**	**4**	**5**	**6**	**7**
1. SB	---						
2. VB	.747***	---					
3. ESE	.483***	.506***	---				
4. Creativity	.247***	.249***	.315***	---			
5. Need for Achievement	.158**	.129*	.337***	.225***	---		
6. Need for Independence/ Autonomy	.089	.079	.186***	.224***	.126*	---	
7. Risk-taking	.257***	.292***	.377***	.357***	.283***	.270***	---

* p <.05, ** p < .01, *** p < .001

Thus, "strategic renewal behaviour" (SB) correlates with "entrepreneurial self-efficacy" (ESE) (.483; p < .001) and with all entrepreneurial abilities except "need for independence/autonomy", namely, "creativity" (.247; p < .001), " need for achievement" (.158; p < .01), "risk-taking" .257; p < .001). The scale "venture behaviour" (VB) correlates with "entrepreneurial self-efficacy" (.506; p < .001) and with all entrepreneurial personal characteristics except "need for independence/autonomy", namely, "creativity" .249; p <.001), "need for achievement" (.129; p < .05), and "risk-taking" (.292; p < .001). Thus, the data obtained indicate high consistency with conceptually similar constructs.

To formulate ***the test norms***, we conducted a preliminary check of the empirical data for normality. We used Plochinsky's (Bosniuk, 2020) approach, based on the analysis of skewness and kurtosis and their standard errors (see Table 6). According to Plochinsky's criterion, a distribution is considered normal if the skewness (A) and kurtosis (E) values do not exceed 3 times their representativeness error or standard error (mA and mE). As the results show, the distributions of the indicators "strategic renewal behavior" and "venture behavior" are normal.

The test norms of the shortened version of the methodology are presented in Table 7.

Table 6
Descriptive Statistics for the Main Indicators of the Methodology (N=324)

Descriptive statistics	**Strategic renewal behaviour**	**Venture behaviour**
Asymmetry coefficient (A)	.0682	.154
Standard error of skewness (mA)	.135	.135
Kurtosis coefficient (E)	-.648	-.776
Standard error of kurtosis (mE)	.270	.270
Minimum	4	4
Maximum	28	28
Average value	17.5	14.2
Standard deviation	6.03	6.11
Shapiro-Wilk test (p-level of significance)	<.001	<.001

Table 7
Test Norms by Subscales of the Employee Intrapreneurial Behaviour Scale (EIS-UA)

	High level	**Medium level**	**Low level**
Strategic renewal behaviour	≥ 24	13 – 23	≤ 12
Venture behaviour	≥ 20	9 – 19	≤ 8

Discussion

The aim of this study was to adapt the *Employee Intrapreneurship Scale* (EIS) into Ukrainian using a sample of personnel from Ukrainian organisations of various types and forms of ownership. For this purpose, we applied the linguistic adaptation procedure and the necessary list of statistical procedures, including: exploratory factor analysis and confirmatory factor analyses using structural equation modelling (SEM), reliability tests of the scale and its sub-scales, and a test of the construct validity using correlational analyses that linked the EIS-AU subscales to several constructs that can theoretically be linked to intrapreneurial behavior.

We found that the measurement instrument has high internal consistency and satisfactory discriminant validity of all items. The construct validity of the scales was also confirmed (Hypothesis 2): indicators of "strategic" and

"venture" behaviour are significantly correlated with related psychological constructs, particularly entrepreneurial self-efficacy, creativity, need for achievement, and risk-taking.

The lack of correlation with the indicator “need for independence/ autonomy” can be explained, in our opinion, by the fact that personnel in organisations with an intrapreneurial orientation do not seek complete independence, but rather aim to demonstrate intrapreneurial behaviour within the organisational structure. This is consistent with existing approaches (Antoncic & Hisrich, 2001).

However, the study's results did not fully replicate the factor structure of the author's original English-language scale. The structure of the short version of the original English-language scale was partially confirmed (Hypothesis 1). Namely, the scale "*Strategic renewal behaviour*" in the Ukrainian version included the same items as the English-language one (items 1-4). As for the scale "*Venture behaviour*", the correspondence was only partially confirmed (2 of 4 items). This factor did not include items on the scale, such as "9. I undertake activities to set up new business units" and "10. I undertake activities to reach a new market or community with my organization". In addition, the Ukrainian-language scale included items not included in the short English-language version. For example, "13. I undertake activities that result in new projects within my organization" and "15. I conceptualize new products for my organisation".

