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Development of Seasonal Changes of Hotel and Restaurant Business in Uzbekistan

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Abstract. This chapter presents the research design and econometric strategy used to examine resilience and recovery in Uzbekistan’s hotel and restaurant sector across two crises: the COVID-19 pandemic (2020–2021) and the post-2022 geopolitical disruption. A sequential explanatory mixed-methods design combines macro-level time-series analysis (2012–2025, ARIMAX modelling of visitor arrivals), a firm-level survey of 170 hospitality businesses analysed through OLS and ordinal logistic regression, and four semi-structured interviews analysed via corpus-based textual methods. Three regression models test the effects of pre-crisis preparedness, crisis response capability, digital adoption, staff retention, geopolitical shock exposure, firm size, and ownership structure on operational recovery, revenue recovery, and future preparedness. The chapter details variable operationalization, survey instrument design, sampling strategy, and diagnostic procedures (VIF, heteroskedasticity-robust standard errors, the Brant test), providing a transparent and reproducible foundation for the study’s empirical findings.

Keywords: *hospitality resilience, mixed-methods research, ARIMAX, ordinal logistic regression, crisis recovery.*

1. Introduction

This chapter describes the epistemological view, the econometric model, the reasoning behind each analytical choice, and the rules governing both the quantitative and qualitative aspects of the study. The research focuses on two crises that affected Uzbekistan’s hotel and

restaurant industry in rapid succession: the COVID-19 pandemic in 2020–2021, and the geopolitical turmoil stemming from the Russia–Ukraine conflict from 2022 onwards. Although these may appear as separate events to be studied with different analytical methods, the study design is integrative: macro-level secondary data provide an external perspective on how the sector was impacted by the shocks, the firm-level survey provides insight into what businesses experienced internally, and four case studies provide descriptive and contextual accounts of the mechanisms underlying the numerical data.

Research Philosophy and Design

Creswell and Plano Clark (2018) state that the study is performed within a post-positivist pragmatic epistemology, with the overall consideration that causal mechanisms exist, but that researchers have only incomplete and/or fallible access to them (Morgan, 2007). It is therefore appropriate to treat this not as a limitation undermining the inquiry, but as the basis that necessitates systematic empirical study. Pragmatism adds a further layer, following the argument of Tashakkori and Teddlie (2010) that methodology should follow the research question rather than the reverse.

Approached purely from a positivist perspective, there would be little confidence in applying a fixed ratio or proportion of a study to represent the extreme disparities of Uzbekistan’s transitional-economy context, given the significant differences in institutional environments, regulatory frameworks, and social-capital constraints compared with the Western hospitality context in which most Organisational Resilience Theory was originally developed (Okumus et al., 2005; Linnenluecke, 2017). It would therefore be intellectually dishonest to present a context-free causal model of operational or organisational resilience based purely on pre-existing data and theory; yet swinging too far in the opposite direction would forfeit the confidence that comes from a systematic, statistically leveraged design built on 170 of 200 targeted participants. A mixed-methods pragmatist perspective reconciles both concerns simultaneously.

Research Design

The study follows a sequential explanatory design combining qualitative and

quantitative methods (Creswell & Plano Clark, 2018), with the quantitative phase preceding the qualitative phase: the quantitative phase identifies and measures patterns of statistical significance and their magnitude, while the qualitative phase gives definition and meaning to those patterns by engaging those who experienced the crises (Tashakkori & Teddlie, 2010). The quantitative component comprises primary survey data (170 respondents across Uzbekistan’s hospitality industry) and secondary time-series data for the same industry from 2012–2025. The qualitative component consists of four semi-structured interviews analysed through corpus-based textual methods using T-Lab.

