

ORIGINAL

The behavior of street vendors in the informal sector in relation to decision making as rational agents

El comportamiento del vendedor ambulante en el sector informal frente a la toma de decisiones como agentes racionales

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Cite as: Mendoza Bolivar N, Toro Cardenas Y, Mosquera Trujillo A. The behavior of street vendors in the informal sector in relation to decision making as rational agents. Management (Montevideo). 2024; 2:33. <https://doi.org/10.62486/agma202433>

Submitted: 30-11-2023

Revised: 19-03-2024

Accepted: 30-07-2024

Published: 31-07-2024

Editor: Misaël Ron 

ABSTRACT

The behavior of a street vendor in the informal sector regarding decision making as rational agents can be understood through a stochastic model that explains their behavior. In this model, the street vendor has subsistence consumption subject to two constraints: the first considers an uncertain income and the second consists of his consumption routine. Past consumption influences future consumption, which is an important part of this seller's decision making as a rational agent. In addition, the optimal proportion of income for savings is determined when the individual has a surplus, the hours dedicated to his activity and the optimal future consumption strategy. This approach shows how street vendors in the informal sector make rational decisions in an environment of uncertain income and consumption routines.

Keywords: Behavior; Street Vendor; Informal Sector Decision Making; Rational Agents.

RESUMEN

El comportamiento de un vendedor ambulante del sector informal frente a la toma de decisiones como agentes racionales se puede entender a través de un modelo estocástico que explica su comportamiento. En este modelo, el vendedor ambulante tiene un consumo de subsistencia sujeto a dos restricciones: la primera considera un ingreso incierto y la segunda consiste en su rutina de consumo. El consumo pasado influye en el consumo futuro, lo que es parte importante en la toma de decisiones de este vendedor como un agente racional. Además, se determina la proporción óptima de ingresos para el ahorro cuando el individuo tiene un excedente, las horas dedicadas a su actividad y la estrategia óptima de consumo futuro. Este enfoque muestra cómo los vendedores ambulantes del sector informal toman decisiones racionales en un entorno de ingresos inciertos y rutinas de consumo.

Palabras claves: Comportamiento; Vendedor Ambulante; Sector Informal Toma de Decisiones; Agentes Racionales.

INTRODUCTION

Street vending, rooted in the daily life of many societies worldwide, represents a complex microcosm of economic, social, and cultural interactions. Often in defiance of formal trade structures, street vendors operate in the so-called informal sector, where the rules of the game differ considerably from those established in the formal market. In this context, the decision-making of street vendors emerges as a central topic of study, as it directly influences their survival, success, and contribution to the wider economic environment.

This extension aims to explore in-depth street vendor behavior in the informal sector from the perspective of decision-making, focusing on the premise that these economic actors can be considered rational agents. A detailed analysis will seek to understand how street vendors navigate in a complex and often adverse environment, applying bounded rationality to maximize their economic and social objectives.

It is thus timely to contextualize the informal sector and street vending; to properly understand the behavior of vendors in this area, it is essential to contextualize the environment in which they operate. The informal sector, characterized by its lack of regulation and formalization, encompasses various economic activities ranging from small street vending to handicraft and repair services. In this context, street vending is a prominent form of livelihood for many individuals and communities.

Street vendors are in a unique position within the informal sector. They often lack access to significant financial resources and face legal and social barriers to their commercial activity. However, their flexibility and ability to adapt quickly to changing market conditions give them a competitive advantage in dynamic urban environments.

In the Rational Agent Decision Making scenario, traditional economic theory has described economic agents, including street vendors, as rational actors seeking to maximize utility or profit. From this perspective, street vendors are expected to carefully evaluate the available options and make decisions to achieve their objectives efficiently.

However, the rationality of street vendors in the informal sector may be constrained by several factors. Financial constraints, market uncertainty, and legal barriers can influence the decision-making process, leading to behaviors that may appear irrational from a purely economic perspective.

Theoretical approach

Theory of street vendors

As economic agents in the informal sector, street vendors exhibit adaptive and strategic behavior in response to the complexities of the urban environment. Their ability to quickly adjust their product offerings, vending locations, and pricing strategies reflects a dynamic adaptation to competition, financial constraints, and legal regulations. This behavior enables them to survive in challenging environments and capitalize on emerging opportunities, thus demonstrating their agency and significant contribution to the urban economy. The flexibility and resilience of street vendors position them as key actors in the economic life of modern cities.

