AN ASSESSMENT OF THE IMPACT OF TARGET COSTING ON THE FINANCIAL PERFORMANCE OF SOUTH AFRICAN STATE-OWNED ENTITIES

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Abstract: *This paper examines the effect of target costing on the financial performance of state-owned enterprises (SOEs). The paper aims to clarify the impact of this strategic cost management technique, particularly target costing on financial performance variable. The result of the study highlights an increasing importance of target costing in improving organisational profitability by depicting a favourable association between target costing and financial performance. This paper enhances the current knowledge base by investigating the particular setting of state-owned enterprises (SOEs) and analysing the possible moderating variables that might affect the link between target costing and financial success. Moreover, this paper provides significant insights for policymakers and practitioners in state-owned enterprises aiming to enhance their financial performance via strategic cost management.*

Keywords*: SOE, SCM, financial performance, target costing*

INTRODUCTION

Strategic cost management is a process within which the identification of key cost drivers is essential for re-engineering systems to lower costs, thus providing services and products at lower costs that ensure improved financial performance (Hansen et al., 2021:55-56). Modern management accountants have therefore become more involved in SCM application, and this provides them the platform on which to become part of critical decision-making in operations as the field evolves (Appelbaul, 2017:29-44). In addition, SCM provides managers with pertinent information that empowers them to react appropriately to external users and environmental changes, and thus to strategically position the firm beyond the present (Ghanbari et al., 2022:32-49). According to Sulaiman et al. (2004:493-508), implementation of SCM techniques such as just-in-time (JIT), activity-based costing (ABC), total quality management (TQM) and target costing (TC), considerably increase a company's capacity to thrive on the global stage. Accordingly, SCM techniques like JIT, ABC, TQM, process re-engineering, life cycle assessment, and Target Costing can assist organizations in overcoming intense global competition to accomplish organizational goals and achieve better financial performance within the current dynamic and changing conditions of the current business environment (Khan, 2018:22-168). The primary role of SCM is therefore to increase efficiency and thereby enhance financial performance (Duçi 2021:376). It therefore extends beyond cost as its primary concern to include revenue, productivity, customer value, and the company's strategic position (Kumar & Nagpal, 2011:118-130). Researchers in the field, including Grinko et al. (2020:1-7) and Adigbole et al. (2020:142), have discovered that SCM boosts financial performance by reducing production costs and uncertainty, and calls for strategy revision (when necessary) to meet predetermined goals. Other researchers have indicated that benchmarking and using ABC

tools can reduce costs and boost financial performance; this makes them most relevant and pertinent for achieving operational efficiency (El-Haddad & Elewa, 2019). Strategic positioning analysis, value chain analysis, and cost driver analysis are all examples of SCM aspects that, according to Thapayom (2021:100-125), have a significant and beneficial impact on financial performance and thus positively affect performance. Although these problems of the inability to generate sustainable profits exist in SOEs, there is still a scarcity of previous research that has recognised that corporate governance (CG) and SCM, in combination, can provide a solution. The emphasis of this research will be placed on target costing in particular, a crucial SCM technique that has been extensively embraced by businesses all over the globe (Sharaf-addin et al. 2014: 82). However, the effectiveness of this technic in SOEs has not been sufficiently researched. The primary objective of this paper was to analyse the extent to which the implementation of target costing influences the financial performance of state-owned enterprises. Therefore, the study's main research question is, how does target costing affect the financial performance of SOEs?

The subsequent portions of this article are organised as follows: the literature review is provided after this introduction. After the literature assessment, the study delineates the methodology used in the research. The results and the discussion of those results follow this. The last part offers recommendations and conclusion.

LITERATURE REVIEW

The concept of target costing (TC) has its origins in Japan during the 1960s, where it was referred to as "genka kikaku." The first use of this approach occurred in 1965, pioneered by Toyota (Kostrzewa-Nowak & Gos, 2022:124). It is a strategy that is now widely used by companies operating in the Japanese market (Gonçalves et al., 2018:378-384). It was found that the success of Japanese businesses was typically linked to the implementation of strategic cost management (SCM) approaches (Ansari et al., 2007:507-530), and in particular target costing. Previous research has evaluated target costing's efficacy in Japanese firms (Cooper, 1996:219-246), and found that target costing is a good and efficient method for reducing manufacturing costs, and therefore boosting financial performance metrics. Furthermore, Cooper (1996:219-246) and Tambuna (2023:45-64) discovered that by using target cost methods, expenses could be better managed, leading to more competitive prices for products and services. Similar to the findings of Cooper (1996:24-214), and Tambunan (2023:45-64), this research further indicated that target costing resulted in more controllable costs, making the products more competitive in relation to cost. These findings suggest that target costing could be applicable and beneficial in other countries as well.