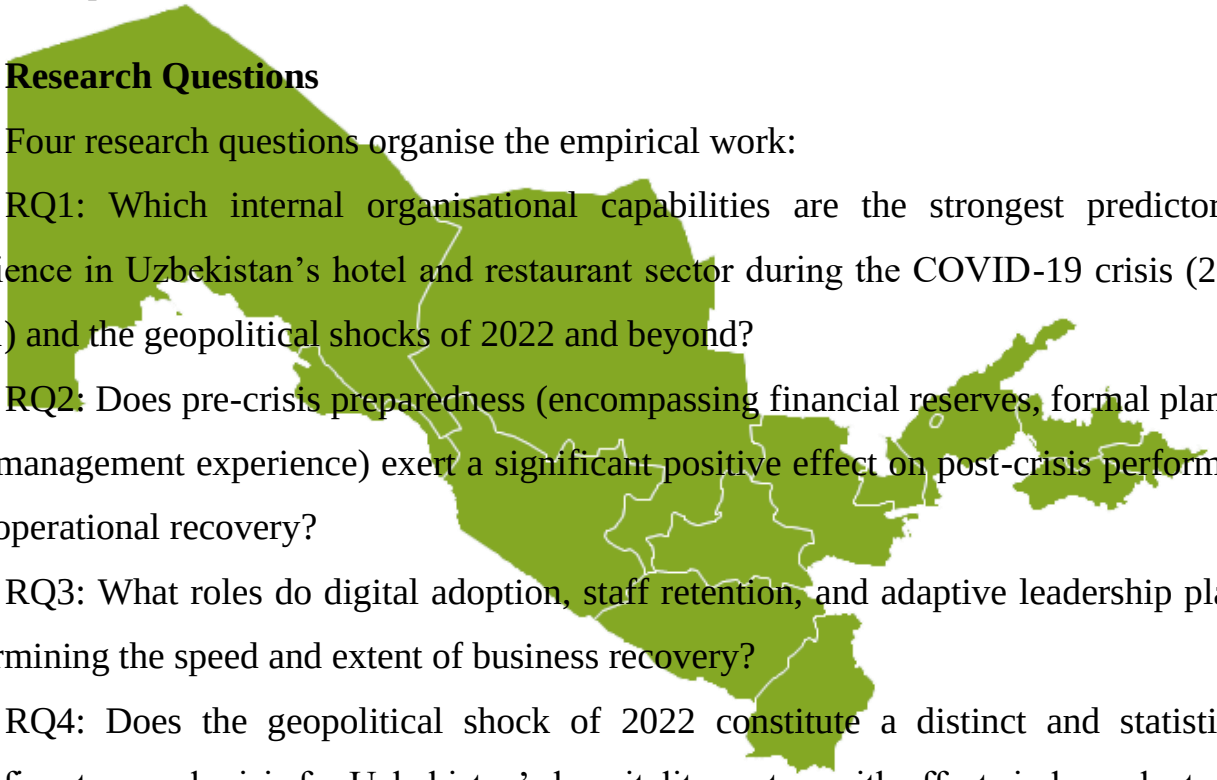
Findings from all three data sources are brought together in the discussion chapter through convergent triangulation (Bryman, 2016). This is more than a check that the different data types agree; it is the process through which the study’s core argument is expressed: that resilience is both a measurable organisational characteristic and an ongoing experience for managers. A complete understanding of resilience therefore requires both measurement (quantitative) and experience (qualitative).

Theoretical Framework, Research Questions, and Hypotheses

The theoretical framework rests on three bodies of literature. The first is Burnard and Bhamra’s (2011) definition of resilience, comprising four sequential capabilities (anticipation, absorption, adaptation and restoration) which forms the structural logic of the study; the data-collection instrument corresponds directly to these phases, with Section B addressing anticipation (pre-crisis preparedness), Section C addressing absorption and adaptation (crisis response), and Section D addressing restoration (recovery outcomes). The second body of literature is Teece et al.’s (1997) Dynamic Capabilities view, which defines resilience as an organisation’s ability to identify and respond to a dislocation, reorganise, and leverage its resources. The third is the Resource-Based View of Barney (1991) and Barney and Hesterly (2010), which predicts that organisations entering a crisis with superior resource capabilities (financial slack, experienced leadership, developed sourcing systems) are better positioned to recover.

The empirical grounding of the framework draws on hospitality-specific crisis

literature. Israeli (2002), Okumus and Karamustafa (2005), and Foo et al. (2020) provide insight into how hotel and restaurant companies have responded to acute demand shocks, identifying internal configurations that differentiate surviving from non-surviving firms. Gössling et al.’s (2021) extension into the COVID-19 period highlights digital adoption and operational flexibility as key moderators. Political-risk and tourism-demand literature from Neumayer (2004) and Sönmez and Graefe (1998) informs the geopolitical dimension of the post-2022 period.



