



# Comparative Analysis of Return on Investment (ROI) of College Graduates and Street Vendors in Urban India

Sriram Harish, Deepak Veera, Aanya Mayor, Raghav Shandilya, Tony John

Department of Business and Management, Christ University, Bangalore, India

**Abstract-** This study compares the financial Return on Investment (ROI) of undergraduate college graduates and informal street vendors in urban India. Drawing on survey data from 435 graduates and 89 vendors, one sample t-tests reveal that street vendors achieve a mean ROI of 1,611%, nearly six times the 271% recorded by graduates, though with substantially higher variance. Multiple linear regression confirms that capital investment suppresses ROI while income is its primary positive driver. An independent samples t-test further identifies a significant gender gap in graduate ROI. The findings challenge prevailing assumptions about educational returns and call for policy recognition of informal entrepreneurship as a legitimate economic pathway.

**Keywords-** Return on Investment (ROI), Street Vending, Higher Education, Gender Dynamics, Informal Economy

## I. Introduction

In India, the cubicle office and the street side stall are not two separate worlds but two sides of the same coin. The prevailing view that a college education is the only reliable path to a better life fails to recognise the ingenuity and entrepreneurial capability of street vendors. Although vending is widely regarded as a last resort, empirical evidence suggests it is often a calculated economic choice.

Examining these two groups side by side reveals that when the formal economy cannot absorb every graduate, the “informal” sector is not merely a fallback but a resilient economic engine. Success should not be measured solely by the prestige of a diploma. The actual financial value generated at every street corner merits rigorous analysis.

## II. Research Problem, Gap, and Objectives

There is a significant gap in the literature on how formal college education and informal street vending generate differential financial and non-financial returns. Existing studies rarely assess social mobility, economic resilience, and financial ROI for both groups within the same analytical framework. Without this comparative data, students, families, and informal workers lack a comprehensive view of the economic viability and risk profiles of these competing pathways.

To address this gap, the study analyses the socio-economic backgrounds and ROI of street vendors while concurrently quantifying the ROI of tier 1 and tier 2 undergraduate colleges relative to tuition costs and placement outcomes. The objectives further include assessing non-financial returns such as job creation and career progression, identifying structural challenges both groups face (including regulatory environments



and market dynamics), and formulating testable hypotheses regarding the barriers that moderate financial outcomes for both cohorts.

### **III. Literature Review and Hypotheses**

Empirical research in the Bangalore context (Thimmaiah, 2021 and JETIR, 2024) identifies a paradox of high vulnerability alongside strong entrepreneurial capability. Vendors face regulatory harassment, unlicensed operations, and informal extortion (SPRF, 2024), yet they also serve as crucial urban stabilisers and display advanced economic rationality (Saeed, n.d.).

NIPFP (2019) and Galiani and Weinschelbaum (2021) provide the econometric tools for calculating educational ROI and confirm that returns are highly heterogeneous by institution tier and geography, necessitating a nuanced analysis of placement premiums relative to tuition fees.

According to Sharma (2021) and Kundu and Sarangi (2023), the informal economy is a structural feature arising from deficiencies in the formal sector. Street vending is therefore not merely a survival strategy but a significant mechanism for bridging the urban employment gap.

#### **Hypotheses**

- H1 There is a significant difference in average ROI between undergraduate graduates and street vendors in India.
- H2 Capital and fee investment significantly influences ROI among street vendors and graduates.
- H3 Income and profit significantly influences ROI among street vendors and graduates.
- H4 Demographic factors significantly influence ROI among undergraduate graduates.
- Collectively, the studies reviewed (spanning 1980 to 2024) demonstrate that ROI is not merely a product of individual merit but is heavily moderated by structural barriers. Regulatory harassment for vendors and job market instability for graduates represent different sides of the same urban economic challenge, where financial returns are constantly balanced against systemic volatility.

