

A study on the impact of regulatory challenges on the earnings of Indian street vendors : A case study of Puri district

Smruti Rekha Sahoo

Department of Commerce

Samanta Chandra Sekhar (Autonomous) College

Puri 752001

Odisha

India

Abstract

Street vendors form a significant and diverse segment of the informal economy that operate without fixed business premises. Their contribution to the GDP cannot be ignored and they play a crucial role in the overall economic development. Despite the positive contributions, they are often subjected to different vulnerabilities and regulatory challenges being one of them. This paper is a descriptive study which aims to examine how different regulatory issues impacts the earnings of street vendors on daily basis. Statistical techniques like confirmatory factor analysis to identify the different indicators of regulatory challenges and ordinal logistic regression have been used to study its impact on earnings. Results showed that there is a strong negative relationship between regulatory issues and income which is consistent across different levels of income.

Subject Classification: 62H25, 62M10.

Keywords: Challenges, Contribution, Income, Negative, Regulatory issues.

Introduction

Street vendors are nanopreneurs who set up makeshift stalls or carts along sidewalks, public squares and busy throughfares, selling a diverse range of goods and services. It is a common form of self-employment and

ORCID ID: 0000-0002-2812-6073

E-mail: sahoo.smrutirekha@yahoo.in

entrepreneurship, especially in urban areas and offer a wide range of convenience goods. They also contribute to the cultural richness of cities by offering products and services reflecting the uniqueness of local traditions and cuisines. It contributes in multifaceted ways to the broader economy. Street vending provides employment opportunities to people with limited formal education or skills. It may also be noted that such businesses may be started with a small capital and has limited formalities. The economic activities of these vendors contribute substantially to the GDP of the country.

The Puri district in Odisha is a tourist-centric economy which also attracts street vendors from in and around the district to cater to the needs and preferences of tourists. They offer a variety of wares including handicrafts, religious artifacts, traditional textiles, souvenirs, local snacks and refreshments, different services, etc.

Undoubtedly, street vending brings numerous benefits but at the same time, the vendors are exposed to many challenges due to their informal nature of work. They are exposed to different vulnerabilities starting from access to basic utilities to finance, technology, marketing, regulations, etc. The different regulatory factors affecting street vendors in India are licencing and permits, eviction, bribery, harassment, confiscation of goods, limited access to public spaces or zoning restrictions, etc.

Review of literature

Rao et.al [1] and Arora, R. [2] studied the socio-economic conditions, factors influencing working conditions of street vendors in Ahmedabad city. The findings of both studies suggest that the conditions of work and life is not encouraging, involving an extensive work load with no guarantee to safety and security. Mengistu and Jibat [3] made similar study with respect to Jimma town. Along with studying the socio economic and working conditions, the reasons behind choosing street vending as a source of employment was done and concluded that many considered it to be better than low wage employment whereas some others chose it out of compulsion to alleviate poverty. Karthikeyan and Mangaleswaram [4] studied the impact of climate change in street vending business along with the challenges faced by them, awareness about street vending policies and concluded that longer working hours affecting the health of street vendors negatively leading to hypertension and respiratory related illness. Islam and Khan [5] examined the socio-economic features among street vendors in Bangladesh. It also studied the reasons behind choosing street vending

as a source of income along with the threats and insecurities associated with it. socio-demographic features indicated that street vending is mostly prevalent in urban areas among illiterate youth with large family size. Various threat and obstacles act as a hinderance in expansion of this sector. The women are also subjected to various difficulties as compared to their male counterpart [6] starting from lack of credit support to enormous physical labour, issues relating to vending and legality pose a severe threat. The working environment without basic hygiene human needs affected the health conditions of women exposing them to various health disorders. The challenge of eviction often leads to bribery resulting in financial loss to women vendors. The contribution of street vendors to economy of Pakistan and various challenges faced by them during street vending have been studied [7] and concluded that the choice of street vending as a source of income is preferred because of limited hassles in starting the business. However, the lack of social protection, lack of basic necessities at work is a grave problem that requires attention considering their valuable contribution to the economy of Pakistan. To analyse the credit risk of small, medium enterprises (SME), Analytic Hierarchy Process (AHP) was utilized to standardize credit ratings, followed by using TOPSIS comprehensive evaluation to rank enterprises based on relevant data. Additionally, optimal credit strategies were developed from the perspective of interest rates and credit limits through cluster analysis. [8]. A study on entrepreneurial opportunities in tourism industry has been made [9], to focus on the untapped potential of the tourism sector and boost entrepreneurship in this sector in the state of Tamil Nadu and it was suggested that proper attention is to be given to channelize the budding entrepreneurs as there is a lot of scope in the industry. With an objective to analyse the importance of the use of digital marketing and social networks as a strategy for the positioning of SMEs [10], a study showed that corporations have been using technology as a tool to respond to customer wants, strengthening brands and market positions during the period of Covid-19. The impact of microfinance on entrepreneurial activities was studied [11] using two machine learning approaches i.e. Principal Component Analysis (PCA) and clustering and it was found that Gross Loan Portfolio (GLP) is the primary factor in determining the level of entrepreneurship.

Objectives of the study

The primary aim of this study is to investigate whether regulatory factors have an impact on the earnings of street vendors in Puri. Specifically, the research seeks to understand how various regulations and policies influence the income levels of these vendors and also suggest various measures that can play a role in shaping the economic outcomes for street vendors in the area.

Hypothesis

H_0 – Regulatory Factors do not have any impact on the earnings of street vendors.

H_1 – Regulatory Factors significantly impacts the earnings of street vendors.

