

THE APPLICATION OF COST VOLUME PROFIT ANALYSIS IN THE SOUTH AFRICAN MINIBUS TAXI INDUSTRY

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ABSTRACT

The rapid and strong flow of economic development and competition has compelled businesses in both the informal and formal sectors to be competitive in every way. Cost volume profit analysis (CVP) has become an important management accounting principle in this rapid and strong economic flow. This is because cost volume profit analysis is a management accounting principle that may be used in planning, monitoring, and decision-making by forcing minibus taxi owners to evaluate future possibilities, anticipate openings in terms of opportunities and restructuring, and detect future risks. The purpose of this research paper is to investigate how minibus taxi owners in the informal sector apply CVP as a management accounting principle tool in operating their minibus taxi business. This research paper used a quantitative research methodology in the form of an online questionnaire to gather data from a census of 500 minibus taxi owners situated in the Emfuleni Local Municipality. This is a cross-sectional research paper with a location restriction. Data were collected in 2021. The data collection was restricted to the online environment, because of the COVID pandemic restriction. Following data collection, the information was synthesized into an excel file, a conformity check was performed, and data cleansing was completed. The Statistical Package for the Social Sciences version 27.0 software package was used to analyse the data. The results were displayed using descriptive tools such as pie charts and bar charts. The results of these descriptive tools show that most minibus taxi owners do not apply cost volume profit analysis when running their minibus taxi industry. Lastly, the research paper concludes by providing recommendations on how minibus taxi owners may apply CVP to their minibus taxi business.

Keywords: cost volume profit analysis - costs - volume - profits - minibus taxi industry.

1. INTRODUCTION

In today's business world, according to Sloanreview (2020), the main aim of any business, whether in the informal or formal sector, is to generate a profit for its owners. But in recent times, due to the coronavirus pandemic, businesses have struggled to generate profits for their owners, especially those in the minibus taxi industry (Muthige 2022). According to Jennings (2022), the coronavirus pandemic has had a negative impact on the minibus taxi industry as it has brought competition that has forced some minibus taxi owners to close their minibus taxi business. Though Muthige (2022) supported the latter statement, he posited that the minibus taxi industry had had profitability challenges long before the coronavirus pandemic. Thus, minibus taxi owners were constantly in rivalry with other public transport providers over subsidies given by the government. Public transport scholars such as Moyake (2006) and Diane (2002) blamed the profitability decline of the minibus taxi industry on the large influx of minibus taxis that happened in the early 1990s. Diane (2002) posited that the minibus taxis started

using cheap and dangerous ways to keep their minibuses in good shape. This caused many minibuses to be unsafe to drive and forced some minibus taxi owners out of business.

Even though the latter is evident, there are still minibus taxi owners operating with roadworthy minibuses who can be considered successful as they have operated in the minibus taxi industry for more than a decade. With no public paperwork in terms of financial statements to show how successful in terms of profit these minibus taxi owners are and limited research studies that show how these minibus taxi owners operate their minibus taxi business, the researchers in this research paper prompted CVP, a management accounting principle that can be used to achieve or increase profit. The existence of this management accounting principle was explored in the minibus taxi industry. Since this chosen management accounting principle has to do with owners who falls under management, it is important for this research paper to first define this area of accounting.

In the words of Marx, De Swart, Pretorius, and Rosslyn-Smith (2017), "*management accounting is a branch of accounting that supplies both the workforce of the business and its management or owners with financial and non-financial information that is useful for planning, decision-making, and controlling.*" Additionally, Brummer, Hall, and du Toit (2017) described the processes of management accounting and its principles as those of figuring out, gathering, estimating, interpreting, and deciphering financial data that can enhance both the informal and the formal sector to achieve their set financial goals. In the formal sector, the latter mentioned processes of management accounting are placed under the responsibility of a management accountant, while in the informal sector, these processes of management accounting are placed under the responsibility of an owner (Lulaj & Iseni 2018). The latter research scholar further proclaimed that the effectiveness of placing the responsibilities under a management accountant is far greater than that of placing the responsibility under an owner. The effectiveness can be seen through succession in planning, decision-making, and control in the formal sector. Lastly, the research posited that the success and effectiveness of these processes are due to how well management accountants know how to use them.

As later posited in the current research paper, the application of CVP is being explored in the minibus taxi industry at Emfuleni Local Municipality. The minibus taxi business in South Africa forms part of the public transportation sector but operates in the informal sector. In conducting and presenting the results of the current research paper included the following five sections: the introduction; literature review; the methodology; the results and discussion; and the conclusion. The current section has introduced the subject to be investigated, which is the application of CVP in the South African minibus taxi industry. The section to follow reviews literature that underpins the current research paper. It is important to note that the reviewed literature does not leave out the researchers' understanding of the topic or subject. Instead, it organizes the main ideas of this investigation.