Research Questions

Four research questions organise the empirical work:

RQ1: Which internal organisational capabilities are the strongest predictors of resilience in Uzbekistan’s hotel and restaurant sector during the COVID-19 crisis (2020–2021) and the geopolitical shocks of 2022 and beyond?

RQ2: Does pre-crisis preparedness (encompassing financial reserves, formal planning and management experience) exert a significant positive effect on post-crisis performance and operational recovery?

RQ3: What roles do digital adoption, staff retention, and adaptive leadership play in determining the speed and extent of business recovery?

RQ4: Does the geopolitical shock of 2022 constitute a distinct and statistically significant second crisis for Uzbekistan’s hospitality sector, with effects independent of the COVID-19 shock?

Hypotheses

The hypotheses below establish the directionality of relationships between variables, each developed with a predicted direction ("+") and supported by theoretical and empirical evidence, providing a clearer basis for regression testing versus exploratory analysis.

H1: Preparedness preceding the crisis (+) → organisational resilience. Firms with continuity plans, financial reserves, and experienced managers prior to 2020 should display noticeably higher resilience outcomes (Burnard & Bhamra, 2011; Bourgeois, 1981; Israeli, 2002).

H2: Availability of financial buffer (+) → revenue recovery. Firms with sufficient liquidity to see them through the crisis will recover to or above 2019 revenue levels sooner than firms without sufficient financial buffer, based on financial slack (Gu, 2002; Bourgeois, 1981).

H3: Crisis response capability (+) → operational recovery. Firms that adapted operations quickly, retained employees, and maintained clear internal communication will show higher operational recovery (Teece et al., 1997; Williams et al., 2017; Foo et al., 2020).

H4: Digital adoption (+) → resilience. Firms that adopted digital tools during the crisis should self-rate their resilience and recovery higher than firms that did not (Gössling et al., 2021; Sigala, 2020).

H5: Staff retention (+) → post-crisis performance. Firms that retained their core workforce will recover faster owing to retained human capital and accumulated organisational knowledge (Becker, 1964; Coff, 1997).

H6: Exposure to geopolitical shocks (uncertain) → revenue recovery. The post-2022 environment is predicted to constrain supply-side conditions while producing a mixed demand effect: negative for Western travellers and positive for CIS travellers, with the net direction theoretically unclear and contingent on business type and location (Neumayer, 2004; Sönmez & Graefe, 1998; UNWTO, 2023).

H7: Business size (+) → resilience. Larger businesses, with greater slack resources and more diverse revenue streams, are anticipated to be more resilient than smaller businesses (Barney, 1991; Barney & Hesterly, 2010).

H8: Private/family (non-state) ownership (+) → adaptive capacity. Privately and family-owned businesses are projected to show greater decision-making flexibility and operational flexibility than state-owned businesses (Okumus & Karamustafa, 2005; Hiebl, 2013).

The Econometric Model

The econometric specifications follow standard practice in quantitative strategic-

management and organisational-behaviour research (Hair, Black, Babin, & Anderson, 2019; Field, 2018). Three regression models are estimated to capture separate dimensions of resilience, covering the financial, operational, and forward-looking aspects of recovery.

Dependent Variables

Three separate outcome variables represent the multi-faceted construct of organisational resilience (Linnenluecke, 2017); recovery from multiple crises is difficult to represent through a single item, so the analysis distributes the outcome across three items rather than collapsing it into one.

Y_1: Operational recovery (survey item D2, Likert 1–5): the firm’s self-rated level of operational recovery from the 2020–2022 disruptions; the primary outcome variable in Model 1.

Y_2: Revenue recovery vs. 2019 (survey item D1, ordinal 1–4: below 50%, 50–75%, 76–100%, above 100%): financial resilience measured through revenue recovery relative to 2019, analysed via ordinal logistic regression in Model 2.

Y_3: Future preparedness (survey item D5, Likert 1–5): the firm’s forward-looking resilience orientation, an especially salient distinction in an industry where firms can resume operations before recovering revenue.

Independent Variables and Survey Instrument Design

A design consideration arising from the Google Forms implementation warrants discussion. Respondents did not rate all five items in Sections B, C, and E simultaneously on a Likert scale; instead, each section was presented as a multiple-choice question requiring selection of the single item best describing their experience, yielding one categorical outcome variable per section per respondent rather than five continuous variables.

