



# Coin-Operated Services and Shadow Economy in Region XI, Mindanao, Philippines

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## ABSTRACT

This study investigates the emerging market within the shadow economy, employing a systematic review of existing literature. The findings reveal that these markets predominantly consist of vendo-type services generate profits primarily from the use of 20, 10, 5, and 1 peso coins. These services offer various time consumables for Wi-Fi access and vend 3 to 4 kinds of instant coffee starting at just 10 PHP.

Additionally, 5 peso coins are utilized for self-service car washes and for dispensing drinkable mineral cold water from automatic tubig machines. Specifically, the analysis identifies three key sectors: coffee vending, automatic tubig machines/ car wash services, and Wi-Fi access points. This research highlights the significance of these informal markets and their economic contributions within the fabric of the shadow economy.

These services cater to the demands of consumers who prefer low-cost, accessible options that fit within their budgets. It underscores the importance of developing policies that can support the growth of these services while ensuring fairness and safety for all stakeholders involved.

Keywords: shadow economy, coffee vending, car wash services, Wi-Fi access

## 1. Introduction:

The shadow economy refers to economic activities that take place outside of formal regulations and government oversight. This includes businesses and jobs that are not officially registered or reported, often relying on cash transactions (Schneider & Enste, 2013). The unregulated economy contributes to issues of equity and justice, leading to the emergence of coin-driven services. This opportunity for business in the "emerging market" has been part of the economic climate of the Philippines since the era of colonization (Jones, G. G. 2017). Business-minded individuals have been able to identify the immediate needs of people living in poverty. As a result, they have created affordable products "tinge – tinge" that cater to the budget constraints of Filipino consumers, who often feel they have no choice but to rely on these items for their basic needs (Tiu, E. J. Y., et al. 2019).

Filipino workers possess valuable skills that are often overlooked and unrecognized by policymakers. Despite their significant contributions to the economy, these individuals frequently operate in informal settings, where their talents and efforts go unacknowledged. This lack of recognition can hinder their access to resources, support, and opportunities for growth (Boyden, J. 2015). The emerging markets in Tinge-Tinge are thriving, with notable developments in various sectors. The introduction of Wi-Fi vending machines has provided residents with convenient internet access, catering to the growing demand for connectivity. Additionally, coffee vending machines have become popular, offering a quick and accessible caffeine fix for busy individuals. The car wash vending services are also gaining traction, providing efficient vehicle cleaning options. This evolution of the shadow market highlights the need for government prioritization to ensure regulation, safety, and support for these innovative ventures (Eguia, R. 2015).

In this context, the reliance on informal services becomes both a necessity and a choice. Individuals navigate their circumstances by creating and participating in informal markets, where they can offer goods and services that meet immediate community needs. This adaptability showcases their entrepreneurial spirit and resilience in the face of economic challenges (Burdum, T. F., et al. 2018). As a result, coin-driven services—those that primarily operate on cash transactions—have emerged and continue to evolve. These services cater to the demands of consumers who prefer low-cost, accessible options that fit within their budgets. The constant evolution of these services reflects the dynamic nature of the informal economy, which is shaped by changing consumer preferences and economic realities.

The Consumer demand for convenience is a significant driver in the growth of vendo services, appealing to those seeking quick and easy access to products and services. This demand enables informal businesses to thrive, reinforcing their role in the shadow economy (Lopez, K. A. B. 2021). Economic accessibility is another critical aspect, especially for underserved communities. By providing affordable options for everyday goods, such as coffee and car washes, these enterprises cater to a diverse demographic, including individuals with limited financial means. This affordability is vital in

areas where traditional retail may impose higher prices due to operational costs. Consequently, these businesses not only address immediate consumer needs but also contribute to the economic empowerment of low-income populations (Gonzales, K. K. C. 2020).

Furthermore, the emergence of such ventures creates significant employment opportunities within the informal sector. Entrepreneurs can initiate these businesses with relatively low startup costs, making them accessible to those lacking formal employment. This accessibility fosters innovation and encourages local residents to take charge of their economic futures. Additionally, by employing others in the community, these operations help reduce unemployment rates and promote economic stability (Bueno, B. 2018). Automated systems enhance the efficiency of purchasing everyday items, allowing consumers to quickly access necessities without human interaction. This convenience is especially appealing in fast-paced urban environments, offering time-saving solutions and 24/7 access to essential goods, catering to varying consumer schedules (Greenhalgh, T. C. 2020).

The integration of technology has transformed interactions with these enterprises. Features such as mobile payments and touchless interfaces streamline the purchasing process, enhancing customer satisfaction. Moreover, this technological advancement enables vendors to collect valuable data on consumer preferences and behaviors, allowing for optimized offerings and improved service delivery, ultimately leading to increased profitability (Malden, S., Heeney, C., et al. 2020). However, operating in the informal sector presents significant regulatory challenges. Without formal oversight, issues such as inconsistent quality control and safety concerns can arise. Additionally, the lack of regulation may lead to exploitation of loopholes, undermining fair competition. Thus, it is crucial for policymakers to develop balanced regulations that support innovation while ensuring consumer protection and equitable business practices (Heath, J. 2014).

These types of enterprises have shown remarkable resilience, particularly during economic downturns. They often provide affordable alternatives to traditional retail, making them particularly appealing during financial hardships. Their adaptability allows them to thrive in changing market conditions, offering essential goods when consumers may be cutting back on spending. This resilience not only supports individual entrepreneurs but also contributes to the overall stability of the local economy (Béné, C. 2020). Beyond their economic contributions, these ventures have a profound social impact on local communities. By providing a platform for local entrepreneurs, they foster community engagement and encourage residents to support one another. This social dimension enhances community cohesion, as operators often become integral parts of the neighborhoods they serve. Additionally, their presence can promote local initiatives and encourage the development of a vibrant, interconnected community (Schiefer, D., & Van der Noll, J. 2017).