2. LITERATURE REVIEW

In regard to the current research paper, the current piece of literature review demonstrates knowledge and understanding of CVP and the South African minibus taxi industry. In other words, the current research reviews two pieces of academic literature; one is the CVP and the other is the South African minibus taxi industry. In the context of reviewing literature on CVP, the following two aspects were reviewed: the definition and how CVP can be helpful and the elements and factors affecting CVP. The second piece reviewed literature on the South African minibus taxi industry.

2.1 Literature on CVP

2.1.1 The definition and how CVP can be helpful

CVP can alternatively be referred to as *breakeven analysis* (Marimuthu et al. 2016). Llie and Sorina (2017) posit that CVP is an analysis based on a balance point, which is the link between the price of services or goods, the output volume, the variable cost per unit, and fixed overheads. CVP is a management accounting principle used for planning and decision-making by the management or owner,

either in formal or informal business (Cele 2022; Budugan & Georgescu 2008). Moreover, Marimuthu et al. (2016) stated that usually managers of entities that operate in the manufacturing industry uses CVP as it is a principle of management accounting that is useful to determine how many units needs to be sold in order to cover all costs incurred for the product business and whereas in the service CVP is used to determine how many customers' needs can be catered for in order to cover all costs incurred. At the point that business costs are covered, whether in a product or service, is the breakeven point (Muthige 2022).

Therefore, CVP can be useful for budgeting, management control, and performance evaluation in addition to planning and decision-making. Ameyaw (2016) alluded to the fact that business owners could use CVP to prepare for economic changes. Moreover, Ihemeje, Okerefor, and Ogungbangbe (2014) point out the advantages of CVP in a service business, such as the minibus taxi industry.

- The bare minimum of services that must be provided in order to avoid a loss;
- The level of services that the business needs to render to earn a targeted profit;
- How the increase or decrease in service costs will impact the target profit;
- Identifying services that contribute less to profits and those that contribute more;
- Decisions on whether to discontinue or continue specific services offered;
- The new breakeven point after the above mentioned (sales price, costs, and service rendered) effects is;
- How the increase or decrease in fixed costs, such as rent and other service fixed costs, may affect the business's operating profit;
- Lastly, the impact of the expansion plan on the CVP relationship.

2.1.2 The elements and factors of CVP

There are three elements of CVP, namely cost, volume, and profit, and each element is affected by factors (Alnoor et al. 2020). Ameyaw (2016) put forward that the factors of CVP are also called components of CVP. In this research paper, the word "*factors*" is used, but in other studies that talk about CVP in general, the word "*component*" is used instead. In Figure 1 below, the researchers illustrated the factors of CVP.

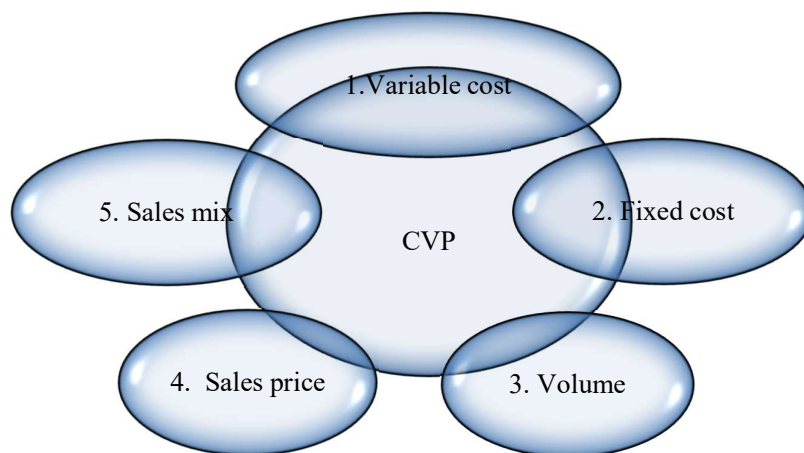


Figure 1. Factor of CVP
Reference: (Muthige, 2022)

As mentioned, each element of CVP is affected by the factor of CVP (Alnoor et al. 2020). The variable costs and fixed costs factors of CVP affect the cost element of CVP. While Hillier and Lieberman (2006) posit that the volume factor of CVP is affected by itself, in other words, the volume factor of CVP affects the volume element of CVP. Lastly, the sales price and sales mix factors of CVP affect the profit element of CVP (Abdulkareem & Aymen 2020). How each factor of CVP is affected by each element of CVP is discussed in detail below. But as volume is a factor of CVP itself, the researchers discussed the

element of CVP and the factor of CVP conjointly. In the subsection to follow, the cost element of CVP is discussed.