Consequently, factor analysis cannot be performed, since respondents provide only one binary indicator per item and no full item-response profile. All resulting variables therefore enter the regression analyses as dummy-coded variables, with one category serving as the reference category for each item to avoid perfect multicollinearity, while preserving the theoretical relationship between each item and its construct. A limitation of this design is

that the independent variables become mutually exclusive binary dummies rather than continuous latent factors; it is correspondingly impossible to compute Cronbach’s alpha, confirmatory factor analysis, average variance extracted, composite reliability, or discriminant validity for these constructs. The implication for hypothesis testing is that the regression models can establish whether a respondent who selected a given item differs from those who did not, but cannot provide a consistent measure of the underlying construct. All results relating to H1–H3 and H6 should therefore be read as preliminary and indicative rather than causal or confirmatory. The independent variable structure is shown in Table 4.1.

Table 4.1. Independent Variables, Survey Item Mapping, and Expected Directional Effects

Construct	Survey items	Expected sign	Theoretical grounding
X_1: Pre-crisis preparedness	B1–B5 (dummy per item)	(+) → Y_1, Y_2, Y_3	Burnard & Bhamra (2011); Bourgeois (1981)
X_2: Crisis response capability	C1–C5 (dummy per item)	(+) → Y_1, Y_2, Y_3	Teece et al. (1997); Williams et al. (2017)
X_3: Geopolitical shock exposure	E1–E4 (dummy per item)	(ambiguous) → Y_1, Y_2	Neumayer (2004); UNWTO (2023)
X_4: Digital adoption	C4 (dummy)	(+) → Y_1	Gössling et al. (2021); Sigala (2020)
X_5: Financial buffer	B2 (dummy)	(+) → Y_2	Gu (2002); Israeli (2002)
X_6: Staff retention	D4 (ordinal 1–5)	(+) → Y_1, Y_2, Y_3	Becker (1964); Coff (1997)

Control Variables

Five firm-level structural characteristics enter all regression models as controls, holding constant the variation in outcomes attributable to what the firm is rather than what it did. Table 4.2 specifies each control, its survey source, its coding, and its R variable name.

Table 4.2. Control Variables, Coding, and R Variable Nomenclature

Control variable	Survey item	Coding	R variable
Business type	A1	Dummy: 1 = hotel, 0 = restaurant or mixed	hotel
Firm size (pre-2020)	A2	Ordinal 1–4 (employee count bands)	size_num
Ownership type	A3	Dummy: 1 = private or family-owned, 0 = other	private
Business age	A5	Ordinal 1–4	age_num
Region: Bukhara	A4	Dummy: 1 = Bukhara, 0 = other	bukhara
Region: Tashkent	A4	Dummy: 1 = Tashkent city, 0 = other	tashkent

Full Model Specification

Three regression equations are estimated. They share a common predictor set but differ in dependent variable and estimation method.

Model 1. OLS regression: Operational recovery (Y_1)

$$Y_1 = \beta_0 + \beta_1(staff_ret) + \beta_2(size_num) + \beta_3(resp_adapt) + \beta_4(resp_digital) + \beta_5(resp_lead) + \beta_6(resp_staff) + \beta_7(prep_exp) + \beta_8(prep_fin) + \beta_9(geo_tourists) + \beta_{10}(hotel) + \beta_{11}(private) + \beta_{12}(bukhara) + \varepsilon$$

Model 2. Ordinal logistic regression: Revenue recovery (Y_2)

$$Y_2 = f[\beta_0 + \beta_1(staff_ret) + \beta_2(size_num) + \beta_3(resp_adapt) + \beta_4(resp_staff) + \beta_5(resp_digital) + \beta_6(prep_fin) + \beta_7(geo_tourists) + \beta_8(hotel) + \beta_9(private) + \beta_{10}(bukhara) + \varepsilon]$$

Y_2 is an ordered categorical variable with four levels, making ordinal logistic regression the appropriate estimator; the proportional-odds assumption is tested using the Brant test (Brant, 1990) before results are interpreted.

