



## THE IMPACT OF INNOVATION ACTIVITY ON THE INVESTMENT VALUE OF A BUSINESS: EVIDENCE FROM SMALL SERVICE ENTERPRISES IN SAMARKAND, UZBEKISTAN

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**Abstract.** *This study investigates the relationship between innovation activity and the investment value of small service enterprises in Samarkand, Uzbekistan. While innovation is widely promoted as a driver of competitiveness, its direct impact on business valuation—particularly in emerging Central Asian economies—remains underexplored. A survey of 20 small enterprises (cafés, beauty salons, photo studios, and IT service providers), supplemented by semi-structured interviews with owners and local investors, was conducted in May 2025. Investment value was assessed via three approaches: (1) owner–investor perceived valuation multiples (EV/EBITDA), (2) discounted cash flow (DCF) projections, and (3) willingness-to-invest (WTI) scores from mock investor panels. Results show a strong positive correlation between the breadth of innovation adoption (measured by Oslo Manual criteria) and investment value: enterprises implementing  $\geq 2$  types of innovation demonstrated, on average, a 24.7% higher EV/EBITDA multiple and 31% higher DCF-based valuation ( $p < 0.05$ ). Product and process innovations showed the strongest marginal effects, while marketing innovations contributed mainly to perceived growth potential. Key mediating factors included improved cash flow predictability, reduced operational risk, and enhanced scalability—all critical for investor confidence. The findings confirm that even modest, low-cost innovations significantly enhance investment*

*appeal in resource-constrained contexts. The study provides actionable insights for SME owners seeking valuation growth and for policymakers designing innovation-support instruments in Central Asia.*

**Keywords:** *innovation activity, investment value, business valuation, SMEs, service sector, Uzbekistan, Samarkand, DCF, EV/EBITDA*

## Introduction

Uzbekistan's post-2017 economic reforms have prioritized SME development as a cornerstone of inclusive growth (World Bank, 2023). The national "Strategy for Innovative Development 2022–2026" (Cabinet of Ministers, 2022) explicitly links innovation to increased firm value and foreign direct investment attraction. Yet, empirical evidence connecting micro-level innovation efforts to tangible valuation outcomes—especially outside Tashkent—remains scarce.

Existing literature establishes theoretical links between innovation and firm value: innovations can boost future cash flows (Damodaran, 2012), reduce uncertainty (real options theory; Dixit & Pindyck, 1994), and signal management quality to investors (Guo et al., 2020). However, most evidence derives from large firms in developed economies. In emerging markets like Uzbekistan, where SMEs often lack audited financials and rely on informal valuation methods, the mechanisms may differ.

This study addresses two research questions:

- (1) To what extent does innovation activity influence the investment value of small service enterprises in Samarkand?
- (2) Which types of innovation (product, process, marketing, organizational) have the strongest impact on valuation metrics?

Focusing on Samarkand—a tourism-driven city with over 2 million annual visitors (State Committee on Tourism, 2024)—offers a representative case of non-metropolitan SMEs navigating digital transition. The findings contribute to both

academic discourse on innovation economics in emerging economies and practical tools for local entrepreneurs and investors.

## 2. Methods

### 2.1. Research Design

A sequential mixed-methods design was employed:

- Quantitative phase: Survey of 20 small service enterprises (April–May 2025).
- Qualitative phase: In-depth interviews with 8 business owners and 5 angel investors (May 2025).

### 2.2. Sample and Data Collection

Sampling: Purposive sampling ensured representation across four subsectors:

- Cafés (n = 6)
- Beauty salons (n = 5)
- Photo/video studios (n = 5)
- IT service providers (n = 4)

Inclusion criteria:

- < 50 employees
- $\geq 2$  years in operation
- Located in Samarkand city

#### Variables:

- Dependent variable: Investment value, measured via:
  - a) Owner-reported EV/EBITDA (based on recent offers or internal benchmarks)
  - b) 5-year DCF valuation (discount rate = 18%, industry-standard for Uzbek SMEs)
  - c) Willingness-to-Invest (WTI) score (1–10 scale) from 3 local investor mock panels
- Independent variable: Innovation activity index, calculated as the sum of adopted innovation types (0–4), based on the Oslo Manual (OECD, 2018):

1. Product: New/improved services
2. Process: Digital tools in operations (e.g., CRM, automated scheduling)
3. Marketing: Social media campaigns, influencer partnerships
4. Organizational: Mobile payments, remote work policies

Barriers & Controls: Financial constraints, owner education, years in operation.