2.1.2.1 Cost

The most frequent definition of "cost" is forgoing something to obtain something. Shakya (2009) fenced that cost maybe interpreted in numerous ways, but the most typical is forgoing something to gain something. The latter scholar further defined "cost" as the expense of producing, acquiring, maintaining, or achieving anything. In business, it refers to the cost of time, effort, materials, and resources (Ndongolo 2013). Kapil (2011) defines "*cost*" as a sacrifice for organisational goals and benefits. Ndongolo (2013) views cost as a resource sacrificed for goals - forgoing something to accomplish something is the most prevalent reference and perspective. Lastly according to Abelson (2000), the cost might be cash or something virulent to currency. Variable and fixed costs effect CVP cost element. Below are CVP's two factors are discussed:

a) Variable costs

According to Garrison, Noreen, and Brewer (2006), variable costs are those costs of a organization services or products that alter proportionately in quantities as the degree of production varies. When presenting a definition of variable costs, Fransiska (2013) noted that "variable costs are those in which changes are directly proportional to changes in volume, or output, within the relevant range, but the unit cost stays constant." From the later definition provided, it can be concluded that variable costs are those costs that are depending on the degree of output in an activity of a service arrangement. It is vital to understand that variable costs have a cost driver. Fransiska (2013) and Musenga, Mpwanya, and van Heerden (2017) suggest that a "*cost driver*" is anything that makes a cost happen.

Variable costs are generic to sectors and industries and are typically, according to Mutige (2022), are paid daily. Examples of variable expenses in the service industry include fuel costs, drivers' wages and salaries, and service fee charges (Lal 2008). Variable expenses are not constant; they are dependent on a cause (Rodrigue 2016). Lastly, when the latter is related to this research paper, it means that if the minibus taxi travels a lot or for a longer distance, expenses such as gas and oil would grow since they are not fixed. The following part examines the second aspect of CVP that influences the cost element, which is fixed costs.

b) Fixed costs

Shakya (2009) calls fixed costs "*capacity costs*" (Shakya 2009). Because they are unaffected by service volume or output, Kallio (2018) considers these costs as fixed costs. Thus, service volume does not affect it. Profit does not fluctuate with fixed costs remaining the same when they change. When fixed expenses fall, profit rises; when they rise, profit falls (Lal 2008). This research paper suggests that minibus taxi operators who pay less for their payment instalment would make more money, and vice versa if they pay more (increased). If the sum is set, then the cost is fixed, as Berry-Johnson (2019:44) suggested that even though the time might vary daily, monthly, quarterly, or annual payments, the costs are fixed.

Fixed costs are generic to sectors and businesses like variable costs. Fixed expenses in the minibus taxi sector include monthly instalments, insurance, depreciation, impairment, weekly association fees, and rank fees (Gallo 2017; Muthige 2022). Fixed costs in the minibus taxi industry include cash and non-cash factors, including as depreciation and impairment losses (Kallio 2018; Muthige 2022). The next and next sections discuss volume.

2.1.2.2 Volume

Ndongolo (2013) defined volume as space taken. Srikant and Madhav (2015) backed Ndongolo (2013)'s notion of volume as hearing or space. Shakya (2009) suggests selling or making things or services.

Ameyaw (2016) stated that volume is the total number of goods or services sold in a given time. Muthige (2022) posits volume in the minibus taxi as the number of commuters or passengers a minibus taxi takes in a certain time. Naturally, if the fare is cheap, a minibus taxi will carry more people, and vice versa if it is expensive (Ameyaw 2016). Sales price—also known as "*fare price*"—is a CVP element. This research paper will clarify the word later. Profit, the last portion of CVP, is discussed below along with its effects.

2.1.2.3 Profit

Bhattacharyya (2011) claims that "*profit*" has several meanings to various individuals. Dwivedi (2008) defined profit as income above expenses. Economists defined profit as return over cost over potential cost (Ferguson, Rentzler, & Yu 2005). Accounting experts like Garg et al. (2003) see profit as a circumstance when sales income outweighs spending. As mentioned in section 2.3.1, *sales price* and *sales mix* are CVP variables that impact profit. Next section covers them.

a) Sales price

"*Sales price*" is industry-neutral. According to Rodrigue (2016), the phrase is a "fare price" in public transportation and a "service fee" in most service businesses. "*Selling price*" is the most prevalent phrase for product prices. This research paper uses "*sales price*" and "*fare price*" interchangeably. Button and Reggiani (2011) defined "*sales price*" and "*fare price*" as the amount a seller charges a buyer. Thus, it is a service fee in a service sector and a product price in a product-selling industry.

Pricing tactics includes cost-plus-profit, penetration pricing, and price skimming (Button 2010; Holland 1998). South African minibus taxi organizations and mother organizations such as the South African National Taxi Council (SANTACO) and National Taxi Alliance (NTA) control the fare rates in the informal sector (Barrett 2003). Finally, fare price are determined by travel distance, affordability, and commuter size (Vegter 2020). CVP sales mix is below.

b) Sales mix

Not all businesses can apply these factors to CVP. According to Habeeb (2012), sales mix occurs and exists when a business sells multiple goods or renders multiple services. Moreover, Lal (2008) posits that in more than one case, these multiple goods or services are jointly linked, though in other cases, the goods or services are separately used. Habeeb (2012) further explained that a sales mix represents a percentage or proportion of how a business sells its multiple goods. Lastly, a *sales mix* applies to the South African minibus taxi industry - this occurs when a minibus taxi operates in a minibus taxi association that operates multiple routes (Muthige 2022).