Model 3. OLS regression: Future preparedness (Y_3)

$$fut_prep = \beta_0 + \beta_1(staff_ret) + \beta_2(op_rec) + \beta_3(size_num) + \beta_4(age_num) + \beta_5(resp_adapt) + \beta_6(resp_lead) + \beta_7(resp_digital) + \beta_8(geo_tourists) + \beta_9(geo_mkt) + \beta_{10}(hotel) + \beta_{11}(private) + \beta_{12}(bukhara) + \varepsilon$$

Including D2 (operational recovery) as a predictor of D5 (future preparedness) in Model 3, while simultaneously including D5 as a predictor of D2 in Model 1, creates a reciprocal relationship that cannot be resolved with OLS. This cross-inclusion is deliberately descriptive: the two models ask different kinds of questions, and each outcome variable provides context for the other rather than serving as a causal predictor. Results should be read as describing the correlation between D2 and D5 rather than directional causation; establishing directionality would require a structural equation model with a properly specified path structure, which is left as a limitation of this study and an avenue for future

research. The purpose of this model is to examine the relationship between crisis response strategies, recovery outcomes, and forward-looking resilience orientation, specifically whether firms that recovered well are also better prepared for future crises.

Each OLS model was estimated with heteroskedasticity-robust standard errors using the White (1980) HC3 estimator, implemented via the sandwich package in R. Variance Inflation Factors were computed for all predictors; any VIF exceeding 10 triggers removal or combination of predictor variables (Hair, Wolfinbarger, Money, Samouel, & Page, 2019). Model fit is evaluated using R^2, adjusted R^2, and Akaike’s Information Criterion (AIC; Akaike, 1974). Statistical significance is evaluated at $\alpha = 0.05$ for all comparisons, with marginal effects reported at $\alpha = 0.10$.

On the Use of Different Dependent Variables Across Study Levels

The macro-level and firm-level models are deliberately set up to measure different dependent variables. Macro-level measures aggregate sector resilience through tourist arrivals and the number of operating tourism firms, showing whether the industry as a whole absorbed and recovered from the external shock; at the firm level, operational recovery (D2), revenue recovery (D1), and future preparedness (D5) capture individual business resilience outcomes. The macro model establishes the severity and timing of the external shock, while the firm model explains variation in recovery rates among businesses exposed to the same shock. Williams et al. (2017) and Linnenluecke (2017) both emphasise that resilience occurs at both sector and organisational levels, and that evidence from both is required for a full understanding; the discussion chapter provides evidence of convergence between the two levels through convergent triangulation.

Analytical Software

All quantitative analyses were performed in R (version 4.3.x; R Core Team, 2024), using readxl for data import (Wickham & Bryan, 2023), tidyverse for data management and visualization (Wickham et al., 2019), psych for descriptive statistics (Revelle, 2023), MASS for ordinal logistic regression via the polr function (Venables & Ripley, 2002), lmtest and sandwich for robust standard errors (Zeileis & Hothorn, 2002; Zeileis, 2004), brant for the

proportional-odds test (Brant, 1990), corrplot for correlation-matrix visualization (Wei & Simko, 2021), and stargazer for formatted regression tables (Hlavac, 2022). R was chosen for its transparency and reproducibility relative to commercial alternatives; all code is available in the dissertation’s supplemental materials.

Secondary Data and Macro-Level Econometric Model

A macro-level quantitative analysis covers 2012–2025 using annual aggregates for total visitor arrivals to Uzbekistan (14 data points). Data sources were: the Uzbek State Committee of Statistics (total visitors by accommodation type and capacity); the Oxford COVID-19 Government Response Tracker (OxCGRT; Hale et al., 2021) for the Stringency Composite Index; the World Bank Open Data portal for GDP growth, consumer-price inflation, the UZS/USD exchange rate, and unemployment; and the IMF World Economic Outlook Database (IMF, 2024) for GDP per capita and regional forecasts.

The dependent variable is total annual visitor arrivals to Uzbekistan (Y, thousands). Independent variables include total accommodation capacity (X_1, thousands), the number of registered tourism firms (X_2), overall consumer prices (X_3), the services-sector CPI sub-index (X_4), and the UZS/USD exchange rate (X_5). Together these capture supply-side capacity, market structure, macroeconomic price pressure on the supply side, and the exchange-rate conditions affecting destination affordability. The full dataset appears in Table 4.3.