This research seeks to investigate the workings of coin operated services, in the sector and delve into their importance well as the hurdles they face and possible ways to improve financial inclusivity, in Region XI of Mindanao Philippines.

## 2. Methodology

This study employs a systematic review of literature to investigate the emerging market of vendo-type services within the shadow economy, focusing on coffee, car wash, and Wi-Fi vending. A comprehensive search was conducted across multiple databases, including academic journals, newspapers, and reputable internet sources, prioritizing platforms such as JSTOR and Google Scholar to ensure a diverse range of materials. Keywords used in the search included "vending services," "shadow economy," "coffee vending," "car wash vending," "Wi-Fi vending," and "informal economy."

Articles were selected based on their relevance and analytical depth, with a focus on those published within the last ten years to reflect current trends. Key information was extracted and organized into thematic categories to facilitate analysis, capturing both quantitative and qualitative data. The extracted data underwent thematic analysis to identify common patterns and insights, while comparative analysis assessed the differences and similarities among the various service types. The findings were synthesized to draw overarching conclusions about the role and impact of these services in the shadow economy, highlighting themes such as economic accessibility and employment opportunities.

The methodology acknowledges potential limitations, including biases in the available literature and the challenges of obtaining comprehensive data on informal markets, thereby emphasizing the need for further research in this area. This structured approach offers valuable insights into the economic significance and operational characteristics of vendo-type services within the shadow economy.

## 3. Results and Discussion

The systematic review of literature on vendo-type services within the shadow economy revealed that these markets predominantly consist of vending services that generate profits primarily through the use of 20, 10, 5, and 1 peso coins. This reliance on small denominations highlights the accessibility of these services to a broad consumer base, particularly in low-income areas where cash transactions are preferred for affordability and convenience. The ability to use these coins facilitates quick purchases, allowing consumers to access essential goods and services without the need for larger denominations or credit cards.

**Table 1. Type of Vendo Services**

Denomination (Peso)	Vendo Type	Service Type	Time (if applicable)
5	Car Wash	Quick wash	5 minutes
10	Car Wash	Standard wash	12 minutes

20	Wi-Fi Access	5 hours of Wi-Fi access	5 hours
10	Wi-Fi Access	2 hours of Wi-Fi access	2 hours
5	Wi-Fi Access	1 hour of Wi-Fi access	1 hour
1	Wi-Fi Access	30 minutes of Wi-Fi access	30 minutes
10	3-in-1 Instant Coffee	Instant coffee with cream and sugar.	-
10	Choco	Rich chocolate drink mix.	-
10	Black Coffee	Strong brewed coffee, no additives.	-

Table 1. Shows different kinds of vendo services that is the most common and denominations - The service offerings include car wash options and Wi-Fi access, along with a selection of coffee beverages. For *car washes*, customers can choose a quick wash for 5 pesos for 5 minutes. A *standard car wash* is available for 10 pesos in 12 minutes. Additionally, various *Wi-Fi access packages* are offered, ranging from 1 peso for 30 minutes to 20 pesos for 5 hours, providing high-speed internet connectivity for different durations. In terms of refreshments, customers can enjoy a range of *coffee options* for 10 pesos each cup. The 3-in-1 instant coffee comes pre-mixed with cream and sugar for convenience. For those craving something sweeter, there's a rich chocolate drink mix available. Lastly, the black coffee option delivers a strong, brewed flavor without any additives, perfect for coffee enthusiasts looking for simplicity. The service is designed to meet the growing demand for quick and affordable options, catering to people's reliance on fast, efficient solutions at a low cost.

The findings suggest that the informal nature of these services significantly contributes to their popularity (Del Giudice, O. N., Giraldo, M., et al 2023). Many consumers favor vending options because they often provide lower prices compared to traditional retail outlets, making them an attractive alternative during economic downturns. This pricing strategy not only caters to budget-conscious consumers but also reflects the operational flexibility that vendors have in adjusting their prices to meet local demand. Moreover, the review highlighted that the use of coins facilitates the rapid turnover of sales, which is vital for the sustainability of these businesses. The quick and easy transactions associated with coin-operated machines encourage frequent use, thereby increasing overall revenue for vendors (Cohney, S., Hoffman, D., et al 2019). This operational model not only supports individual entrepreneurs but also contributes to the local economy by circulating cash within communities.

However, the reliance on coin transactions also presents challenges. The informal nature of these services often means that vendors operate without the protections and benefits afforded to formal businesses (Chen, M. A. 2012). Issues such as inconsistent quality control and lack of consumer protection can arise, putting both consumers and workers at risk. Furthermore, as digital payment methods gain popularity, there is a potential risk of marginalizing those who rely heavily on cash transactions, particularly in communities with limited access to banking services (Aziz, A., & Naima, U. 2021).

#### 4. Conclusion

In conclusion, vendo-type services using small coin denominations play a vital role in enhancing economic accessibility within the shadow economy. While they generate profits and provide affordable goods, these services face challenges related to regulation and consumer protection. It is essential to develop policies that support their growth while ensuring fairness and safety for all stakeholders. The literature review highlights the significant impact of these services, particularly in creating job opportunities and contributing to local economic resilience. The reliance on small coin transactions allows quick access for consumers, especially in low-income areas, while vendors can adapt effectively to market demands.

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