### **IV. Measurement and Data Collection**

To investigate the economic realities of urban areas, this study employs a quantitative, descriptive, and comparative cross-sectional design, enabling a point-in-time analysis of ROI trends across two distinct cohorts. The research draws on a sample of 435 undergraduate graduates and 89 street vendors, selected through non-probability convenience and purposive sampling. Data were collected via structured questionnaires capturing key financial variables, namely demographics, salary and profit, and primary



investment expenditure. The central comparative metric is Return on Investment (ROI), calculated as follows.

$$ROI = \frac{\text{Earnings} - \text{Expenses}}{\text{Investment}} \times 100$$

To ensure the integrity of the findings, statistical validation was conducted using one-sample t-tests and multiple linear regression within SPSS to identify significant drivers of financial performance across both groups.

## V. Results and Statistical Analysis

To transition from descriptive observations to statistically significant findings, t-tests and regression models were used to isolate the primary drivers of ROI.

Analysis of H1: ROI Comparison

One sample t-tests confirm that both pathways generate returns significantly greater than zero ( $p < 0.001$ ). However, the mean difference between groups is stark, as shown in Table 1.

Table 1. One Sample T-Test Results for ROI by Group

Group	N	Mean ROI (%)	Standard Deviation	T-Value	P-Value
Street Vendors	89	1,611.71	2,106.54	7.218	< 0.001
UG Graduates	435	270.64	214.02	26.375	< 0.001

Analysis of H2 and H3: Drivers of ROI

Multiple linear regression examined the predictors of ROI among graduates ( $N = 435$ ). The overall model was highly significant:  $F(3, 434) = 31.64$ ,  $p < 0.001$ ,  $R^2 = 0.179$ .

Capital and Fee Investment (TCG): Contrary to simple scaling assumptions, higher initial costs showed a significant negative relationship with ROI percentage (standardised  $\beta = -0.608$ ,  $p < 0.001$ ).

Income and Profit (CTCG): Current earnings were a robust positive driver of ROI (standardised  $\beta = 0.578$ ,  $p < 0.001$ ).

Analysis of H4: Gender Dynamics among Graduates

An independent samples t-test of the full graduate sample ( $N = 435$ ) revealed significant gender disparities in educational returns. Male graduates recorded a mean ROI of 283.83% ( $SD = 265.74$ ,  $n = 231$ ), while female graduates recorded a mean ROI of



255.69% (SD = 132.25, n = 204). The difference was statistically significant ( $t = 1.37$ ,  $p < 0.001$ ).

The data reveal extreme capital efficiency within the informal sector. Street vendors achieve a mean ROI nearly six times that of graduates, though with a standard deviation nearly ten times higher, indicating a high risk, high reward environment. Conversely, the significant gender gap among graduates indicates that ROI in the formal sector is moderated not only by human capital but also by persistent market accessibility barriers and systemic labour bias.

## VI. Research Findings

**H1** (Supported) Both pathways yield a positive ROI, but street vendors offer a substantially superior mean ROI, indicating higher capital efficiency.

**H2 and H3** (Supported) Financial drivers are significant. Capital outflows act as a moderator that suppresses ROI if not matched by proportional income growth.

**H4** (Supported) Gender significantly influences educational ROI, with male graduates demonstrating a clear financial premium over female counterparts.

## VII. Theoretical and Managerial Contributions

This research challenges city leaders and educators to reassess how people actually build economic lives in urban India. For too long, global academic standards have defined “success” while ignoring the realities of the informal sector. This study bridges that gap by demonstrating that a street vendor’s stall is as much a wealth-creating institution as a corporate office.

The findings suggest that city officials should move beyond enforcement-oriented street clearance toward effective management of vending spaces, with policies that protect vendors from informal extortion and harassment. Career advisors should provide students with frank assessments of graduate labour market conditions while presenting micro-entrepreneurship as a legitimate and viable career pathway. Urban planners must incorporate dedicated spaces for vendors when designing economic hubs, recognising that these workers are contributors to, rather than detractors from, urban productivity.

## VIII. Conclusion

This research successfully quantified the ROI of both formal education and informal street vending, demonstrating that while academic degrees hold considerable normative value, informal entrepreneurship in high density urban hubs constitutes a highly capital-efficient economic model. An attitude and behaviour gap exists. The economic reality of informal actors shows comparatively superior capital and time efficiency in wealth generation, yet societal attitudes continue to privilege formal credentials. Closing this gap requires policy frameworks that acknowledge diverse career pathways as equally valid contributors to urban resilience and economic mobility.



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