Table 4.3. Time-Series Data on Uzbekistan’s Hospitality Sector and Macroeconomic Environment, 2012–2025

Year	Arrivals (thou.) Y	Places (thou.) X_1	Firms X_2	Overall CPI X_3	Services CPI X_4	Rate (UZS/USD) X_5
2012	1,895.0	79.3	351	0.072	0.162	1,900
2013	1,968.6	81.8	348	0.070	0.150	2,000
2014	1,862.0	89.8	343	0.064	0.116	2,400
2015	1,917.7	93.0	398	0.055	0.111	2,800
2016	2,027.0	95.1	433	0.056	0.116	3,000
2017	2,690.0	97.9	449	0.095	0.090	4,200
2018	5,346.3	100.0	502	0.175	0.121	8,070
2019	6,748.5	108.3	517	0.145	0.155	9,500
2020	1,504.1	108.0	337	0.129	0.106	10,500
2021	1,881.3	143.0	288	0.100	0.077	11,000

Year	Arrivals (thou.) Y	Places (thou.) X_1	Firms X_2	Overall CPI X_3	Services CPI X_4	Rate (UZS/USD) X_5
2022	5,232.8	121.9	348	0.123	0.084	11,500
2023	6,626.3	139.1	593	0.088	0.087	12,000
2024	7,957.2	145.7	743	0.098	0.267	12,650
2025	11,679.6	159.4	813	0.073	0.139	13,050

Note: 2025 figures are preliminary estimates as reported by stat.uz. Sources: stat.uz (2025); World Bank (2024); IMF (2024).

The macro-level specification follows the ARIMAX paradigm (Autoregressive Integrated Moving Average with Exogenous Variables), combining a regression component with the temporal inertia (lagging structure) of the residuals. Structural breaks arising from exogenous shocks are incorporated into the regression component, ruling out transmission of a sudden shock through the ARIMA component alone. Given the model’s two-level architecture, the predictors X_1 and X_2 are first modelled as independent time series; the resulting predictions then enter the ARIMAX model as inputs for forecasting tourist arrivals. Model selection relied on the AIC, AICc, and BIC criteria, together with residual diagnostics (the Shapiro-Wilk test for normality, the Ljung-Box test for autocorrelation and the Breusch-Pagan test for homoscedasticity) while prediction accuracy was assessed via Mean Absolute Percentage Error. X_5 (the exchange rate) was excluded from the final specification owing to severe multicollinearity with X_1 (VIF = 22.849): the structural coincidence of UZS depreciation and accommodation-capacity expansion during the post-2017 tourism-liberalisation period renders these variables near-collinear by construction. After excluding X_5, all remaining VIF values fall below 2.8, confirming that multicollinearity is no longer a material concern.

The ARIMAX specification uses two dummy variables to flag discontinuities in the arrivals series. The break dummy (brk) takes the value 1 from 2019 onward and 0 before, reflecting a regime shift coinciding with the peak of Uzbekistan’s tourism-promotion drive; 2019 rather than 2020 is chosen as the inception point because demand in that year (6,748.5 thousand arrivals) deviated sharply from the pre-liberalisation trend, with the post-2019 period constituting a regime awaiting change amid decline and a subsequent return to an upward trend. A separate shock dummy (shock) takes 1 for 2019 only, isolating that year’s

effect from the regime shift captured by brk. A distinct shock dummy is also defined for 2014, the first year in which arrivals declined (from 1,968.6 thousand in 2013 to 1,862.0 thousand), a decline attributable to external political events affecting international tourists.

Given the short observation period (n = 14), these coding decisions inevitably involve subjective judgement; sensitivity analyses using alternative cut-off points (2020, 2022) yielded qualitatively similar results, though the statistical separation between shock and cut-off effects was weaker. Given the small sample size, the ARIMAX component is treated here as an exploratory, descriptive exercise rather than a basis for reliable medium-term forecasting.

Primary Survey: Instrument, Sample, and Collection

Survey Instrument

Primary quantitative data were collected through a self-administered questionnaire of 25 items across five sections, distributed electronically via Google Forms during April 2025. The instrument design followed established principles of organisational survey construction (DeVellis, 2017; Spector, 1992). Table 4.4 maps each section to its analytical function.