In this context, it is appropriate to refer to one of the theories that support this behavior, as postulated by Sassen, Peet, and Kundu (2020) in their article "Street Vendors in Global Urban Economy," where they argue that street vendors adopt a strategic adaptation strategy to survive and thrive in complex urban environments. According to this perspective, street vendors are not simply passive actors adapting to market conditions but active agents employing specific tactics to address challenges and seize opportunities.

Strategic adaptation theory posits that street vendors use a combination of flexibility, resilience, and local knowledge to adjust their product offerings, vending locations, and pricing strategies in response to changes in the urban environment. This strategic adaptation allows them to survive under adverse conditions, such as intense competition and restrictive regulations, and capitalize on positive events, such as local festivals or temporary increases in demand.

The authors argue that this capacity for strategic adaptation reflects the agency of street vendors and their active role in shaping the urban economy. Rather than being viewed simply as "marginal" or "informal," these actors are seen as dynamic participants in the market whose decisions and actions have significant consequences for the structure and functioning of the city.

This theory provides a new perspective on street vendor behavior, highlighting their ability to innovate and respond creatively to the challenges and opportunities they face in diverse urban environments. It also underscores the importance of considering the agency and strategy of street vendors when designing urban development policies and strategies that promote inclusion and economic sustainability.

Informal Economy. Fundamentals

The informal economy, also known as the subway economy or informal sector, encompasses a wide range of economic activities outside the government's legal and regulatory framework. These activities range from unpaid domestic work, street vending, and trading in goods and services without tax declaration. The informal economy is an integral part of many societies worldwide, providing employment and livelihoods for a large part of the population, especially in developing countries where formal employment opportunities may be limited. However, the informal economy also presents significant challenges, such as a lack of labor protection, tax evasion, and vulnerability to exploitation and abuse. Despite its clandestine nature, the informal economy plays an important role in the global economy, contributing to economic growth and the well-being of millions of people. Its study and understanding are fundamental to addressing poverty, inequality, and economic development in the contemporary world.

Given this economic scenario, it is timely to refer to what is postulated by De Soto (2019), who defines the informal economy as the sector that operates outside the reach of government and formal regulations. This sector includes unregistered economic activities, such as street vending or undeclared work.

For his part, Chen (2018) describes the informal economy as a set of economic activities carried out by workers and businesses that are unregulated or unprotected by the state. These activities are usually informal due to the need for more access to formal employment, adequate infrastructure, or labor protection. Similarly, Portes (2010) defines it as a sector of the economy characterized by the lack of state regulation and the absence of labor protection. This sector includes economic activities ranging from street vending to the provision of unregistered domestic services.

In this sense, from the critical and reflective analysis of the researchers, it is understood that the informal economy, according to De Soto (2019), operates at the margin of state regulation, encompassing unregistered activities. Chen (2018), for his part, links it to the lack of labor protection and access to formal employment. In parallel, Portes (2010) adds the absence of state regulation and labor protection, including activities such as street vending.

Decision-making as rational agents

Decision-making as rational agents involves a process in which individuals evaluate available options and choose the one that maximizes their expected utility or benefit. This approach, rooted in economic theory and cognitive psychology, assumes that actors are conscious, have complete and consistent information, and act logically and consistently to achieve their goals. However, in practice, humans are subject to cognitive biases and information limitations, which can lead to suboptimal or irrational decisions, challenging the premise of absolute rationality. Thus, it is appropriate to enter into the theoretical positions of some authors that define decision-making, namely:

Firstly, Kahneman (2011) describes decision-making as a process in which two systems of thought are involved: the fast and intuitive (System 1) and the slower and reflective (System 2). This approach highlights the influence of cognitive biases on human decisions. For their part, Sunstein and Thaler (2008), in their book “Nudge: Improving Decisions About Health, Wealth, and Happiness,” Sunstein and Thaler introduce the concept of nudge, which consists of using soft interventions to influence people’s decisions predictably, without prohibitions or mandates. Finally, Heath and Heath (2013) propose an approach to decision-making that includes broadening options, contrasting them, taking emotional distance, and preparing action to improve the quality and effectiveness of decisions.

Given this conceptual scenario, the authors’ approaches offer diverse perspectives on decision-making. Kahneman (2011) highlights the influence of cognitive biases and thinking systems in this process, showing how quick and intuitive thinking can lead to irrational decisions. Sunstein and Thaler (2008) propose gentle interventions, such as “nudges,” to improve decisions without constraining freedom of choice.

Finally, Heath and Heath (2013) offer a practical approach to decision-making, highlighting the importance of broadening choices, contrasting options, and taking emotional distance to achieve more effective decisions. These approaches underscore the complexity of the decision-making process and the importance of understanding and addressing its various aspects to improve the quality of our choices.