Subsequent to TC's implementation in Japanese industries, research indicates that target costing has now gained global prominence, and is widely used by many multi-national organisations, including prominent entities such as Mercedes, Caterpillar, Panasonic, Apple, and Toshiba (Thalmeiner, 2021:25-41). Based on its successful implementation in these global institutions, target costing presents a case demonstrating its flexibility, and the advantages that may accrue even in widely different geographic settings. Furthermore, the implementation of target costing by these well-known organisations demonstrates its efficacy in a variety of industries and economic sectors. Thus, an increasing

number of businesses throughout the globe are expected to adopt target costing as a strategic cost management method, to enable them to improve their competitiveness and profitability.

Recent research has found that the use and adoption of this approach has already been extensive in addressing changes in the industrial landscape, resulting in cost reductions and the continuing success of corporate financial performance. The consensus, thus, is that TC a proven and efficient approach that successfully minimises manufacturing expenses across the whole lifespan of the product, while maintaining high quality and simultaneously reducing wasted/poorly allocated time (Potkány et al., 2021:148-159).

A prime example that illustrates the efficacy of this technique may be observed within the automobile sector, where lean manufacturing concepts have been extensively adopted. Automakers have achieved substantial cost reductions and maintained high-quality standards by optimising manufacturing processes and effectively eradicating inefficiencies in production lines (Pawlik et al., 2021:149). This approach has enabled them to maintain their competitiveness in a dynamic market, and continue their long-term financial successes.

The concept of target costing is centred on the effective management of production costs associated with the creation of new products (Ahn et al., 2018:321-354). However, the concept of target costing is seen differently by a significant number of other authors. Scholars such as Szczerbak (2022:28-38) and Almusawi and Alani (2022:183-209), view it as a tool, technique, method, system, concept, or philosophy of strategic cost management or cost reduction, while others argue that it is a short-term approach that may compromise product quality and innovation in the long run (Ahn et al., 2018:321-354). On the other hand, there are those who see it more as a method, system, or strategy for the management of profitability.

Nevertheless, every one of these explanations has one thing in common: the core idea behind target costing is that it is all about evaluating product costs. Aligning the product's acceptable cost with consumer expectations about its price, usefulness, and quality is the essence of this assessment. Scholars such as Khechai and Abdelkader (2021:15-31) have expressed the view that target costing serves at the confluence of customer demands, product excellence, and cost mitigation, thereby serving as a gateway to cost reduction and effective management throughout the phases of planning and product design. They claim that integrating consumer requirements into cost-setting ensures that the finished product fulfils market expectations and maximises customer satisfaction. According to Sievert (2016:28-29), the quality of a product is sometimes sacrificed in an effort to save costs. In this context, it was observed that a commonly utilised technique is to include the customer in the design process, asking for their preferences in terms of product features. Thereafter, these preferences are considered when studying the pricing structure and production methods. Recent research conducted by Sil (2021:27-33) assessed the efficacy of cost accounting techniques used in the service and industrial sectors throughout the last century, and found that critical “difficulties” faced by customers (their demands for increased variety and shorter product life cycles) gave rise to the formulation and implementation

of target costing. Moreover, in a completely competitive market it eliminates the dictates of a desired profit margin, and establishes rather, a target price. Target costings' most pressing concerns focus on the early-stage development categorization of goods and services according to market demands and benefits. Alwisy et al. (2018:387-399) studied energy-based target costing modelling for construction projects, and discovered that designating energy consumption as a project-defined value indicator and capital cost concern in the design estimate, is made much easier with target costing's systematic methodology, and thus increases performance. The author (Alwisy) asserts that target costing is an all-encompassing method of cost management that has been effective in enhancing predetermined performance results, and proactively tracking project costs in accordance with client-set targets.