Table 4.4. Survey Instrument Structure and Analytical Mapping

Section	Content	Items	Scale	Analytical role
A	Firm profile: type, size, ownership, region, age	A1–A5	Categorical/ordinal	Control variables
B	Pre-crisis preparedness: planning, reserves, experience, suppliers, risk monitoring	B1–B5	Single-item selection	Predictor dummies (X_1)
C	Crisis response: adaptation, staff retention, leadership, digital tools, government support	C1–C5	Single-item selection	Predictor dummies (X_2, X_4)
D	Recovery outcomes: revenue, operational recovery, positive change, staff impact, future preparedness	D1–D5	Ordinal + Likert 1–5	Dependent variables (Y)
E	Geopolitical shocks 2022+: impact, tourist flows, marketing adaptation, supply costs, overall resilience	E1–E5	Single-item selection	Predictor dummies (X_3)

Section B items draw on organisational preparedness scales developed by Herbane (2010) and Tierney (2003). Section C items reflect the adaptive response capabilities documented by Teece et al. (1997) and Burnard and Bhamra (2011). Section E items were

written specifically for this study, since no validated instrument addresses the geopolitical-shock dimension in a Central Asian hospitality context. A pilot test with five sector practitioners preceded full deployment, following Dillman, Smyth, and Christian’s (2014) recommendations on ambiguity removal; minor adjustments were made to items B3 and C5 following pilot feedback.

While the forced-choice format effectively captures each firm’s primary strategic priority, it precludes traditional factor analysis. Future studies seeking to measure the continuous depth of multiple simultaneous capabilities should adopt full Likert-scale presentations. The continuous outcome and control variables from Sections A and D are unaffected by this limitation and form the analytical core of the study.

Sample and Sampling Strategy

A total of 170 usable responses were collected from individuals employed across Uzbekistan’s hospitality and tourism sector. This multi-respondent design reflects the view of Linnenluecke (2017) and Williams et al. (2017) that organisational resilience is enacted and experienced across hierarchical levels, not only at the top.

The sampling strategy is non-probability purposive (Patton, 2002): no complete sampling frame exists for Uzbekistan’s hospitality workforce, making probability sampling structurally impossible rather than merely inconvenient. The achieved n = 170 meets standard adequacy thresholds: for multiple regression with 10 predictors at $\alpha = 0.05$, Cohen’s (1988) power analysis ($f^2 = 0.15$, power = 0.80) requires a minimum of approximately 118 observations, which the sample exceeds. Table 4.5 presents the achieved sample profile in full.

Table 4.5. Achieved Sample Profile (n = 170)

Characteristic	Category	n	%
Business type (A1)	Restaurant / cafe	58	34.1%
	Mixed (hotel + F&B)	46	27.1%
	Hotel (4–5 star)	42	24.7%
	Hotel (1–3 star)	24	14.1%
Firm size (A2)	1–10 employees	54	31.8%
	11–50 employees	64	37.6%
	51–200 employees	42	24.7%

Characteristic	Category	n	%
	200+ employees	10	5.9%
Ownership (A3)	Private company	59	34.7%
	Family-owned	58	34.1%
	State-linked enterprise	19	11.2%
	Foreign-owned / JV	19	11.2%
	Sole proprietorship	15	8.8%
Region (A4)	Bukhara	93	54.7%
	Samarkand	26	15.3%
	Tashkent city	25	14.7%
	Fergana Valley	16	9.4%
	Other	10	5.9%
Business age (A5)	Less than 3 years	50	29.4%
	3–10 years	74	43.5%
	10–20 years	35	20.6%
	More than 20 years	11	6.5%

Note: Source: Primary survey data, April 2025.

Bukhara-based businesses make up 54.7% of the sample, reflecting both the concentration of hospitality activity in that heritage-tourism city and the researcher’s professional network in the region. Small and medium-sized enterprises of 1–50 employees account for 69.4% of respondents, consistent with the structural composition of the Uzbek hospitality sector as documented by stat.uz (2024). Private and family-owned businesses together constitute 68.8% of the sample. Potential non-response bias was assessed by comparing early and late respondents on key firm-profile variables (Armstrong & Overton, 1977); no statistically significant differences emerged.

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