2.2 Literature on the minibus taxi industry

The researchers first examine South Africa's land public transport, which includes the minibus taxi industry. The South African land public transportation system includes three forms of public transport: government-subsidized bus and rail services, and the minibus taxi industry, which is not. The non-subsidized taxi industry has been called "the minibus taxis, detested by some and admired by others" by scholars like James (2018) and Moyake (2006). South Africa's three land public transport options compete for passengers, hence they do not operate together (Baloyi 2012). The researchers endorsed by Moyake (2006) claims that the three land public transport modes are interconnected. South Africa's main method of transportation is land public transport (South Africa (SA) Taxi 2018). South African land public transport is environmentally unfriendly and inaccessible to disabled people (Jennings 2022). Despite its drawbacks, most people utilize land public transport to go to work, school, and social events (Baloyi 2012).

Public transportation depends on cost and accessibility (Jennings 2020). Public land transport users include automobile owners, walkers, and people going to work, school, and social events. Bicyclists also utilize these places (Baloyi 2012).

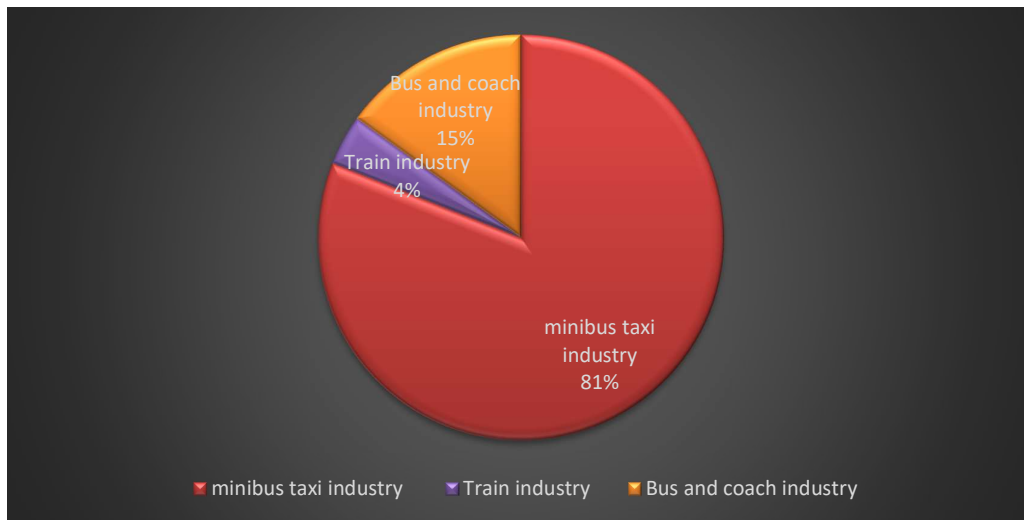


Figure 2: Public Transport Choices in South Africa

Source: National Travel Housing Survey (NTHS) 2021

Figure 2 shows that of the 43,5% of land public transport users, the minibus taxi industry accounts for 81%, which is the majority, leaving 33% to be shared among the bus and coach industries with 15% and 4% of the train industry (NTHS 2021). Moreover, according to Fobosi (2021:2), the minibus taxi industry transports more than 15 million commuters on a daily basis to work, schools and universities, to access healthcare or for leisure. The Conversation (2020) reported that there are about 200,000 minibus taxis in South Africa. The minibus industry employs about 300,000 minibus taxi drivers and 100,000 minibus taxi marshals, and it also benefits 100,000 car washers and 150,000 vendors at minibus taxi ranks. Finally, while the minibus taxi industry is a good fit for many stakeholders, it faces low profit margins and high installments, which necessitate planning and can be overcome by the management accounting principle prompted in this research paper.

12. METHODOLOGY

In a research paper, the methodology section allows the reader to critically evaluate a research paper's overall validity and reliability. In this part of the methodology, the researchers write on the research methodology, respondents, online questionnaire, response rate, data collection and data analysis.

3.1 Research methodology

This research paper employed a quantitative research methodology as a research design. According to Bhandari (2022), quantitative research is the process of collecting and analyzing numerical data. Moreover, the latter author mentioned that quantitative research methodology can be used to find patterns and averages, make predictions, test causal relationships, and generalize results to wider populations. The researchers saw quantitative research methodology fit for this research paper. It aims to find out the patterns used by minibus taxi owners in operating their minibus taxi business. Moreover, a related research study conducted by Muthige (2022), also used a quantitative research methodology. Lastly, Watt (2020) posited that researchers collect quantitative data to either describe or classify the characteristics, behaviors, and activities of research subjects.

3.2 Respondents

For this research paper, a census of 500 minibus taxi owners in the Emfuleni Local Municipality was used. In other words, the population size of minibus taxi owners in the Emfuleni Local Municipality is 500. The researchers sampled the overall population—which is referred to as a census in research. The table below shows the minibus taxi associations that these minibus taxi owners belong to and how many minibus taxi owners each minibus taxi association has.