A further review of the literature revealed that target costing normally focuses on the variable manufacturing costs of new goods (for example, material and labour expenses), and that it neglects other costs, like those attributed to product development (Al-hosban et al., 2023:194-209). In addition, traditional target costing places an emphasis on the development of a single product, while ignoring the cost interdependencies that exist across several products (Stadtherr & Wouters, 2021:1-11). It is only natural for producers to be required to forecast the future demand for their goods in order to simplify the manufacturing process and thus to fulfil this need on the one hand; and to hire people with high levels of expertise on the other hand, in order to minimise production costs and maximise profits (Jiambalvo, 2019:21).

Research conducted by Aladwan et al. (2018:1-13) on the applicability of target costing in Jordanian industry, found that organisations which have previously applied target costing discovered a host of benefits, including the reduction of service costs, and a strategic shift in focus towards the ultimate consumers of the service being offered. Moreover, its application facilitated interdepartmental synergy among staff members to cultivate a culture of teamwork; it created a feeling of responsibility and accountability in effectively managing costs; fostered enhanced collaboration to prioritise supply and value chain optimisation; proactively identified and addressed potential issues pertaining to products or services; augmented the proficiency and knowledge of personnel in contemporary management costing methodologies, and most importantly, improved existing service offerings to attain improved financial performance. According to Sharaf- Addin et al. (2018:615-634), the primary motivation driving companies to adopt target costing is centred on enhancing organisational performance. Hence, Sharaf-Addin's (2018:615-634) analysis led to the determination that a favourable relationship exists between the attainment of TC and the overall performance of an organisation. Research indicates that target costing, financial performance, return on sales, and business growth are all positively correlated with one another (Narsaiah, 2020:148-174). Furthermore, research studies show that internal considerations that affect the usage of target costing demonstrates that target costing delivers precise estimates of financial performance and that senior management that is remunerated based on the profitability of projects prefers its application (Homburg et al., 2021:845-858). Additionally, other researchers have shown that target costing and value chain analysis both materially improve a company's financial performance: however, the latter does so more so than the former (Abdullah & Senan,

2019:1543-1552). This contrasts with the findings of Rattray et al. (2007:68-83), who found that there is no evidence that indicate that target costing has an influence on financial performance.

The authors Narsaiah (2020:148-174), Homburg (2021:845-858) and Abdullah and Senan (2019:1543-1552) agree that the use of target costing in project management has gained significant recognition in recent years. Narsaiah (2020:148-174) highlights its importance as a tool for achieving accurate financial estimates. Additionally, Abdullah and Senan (2019:1543-1552) argue that target costing gives project managers the ability to make educated judgements on the distribution of resources, about resource allocation, and cost control, throughout the project's lifecycle. Through setting clear cost targets and continuously monitoring progress, project teams are better equipped to proactively address any deviations, and to ensure the project stays within budget. Overall, these authors suggest that the adoption of target costing in project management can lead to improved financial performance and overall project success. Abdullah and Senan (2019:1543-1552) also assert that, while both target costing and value chain analysis contribute to improved financial performance, the latter has a more significant impact. Moreover, Homburg et al. (2021:845-858) emphasize that senior management, especially those whose compensation is tied to project profitability, prefer the application of target costing as a result of its accuracy, while scholars such as Abdullah and Senan (2019:1543-1552) and Narsaiah (2020:148-174) are silent about preferences of senior management whose remuneration is tied to performance.

These findings generally underline the effectiveness of target costing in project management and its potential for driving financial success. It has also been found that to maintain profitability and meet market prices, companies using target costing must take drastic measures to reduce costs or redesign processes in order to make them more competitive in the business environment (Blocher, 2019:14). According to Chandrarin et al. (2019:23-49), adopting target costing significantly improves a company's financial performance. This is corroborated by Samuel and Juliana (2019:125) who observed that target costing improves operations and quality, while positively impacting financial performance. Implementing target costing, as suggested by Sumakul et al. (2018:9-25), can lower costs and boost financial performance. As a result, as recent research has found, companies that adopt target costing systems are generally competitive, and their financial performance greatly improves (Ejike, 2020:93-96).

However, there may be other contributors to the positive financial performance of a company: for example, considerations such as market circumstances or external economic considerations, which are usually unrelated to the application of target costing.

Scholars such as Samuel and Juliana (2019:125), Brocher (2019:14), and Chandrarin et al. (2019:23-49) concur, that financial performance is positively affected by target costing's impact and trajectory. Thus, target costing considerably and favourably impacts corporate financial performance, according to these researchers. These authors claim that companies can manage expenses, allocate resources, and boost profitability by using target costing. The empirical data from many sectors confirms these conclusions, indicating that target costing helps achieve financial

success. Accordingly, in today's competitive business world, target costing drives financial performance and competitiveness. The various studies' study designs and analytical methods verify their agreement.