Research Methodology

This study is descriptive and relies on primary data. A detailed structured questionnaire was prepared and the items of the questionnaire were measured on a 5-point likert scale. Non probability convenience sampling technique was used to get responses suitably from the street vendors of Puri. To meet the research objective, a total no. of 137 responses were collected within the study area out of which 120 were valid. SPSS 27.0 and JASP software have been used for analysing the data.

Analysis & discussion

To proceed with analysis, first the reliability of data set was tested with cronbach's alpha and the value is 0.867. The general rule of thumb is that a cronbach's alpha of 0.70 and above is good. Similarly, the skewness value is < -1 whereas the kurtosis value ranged within -2 and $+2$ which may be considered as normal distribution, [12].

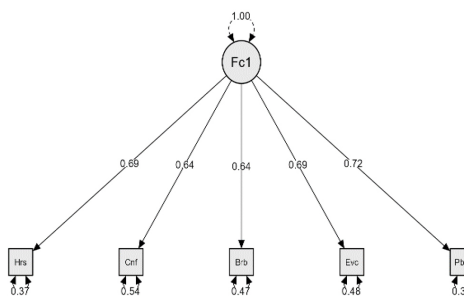
Confirmatory factor analysis is done to identify if indicators like permit & licence, zoning restrictions, bribe, confiscation of goods, eviction, harassment, limited access to public spaces and eviction fall into the category of regulatory issues. Kaiser-Meyer-Olkin (KMO) test was done to examine the sampling adequacy of data and the overall KMO value is 0.849 (Table-1) suggesting that the data set is highly suitable for factor analysis. The factor loadings of indicators like limited access to public

spaces, harassment, confiscation of goods, eviction, and bribery range between 0.652 – 0.771 (Table – 2) (Figure 1) which specifies their significant association with the factor. The eigen value for “regulatory issues” is 3.043 (Table-3) suggesting that the factor is meaningful and contributes to explaining the variance in data.

An assessment is done to study the impact of vulnerabilities on the earnings of street vendors using ordinal logistic regression. The model fitting information with the final significance of 0.0000 (Table – 4) suggests that at least one of the predictor variables (regulatory issues) in this model is statistically significant. The p-value signifies a strong indication against the null hypothesis. This suggests that regulatory issues do have an impact on earnings. The goodness of fit for Pearson 1.000 (Table – 5) indicates a

Table 1

Kaiser-Meyer-Olkin Test	
	MSA
Overall MSA	0.849
Harassment	0.848
Confiscation	0.858
Bribe	0.86
Eviction	0.856
PublicSpace	0.83

**Figure 1****Table 2**

Factor loadings			
Factor	Indicator	Estimate	Std. Error
Factor 1	Harassment	0.692	0.078
	Confiscation	0.641	0.086
	Bribe	0.636	0.081
	Eviction	0.694	0.084
	Public Space	0.720	0.078

Table 3

	Eigenvalues
Factor 1	3.043

Table 4

Model Fitting Information				
Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	199.853			
Final	67.391	132.463	16	0.000
Link function: Logit.				

Table 5

Goodness-of-Fit			
	Chi-Square	df	Sig.
Pearson	49.768	162	1.000
Deviance	56.065	162	1.000
Link function: Logit.			

Table 6

Test of Parallel Lines ^a	
Model	Sig.
Null Hypothesis	
General	1.000
The null hypothesis states that the location parameters (slope coefficients) are the same across response categories.	
a. Link function: Logit.	

Table 7

Pseudo R-Square	
Cox and Snell	0.668
Nagelkerke	0.807
McFadden	0.626
Link function: Logit.	

Table 8

Parameter Estimates		
		Estimate
Threshold	[Earnings Affected = 1]	-14.167
Location	Harassment	-0.721
	Confiscation	-0.234
	Bribe	-0.684
	Eviction	-0.893
	PublicSpace	-0.975
Link function: Logit.		

perfect fit to the model an implies that the model fits the data well. The McFadden's pseudo-R-squared value of 0.626 (Table – 7) clearly explains that there is a substantial amount of variation in earnings based on regulatory issues. The magnitude of the parameter estimates (-14.167) (Table-8) suggests a strong negative relationship between regulatory issues and income. In the test of Parallal lines, the general significance shows 1.000 (Table-6) which implies that the relationship between predictors and the outcome is consistent across different levels of income.

Interpretation

The final significance($p < 0.0001$), indicates that regulatory issues do have a statistically significant importance on earnings. The null hypothesis

is rejected, leading to the conclusion that regulatory issues are associated with differences in earnings among street vendors.

The high McFadden's pseudo R-squared value (0.626) suggests that this model explains a substantial amount of variance in earnings further supporting the importance of regulatory issues as predictors.

Based on the model fitting information and the low p-value for the significance of regulatory issues, it may be concluded that Regulatory issues do play significant role in the earnings of street vendors. The high pseudo R-squared value and the absence of issues with the parallel lines assumptions further support the robustness of the model.

Conclusion & Recommendations

From the above results, it may be clearly interpreted that limited use of public space followed by eviction, harassment, bribe, and confiscation of goods constitute the regulatory challenges for street vendors of Puri district and has significant impact on their earnings (Figure 2). The regulatory challenges faced by street vendors across India are complex and requires careful consideration and strategic solutions.

Designated vending zones at strategic locations may be identified with fair and transparent allocating of vending spots to attract customers. Strong antiharassment measures may be enforced to protect street vendors from harassment and extortion and legal assistance may be provided to street vendors facing harassment.

Addressing regulatory challenges requires collaboration among multiple stakeholders including government bodies, local authorities, and vendors themselves. Regulatory reforms should not only focus on addressing immediate challenges but also empower the vendors, enhance their social and economic standing, and promote inclusive development.

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