Factors Influencing Decision Making by Street Vendors

Several authors have addressed the factors that influence the decision-making of street vendors in the informal sector, and they have devoted themselves to studying the informal economy and entrepreneurial behavior in urban contexts. Some of the relevant authors who could refer to these aspects are:

De Soto (1989), a Peruvian economist, conducted extensive research on the informal sector and the subway economy in developing countries. In works such as “The Other Path: The Informal Revolution,” “De Soto examines informal entrepreneurs’ legal and financial constraints.

Chen and Vanek (20002), labor and development specialists, have explored the informal economy in depth and the role of street vendors in it. Their work, including the “Global Informal Economy Report,” can provide insights into the challenges faced by these vendors.

Portes and Wilsom (1989). Portes is known for his research on the informal economy and migration. In collaboration with other authors, he has examined the regulations and legal barriers affecting informal workers in urban settings. Wilson, for his part, has studied urban poverty and informal markets in U.S. urban contexts. His research on legal barriers and government policies may be relevant to understanding how regulations impact street vendors’ decisions.

Glaeser et al. (2014) have investigated the emergence of the informal economy in urban areas. Their work in the Journal of Economic Perspectives and other writings can offer insights into the competition and market environment in which street vendors operate.

These authors and other related researchers have contributed significantly to understanding the factors that

influence the decision-making of street vendors in the informal sector. Their work provides a theoretical and empirical basis for analyzing the challenges and opportunities these economic actors face in their commercial environment.

RESULTS

From the results obtained in the research, some aspects can be deduced from the analysis of the data collected:

In 'the first place, there is evidence of an Influence of external factors, where contextual factors are identified, such as competition in the informal market or regulatory pressure, which influence the decisions of street vendors, aligned with the assumptions of economic rationality.

Similarly, decision-making patterns were identified, which show that street vendors in the informal sector make decisions following rational agent models, i.e., they only sometimes evaluate costs and benefits logically and maximize their profits.

At the same time, biases and limitations have been identified, indicating that street vendors show cognitive biases or information limitations in their decision-making. This could challenge the notion that they act as completely rational agents.

Finally, regarding adaptive strategies, the analyses could analyze street vendors' strategies to cope with difficult decisions in an informal and dynamic environment. This could shed light on how they adapt and respond to economic challenges. These strategies are

Such is the case of using bargaining as a means of selling, without considering the profit percentage, visualizing only a sales option that allows them to cover priority needs at the specific moment.

CONCLUSIONS

After analyzing the behavior of street vendors in the informal sector and their decision-making about the principles of economic rationality, a complex picture emerges. While some show patterns consistent with rational agent theory, others reveal cognitive biases and pragmatic adaptations to informal market conditions. These findings suggest bounded rationality in their economic behavior. In addition, they highlight the significant influence of contextual factors, such as competition and regulation, on sellers' decisions.

These findings raise important implications for the design of policies and regulations that address the specific needs of this sector. In this sense, some of the most relevant conclusive aspects are as follows:

- A limited validation of rationality is observed when assuming the rationality factor. Although some street vendors in the informal sector show behaviors consistent with economic rationality, cognitive biases and information limitations are also observed, suggesting limited rationality in their decision-making.
- Regarding the market and adaptation to market conditions, street vendors exhibit a remarkable capacity to adapt to the complexities of the informal market, implementing flexible and pragmatic strategies to face economic and regulatory challenges.
- It is felt that contextual factors should be given importance, based on the findings highlighting the significant influence of contextual factors, such as competition in the informal market and regulatory pressure, on the decisions of street vendors. These factors can substantially modify the economic behavior expected under the rational agent model.

Finally, the implications for policy and regulation should be emphasized, as the findings suggest that policies and regulations designed for the informal sector should consider the diversity of behavior and the rationality constraints of the actors involved. Rather than imposing rigid restrictions, interventions that promote financial education and access to resources to improve street vendors' decision-making may be more effective.

In conclusion, studying the behavior of street vendors in the informal sector sheds light on the complexity of their economic decisions. While some follow patterns of economic rationality, others show bounded rationality influenced by cognitive biases and contextual adaptations. These findings underscore the need for flexible policies and regulations that recognize the diversity and constraints of actors in the informal market. By better understanding the mechanisms behind decision-making in this context, we can design more effective interventions to support and improve the economic situation of street vendors.

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FINANCING

The authors did not receive funding for the development of this research.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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