Table 1: Number of minibus taxi owners in the Emfuleni Local Municipality

Name of association	Number of owners
Civic Centre Taxi Association	112 minibus taxi owners
Get Ahead Taxi Association	61 minibus taxi owners
Sharpeville to Vereeniging and Vanderbijlpark Taxi Association	127 minibus taxi owners
Vaal National Taxi Association	150 minibus taxi owners
Vanderbijlpark Taxi Association	50 minibus taxi owners
<u>Total</u>	500 minibus taxi owners

The five minibus associations that operate in the Emfuleni local municipality operates in both urban and rural areas - Vanderbijlpark, Vereeniging, Vaal Oewer, Loch Vaal, Sebokeng, Sharpeville, Boitumelo, Evaton, North Vaal, Boipatong, Tshepiso, and Bophelong are some of these settlements and towns.

3.3 Online questionnaire

The research instrument used in this research paper was an online questionnaire adopted from Muthige (2022)'s questionnaire that focused on the application of management accounting principles in the minibus taxi industry in the Emfuleni Local Municipality. An online questionnaire is a set of questions designed to find out about a certain group of people or target audience. It is done online. Only the section of the online questionnaire focused on CVP was adopted and used in this research paper.

3.4 Response rate

From the 500 online questionnaires that were sent to minibus taxi owners, 78 questionnaires were void and did not form part of the final data analysis. The table below shows the response rate of this research paper.

Table 2: Response rate

Respondents	Distributed questionnaires	Filled and returned questionnaires	Response rate
Minibus taxi owners	500	422	84.4%

Source: Researcher

The research paper's response rate was 84.4%, which indicated a reliable and excellent response rate for analysis. Lastly, Esinah (2014:22) found that a response rate of 50% or higher is considered adequate for analysis and interpretation of a questionnaire.

3.5 Data collection

Permission to conduct this research paper was granted by the five minibus taxi associations and their regional mother bodies—the SANTACO and the NTA. Following that, contact was made with the Municipality Manager of Transport in Sedibeng, whereby permission was also granted. A cross-sectional research paper was chosen because it was thought to be a good way to describe the current situation.

3.6 Data analysis

One software package was used to analyse the data in this research paper: the Statistical Package for the Social Sciences version 27.0. Moreover, as this research paper employed a quantitative research methodology, a certain degree of reliability had to be achieved, and therefore, a Cronbach alpha level of 0.909 was reached, which shows that the collected and analyzed data is reliable.

4. RESULTS AND DISCUSSION

In this section, the researcher sought information on all the three elements of CVP and five factors of CVP. This information determines the application of CVP.

Indicate the fare price that you charge per trip

As latter mentioned, the term *"fare price"* is generic to the public transport sector and is an issue associated with fare collection, often called *"taxi maths"*. This question is related to the sales price and the sales mix element and the profit factor of CVP. According to Maqubela (2018), the fare price is determined by the distance traveled. Chairman Mali said in 2018 that the answer to the question of who sets prices in the minibus taxi industry is the association in accordance with their affiliated mother bodies (SANTACO or the NTA). According to Fransiska (2013:17), the application of CVP requires a *sale price*. The question below asked the respondents to indicate their fare price.



Figure 3. Fare price

Figure 3 shows that out of the 422 minibus taxi owners, 200 charge a *"fare price"* between R12,01 and R16,00 and 89 minibus taxi owners charge a *"fare price"* between R28,01 and R32,00. 66 minibus taxi owners charge between R8, 00 and R12, 00. 43 minibus taxi owners charge between R24,00 and R28,00, 17 minibus taxi owners charge between R20, 01 and R24,00 and 7 minibus taxi owners charge between R16, 01 and R20,00. *"fare price"* is the terminology used in the minibus taxi industry in place of the sales price. There are a lot of factors, such as demand, standard of living, and also living costs that influence fare prices within the minibus taxi industry (Maqubela 2018). The latter speaker also indicated that all minibus taxi associations in the Emfuleni Local Municipality operate on more than one route. Which indicates the existence of a sales mix.

4.1 Tick the following costs that you incur in the running of your business

In this question, the researcher asked the minibus taxi owners to tick off the costs that they incur during the running of their business. This question is related to the cost factor of CVP. The following options were given: fuel, instalment on the purchase of a minibus taxi, service and maintenance, salaries or wages to the driver, miscellaneous fees, association fees, insurance fees, and rank fees. The results are presented in Figure 4. The figure shows only the respondents who incur these costs.