In our opinion, such results can be explained by the cultural and historical factors in the development of Ukrainian organisations. Ukrainian entrepreneurship has developed only in the last 30 years. Before that, this type of activity was prohibited and accompanied by many negative stereotypes and stigmas. A relatively new phenomenon in Ukrainian management is “intrapreneurship”. This type of employee activity within the organisation is still sometimes perceived negatively by some managers and owners. Therefore, issues related to the first scale and the organisation's development are confirmed in Ukrainian realities, while those related to purely entrepreneurial activity (creation of new business units, entry into new markets) are still in the process of formation.

Thus, based on the results of linguistic adaptation, expert assessment, and reliability and validity analyses, it was confirmed that the shortened two-factor version of the instrument is the most suitable for use in the Ukrainian sample.

Confirmatory and exploratory factor analyses revealed that Model 4 — “Short UA Balanced Form” — provides the best fit to the empirical data, has a stable factor structure, and explains the largest share of variance.

The results of this study are promising, although a few ***limitations*** need to be acknowledged. *First,* the sample of organisations is heterogeneous in

terms of areas of activity and forms of ownership. Perhaps our results may change if we study only business organisations or only government institutions. *Secondly*, the organisations studied were mostly located in Kyiv, which could also have affected the results. It may be that intrapreneurship is more common or accepted in some sectors or regions than in others, which could result in slightly different outcomes across specific sectors, such as business organisations versus state institutions, or across regional areas, such as urban versus rural. Our study did not allow for analysing sector or regional differences in more detail, which might be an interesting avenue for future research. *Thirdly*, a significant background factor that could have influenced the study's results is the war in Ukraine. The study was conducted during the constant shelling of the territory where the organisation's employees work and live. This may, in our opinion, shift the focus from "development" to "resilience and preservation".

Therefore, the prospect of our study is to conduct a retest in organisations of the same sphere and form of ownership in other regions of Ukraine, under peaceful conditions.

Despite these limitations, the adapted Ukrainian version of the Employee Intrapreneurial Scale (EIS-UA) has broad practical applications across psychological and managerial domains. Due to its high reliability, validity, and structural stability, the EIS-UA can be used effectively:

- In applied psychological research, in particular in the fields of organisational psychology, labour psychology, and economic psychology, to study the motivational, cognitive, and behavioural factors of staff innovation activity;
- In HR analytics and personnel management, to identify the potential for initiative, strategic thinking, and entrepreneurial activity among employees, which is especially relevant in the processes of recruitment, evaluation, and development of personnel.
- In leadership and management competence development programmes, to foster innovative thinking among managers of different levels, stimulate proactive behaviour, and support internal entrepreneurship in organisations;
- In organisational development and change systems, to diagnose organisational culture, climate, level of support for innovation, and transformational potential of teams;
- In educational institutions and business schools, for research and training purposes in management, entrepreneurship, organisational behaviour, and HRM programmes;
- In supporting organisations that are innovating, transforming their structure, or adapting to uncertainty, in particular, in the context of war and post-war recovery.

Conclusions

In sum, we conclude that the EIS-UA is a universal tool that can be integrated into interdisciplinary research and practice that involves the study and development of human capital in the context of the innovation economy. The adapted Ukrainian version of the EIS-UA scale is a valid, reliable, and informative tool for studying the intra-organisational entrepreneurial behaviour of employees in Ukrainian organisations, especially in the context of social transformations and war. The EIS-UA has a high potential for use in scientific research, HR diagnostics, and personnel management.

Disclosure Statement

The authors reported no potential conflicts of interest.

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Appendix

Шкала інтрапренерської поведінки працівників (EIS-UA)
(The Employee Intrapreneurship Scale)

Інструкція: Оцініть, будь ласка, запропоновані твердження за наступною шкалою:
1= ніколи; 2= рідко; 3= інколи; 4= регулярно; 5= часто; 6= дуже часто; 7= завжди
Текст методики
1. Я вживаю заходів щодо здійснення змін в моїй організації.
2. Я вживаю заходів щодо здійснення змін у поточних продуктах/послугах моєї організації.
3. Я пропоную ідеї стратегічного оновлення для моєї організації.
4. Я розробляю нові способи роботи для моєї організації.
5. Я вживаю заходів, які призводять до створення нових департаментів поза межами моєї організації.
6. Я вживаю заходів, результатом яких є нові проєкти у моїй організації.
7. Я активно налагоджую співпрацю з експертами в інших професіях.
8. Я розробляю концепції нових продуктів/послуг для моєї організації.

Ключ:
Поведінка стретегічного оновлення: 1-4.
Венчурна поведінка: 5-8