Data collected via structured questionnaires (in-person) and semi-structured interviews (recorded, transcribed, anonymized).

### 2.3. Analysis

- Descriptive statistics (means, frequencies)
- Pearson correlation and simple linear regression (investment value ~ innovation index)
- Thematic analysis of interview data (Braun & Clarke, 2006)

Ethical approval: Obtained from the Institutional Review Board of Samarkand Institute of Economics and Service.

## 3. Results

### 3.1. Sample Profile

- Mean age: 6.2 years
- Mean employees: 8.4
- 70% owners hold bachelor's degrees (mostly in economics or management)

### 3.2. Innovation Adoption and Valuation Metrics

Table 1. Innovation Types and Mean Investment Value Indicators (n = 20)

| Innovation Type | No. of Firms | Mean EV/EBITDA | Mean DCF Val. (mln UZS) | Mean WTI Score |
|-----------------|--------------|----------------|-------------------------|----------------|
| None            | 3            | 2.1            | 142                     | 3.2            |
| 1 type only     | 7            | 2.6            | 168                     | 4.7            |

|          |    |     |     |     |
|----------|----|-----|-----|-----|
| $\geq 2$ | 10 | 3.2 | 220 | 6.5 |
| types    |    |     |     |     |

Note: Differences significant at  $p < 0.05$  (t-test).

### 3.3. Regression Analysis

A simple linear regression model:

$$EV/EBITDA = 2.05 + 0.53 \times (\text{Innovation Index})$$

$$R^2 = 0.61, p = 0.003$$

→ Each additional innovation type correlates with a +0.53-point increase in EV/EBITDA.

Product and process innovations showed strongest individual effects ( $\beta = 0.41$  and  $0.38$ , respectively), while marketing innovations primarily raised WTI scores ( $\beta = 0.49$ ).

### 3.4. Qualitative Insights

- Owner quote: “After we digitalized bookings and introduced a loyalty app, an investor offered us  $2\times$  EBITDA—before, offers were around  $1.5\times$ .” (Café owner, 5 years)

- Investor quote: “We look for repeatability and scalability. A salon using CRM and automated reminders is far less risky than one relying on paper notebooks—even if revenues are similar.”

- Common valuation drivers: cash flow visibility (+78% mentioned), reduced owner-dependency (+65%), customer retention lift (+52%).

## 4. Discussion

The results confirm a robust positive relationship between innovation activity and investment value, even among micro-enterprises. Notably, the effect is non-linear: the jump from  $0 \rightarrow 1$  innovation yields modest gains, but  $\geq 2$  innovations trigger

a disproportionate valuation uplift—likely due to system-level efficiency and investor confidence.

This supports real options theory: innovations (e.g., modular service design, CRM integration) increase flexibility, making future growth paths more credible to investors (Dixit & Pindyck, 1994). The dominance of process + product innovation aligns with Damodaran’s (2012) emphasis on sustainable competitive advantage as a value driver.

Contrary to expectations, marketing innovations (e.g., Instagram ads) had limited direct impact on DCF-based valuation—yet strongly influenced perceived potential (WTI). This suggests a “signaling effect”: visible innovation signals managerial competence, lowering perceived risk.

Policy implications:

- Encourage bundles of low-cost innovations (e.g., mobile payments + simple CRM + digital loyalty) rather than isolated tools.
- Develop investor education programs emphasizing non-financial value drivers (e.g., process maturity, data collection).
- Create SME valuation guidelines incorporating innovation metrics (e.g., “Innovation-Adjusted EV/EBITDA”).

Limitations: Small sample; self-reported financials; cross-sectional design. Future research should use longitudinal data and include financial statement audits.

## 5. Conclusion

This study provides empirical evidence that innovation activity—particularly the combined adoption of product and process innovations—significantly enhances the investment value of small service enterprises in Samarkand, Uzbekistan. Even modest digital steps, when integrated, improve cash flow predictability, reduce operational risk, and increase scalability—key criteria for investors in emerging markets. The findings validate national innovation policies while underscoring the need for practical, bundled support (e.g., “innovation starter kits” with training +

affordable software). For SME owners, the message is clear: innovation is not just about growth—it's a direct lever for valuation uplift.

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