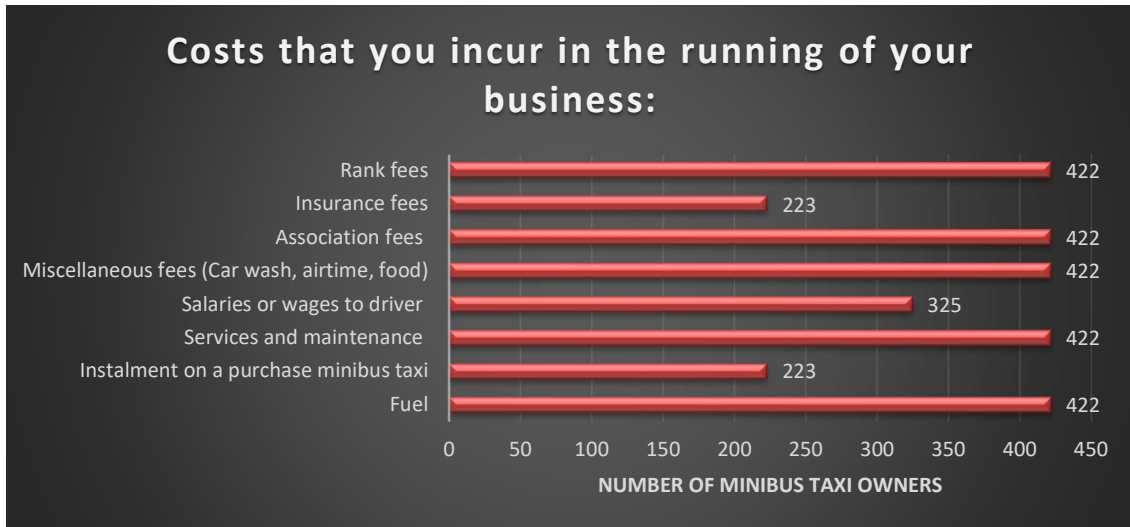


Figure 4. *Costs incur in the minibus taxi business*

All 422 minibus taxi owners spend on the following costs: fuel, miscellaneous fees, association fees, rank fees, service and maintenance. Of the 422 minibus taxi owners, only 325 pay a salary or wage to the minibus taxi driver. These findings are aligned with the findings of Figure 3 above that showed that 97 minibus taxi owners are owner-drivers (these minibus taxi owners do not spend money on salaries and wages as they drive the minibus themselves). Of the 422 minibus taxi owners, only 223 spent the instalment on the purchase of a minibus taxi. Only 223 of the 422 minibus taxi owners posit that they spend on insurance; these findings are aligned with those of the number of minibus taxi owners who are still paying instalments. Lastly, a survey conducted by SA Taxi (2018) shows that most minibus taxi owners who own fully paid minibus taxis do not have insurance.

4.2 Which costs are considered as fixed costs in the minibus taxi industry?

In this question, the researcher asked the minibus taxi owners which of the following costs—fuel, instalment on the purchase of a minibus taxi, service and maintenance, salaries or wages of the driver, miscellaneous fees, association fees, insurance fees, and rank fees—the minibus taxi owners considered as fixed costs. This question is related to the fixed cost element and cost factor of CVP. The researchers probes the variable to understand the classification of costs in the minibus taxi industry. As one of the assumptions for performing CVP, there needs to be a variable and fixed cost. The figure shows only the respondents who incur these costs.

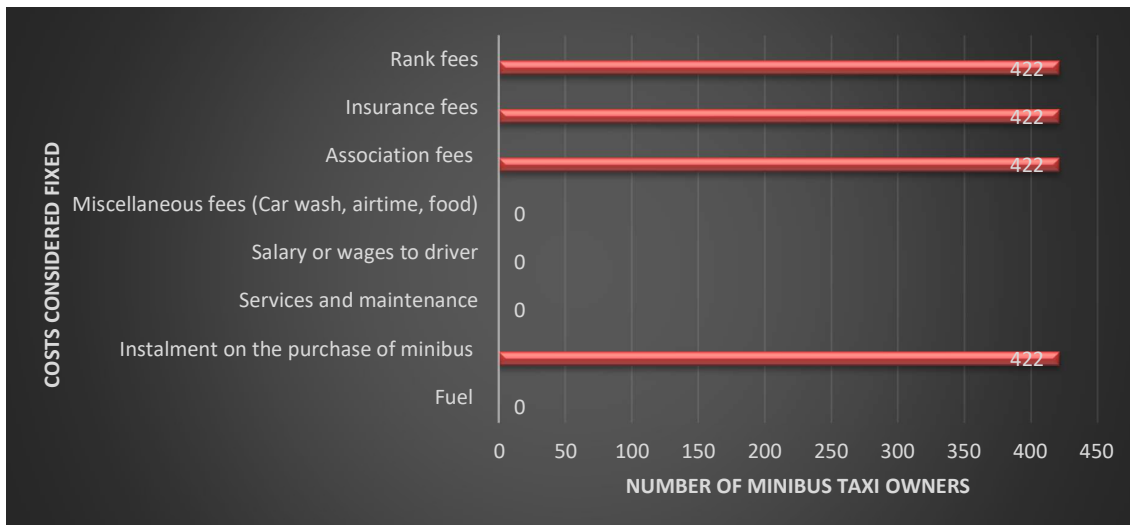


Figure 5. *Costs considered as fixed costs*

Figure 5 shows that minibus taxi owners in the Emfuleni Local Municipality consider the following costs as a fixed instalment on the purchase of a minibus taxi: insurance fees, association fees, and rank fees. The fixed costs are independent of the costs. Minibus taxi owners pay R15 000 per month towards the purchase of a minibus taxi (Moswane 2022). Insurance costs are an avoidable cost that amounts to R2 000 (Mali 2018). Lastly, Maqubela (2018) says that association and rank fees add up to R400 per week.

4.3 Which costs are considered variable costs in the minibus taxi industry?

In this question, the researcher asked the minibus taxi owners which of the following costs they considered variable: fuel; instalment on the purchase of a minibus taxi; service and maintenance; salaries or wages of the drivers; miscellaneous fees; association fees; insurance fees; and rank fees. This question is related to the variable cost element and cost factor of CVP. The term "variable cost" refers to a cost that is not constant and varies as it is dependent on usage. The figure shows only the respondents who incur these costs.



Figure 6. Costs considered as variable

Figure 6 shows that 422 minibus taxi owners in the Emfuleni Local Municipality consider service and maintenance, salaries or wages for the driver, miscellaneous fees, and fuel as variable costs. This means that the minibus taxi owner spends unequal amounts on these costs each month. For instance, on fuel, minibus taxi owners spend more money if their minibus has travelled longer. As Barret (2003) outlined, most minibus taxi drivers do earn a fixed income but earn a percentage of the income brought to their minibus taxi owners. The variable costs are dependent.

4.4 Do you know how many commuters your minibus taxi needs to transport to cover all the monthly costs?

In this question, the researcher asked the respondents if they knew how many commuters their minibus taxi needed to take to cover all their monthly costs. This question is related to the volume element and volume factor of CVP. According to Malele (2021), it is quite rare for an informal business such as the minibus taxi industry to keep a record of kilometers travelled or expenses. Figure 7 shows the findings on the knowledge of commuters to cover all monthly costs.

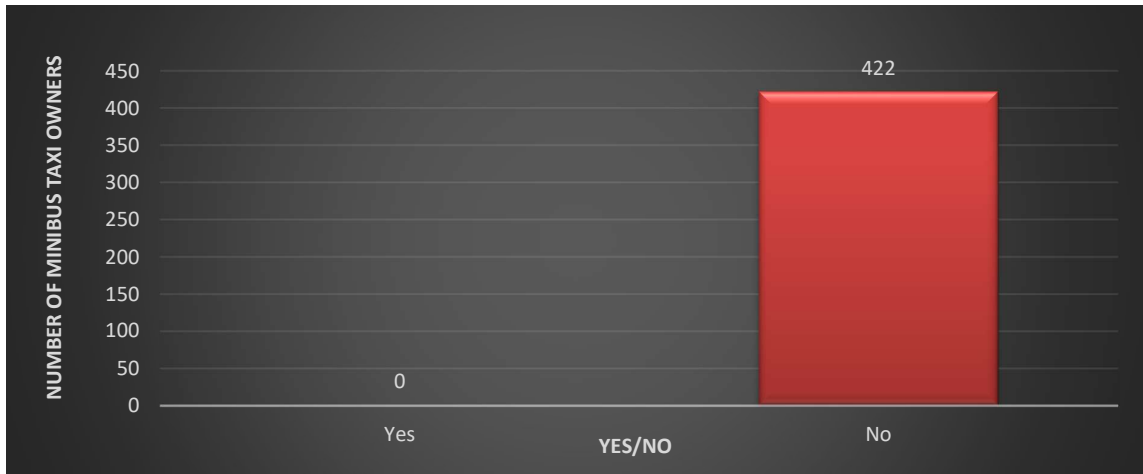


Figure 7. *Costs considered as variable*

Figure 7 shows that out of 422 minibus taxi owners in the Emfuleni Local Municipality, none of them (minibus taxi owners) know how many commuters their minibus taxi should transport to cover all their monthly costs. There are no tracking devices that are used to count commuters in the minibus taxi industry.

4.5 Do you apply CVP in running your minibus taxi business?

In this question, the researcher asked the minibus taxi owners whether they used CVP in running their minibus taxi business. Figure 8 shows the findings.

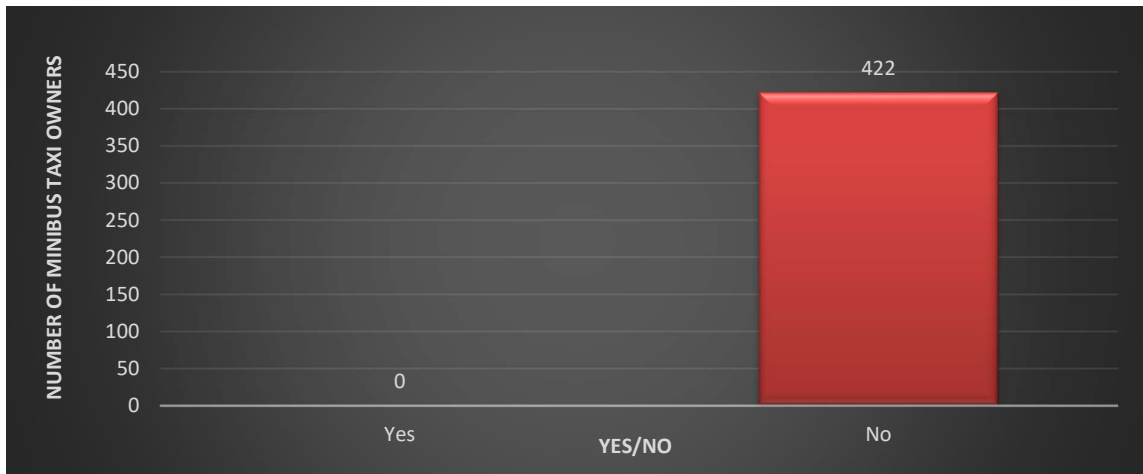


Figure 8. *CVP in running your minibus taxi business*

The findings in figure 8 shows that all minibus taxi owners in the Emfuleni Local Municipality who were part of the current research paper sample do not apply CVP in operating their minibus taxi business. The application requires certain skills, and the non-application may be due to a lack of skills

5. CONCLUSION

As the main objective of this research paper was to explore the use of CVP in the minibus taxi industry in the Emfuleni Local Municipality, the results show that minibus taxi owners in this area do not use CVP in the running of their minibus taxi business. In this exploration, the researchers used a quantitative research approach in the form of an online questionnaire. The questionnaire used was adopted from a previous similar study also conducted in the Emfuleni Local Municipality. 500 online questionnaires were sent but 422 were fully answered, thus analysis was done on 422. Figures 6 and 7 demonstrate an understanding of variable and fixed costs. Lastly, the researchers recommend the following:

- Introduction of a passenger count device to assist in counting passengers who are part of volume.
- Training authorities like the Financial Accounting Services Training Authority and the Transport Education Training Authority should offer CVP training to minibus taxi owners.
- Although this was not part of the current research paper, the researcher recommends the use of a log book, which can be used to determine the number of kilometers to cover all monthly fixed costs.

REFERENCE

1. Alnoor, M., Abrow, H., Abdullah, H. & Abbas, S., (2020). The impact of self-efficacy on employees' ability to accept new technology in an Iraqi university. *Global Business and Organizational Excellence*, 39(2): 41-50, Iraqi.
2. Ameyaw, S., (2016). CVP and sensitive analysis of Ntow Poultry farm. M.Sc. Dissertation. University of Applied Sciences.
3. Baloyi, M., (2012). The impact of the taxi recapitalization programme on the South Africa taxi industry: A case study of Greater Mankweng Taxi Association in Capricorn District, Limpopo Province. M.A. Dissertation. University of Limpopo.
4. Beneke, J., (2014). Value-based management for small and medium enterprises in South Africa. PhD. thesis. North West University.
5. Lal, J. (2008). *Accounting for Management*. 4th ed. Mumbai: Himalaya Publishing House.
6. Llie, R. & Ileana-Sorina, R. (2017). Cost - Volume - Profit Analysis – An Instrument of managerial control of the economic Entities in the Extractive Industry. *Economic Sciences Series*, 17(2): 627-632, n.d.
7. Maduekwe, C. & Kamala, P., (2009). The use of budgets by small and medium enterprises in Cape Metropolis, South Africa. *Problems and Perspectives in Management*, 14(1):183-191, Cape Town.
8. Mali, S., (2018). Interview with Mr. Midday Stompie Mali, Chairman of SANTACO Vaal Sedibeng Region, Taxi owners in the Vaal, 19 June.
9. Maqubela, S., (2018). Interview with Mr. Sam Maqubela, Executive member of Get Ahead Taxi Association, The minibus taxi industry, 10 June.
10. McBryde-Foster, M., (2005). Break-Even Analysis in a Nurse-Managed Center. *Nursing Economics*, 23(1):31-34. n.d.
11. Mmadi, M., (2013). Mobile workplace: work conditions and family life of taxi drivers. M.A. Dissertation. Pretoria: University of Pretoria.
12. Muthige, M., (2022). The application of management accounting in the minibus taxi industry at the Emfuleni local municipality. Vanderbijlpark: Vaal University of Technology.
13. Ngubane, L., (2016). From political wars to taxi wars: investigating the transition of taxi violence in a low-income urban community in the Mpumalanga Township, South Africa. M.A. thesis. University of Kwa Zulu Natal.
14. Shakya, M., (2009). Risk Vulnerability and Tourism in developing Countries: The case of Nepal. *Boschum Studies in International Development*, 56(1):1-32, Nepal.
15. Sloanreview, (2020). The social responsibility of business is to create value for stakeholders. [Online] Available at: <https://sloanreview.mit.edu/article/the-social-responsibility-of-business-is-to-create-value-for-stakeholders/> [Accessed 16 June 2022]