Target costing's primary goal is to reduce the overall product cost or service throughout its lifetime, as stated by Palulun et al. (2021:6385-6395). Consequently, target costing enables businesses to establish/adjust product prices to reflect customers' propensity and capacity to pay. For instance, a firm that is busy developing a new product line may use target costing to analyse the costs of materials, production, and distribution in order to establish a pricing that is competitive, and in line with what consumers are ready to pay. Through the use of target costing, the organisation may ensure a consistent level of profitability, while simultaneously satisfying the need of customers for items that are both reasonably priced and of excellent quality. However, relying solely on customers' willingness to pay may lead to under-pricing products and missing out on potential profits. Additionally, focusing too heavily on cost-cutting measures to meet target costs could result in sacrificing product quality and thus customer satisfaction. Existing literature indicates that it is possible for companies to avoid under-pricing their goods and missing out on full potential revenues if they have a thorough grasp of the demand for their products, the pricing of their competitors, and other considerations (Irabor, 2023:36-53). Rounaghi et al. (2021:1-8) and Alzoubi et al. (2022:94-109) agree that businesses should carefully balance all factors in order to optimize pricing strategies, and maintain a competitive edge in the market.

The body of research literature further revealed that successful target costing implementation requires identification of competitive prices and customer needs: and entry into global competition requires further reduction of product costs, motivating staff, using value engineering, and activity-based costing (Sharafoddin, 2016:123-127). Thus, for this technique to operate effectively, what matters is not only how much a product costs, but how well it serves both the customer and the business (Sharafoddin, 2016:123-127). According to Kelesbayev (2020:182), increased product quality, rising costs, and growing customer dissatisfaction all negatively affect a company’s financial performance, which in turn has a negative impact on a company's capacity to compete and create profitability. The author posits that the unfavourable impact of these situations may be eliminated by careful management of non-value-adding processes and associated costs. Scholars such as Al-Qady and El-Helbawy (2016:39-54), agree with this view and indicate that businesses stand to gain substantially if they use target costing from the start of the product development process, and sustain its usage until the product reaches its final manufacturing stage. This is due to the fact that at any stage, uneconomical procedures and designs may be eliminated, resulting in significant expenditure reductions and an increase in financial performance. However, it could also be argued that a firm's financial performance and competitiveness may benefit as easily by focusing on product quality and customer satisfaction. According to existing research, this is because happy consumers are more likely to buy from the company again, and promote the product to other people (Saraswati, 2022:26-41). Furthermore, if the underlying reasons for low quality or customer discontent are not addressed, spending money on non-value-adding operations may not provide a noticeable increase in financial performance.

Scholars such as Navissi and Sridharank (2017:67-77) examined the internal elements that affect target costing, and its implications for practise. The scholars found that so-called prospector managers are likely capitalize on strong information asymmetry to delay the implementation of TC processes, due to the correlation between their stock-based pay and the volatility of profits and stock returns. In contrast, defensive managers benefit from increased cash-based remuneration as a result of the implementation of TC, leading to higher business profitability.

This kind of opportunistic conduct is consistent with agency theory. It therefore lends credence to the agency theory view, that, as a result of managerial opportunistic conduct, accounting information is manipulated for personal gain (Norhamida, 2023:172-187). According to Johanthan et al. (2023:426-440), the absence of transparency in annual reports produced by managers acting for personal gain leads to knowledge asymmetry. Since these managers directors' remunerations are usually linked to financial performance, they might prioritise their own interests above the company's interests. Therefore, disclosing directors' salaries effectively addresses the knowledge asymmetry between owners and management (Bel-Oms & Segarra-Moliner, 2022:860).

Scholars such as Thalmeiner (2021:25-41), came to the conclusion that the most significant aspects of target costing are the fact that it acts as a method for budgeting and preparing for (company's) financial gain; that it incorporates cost control based on consumer preferences and market pricing, and that it integrates the many functional areas of the organisation. Studies indicates that the adoption and use of endogenous management strategies (such as target costing), have been widely regarded as a solution for reducing operational costs and enhancing financial performance in company operations (Ilemona & Sunday, 2019:1-5). Despite this, some manufacturers have chosen to overlook the significance of this valuable methodology and have abandoned TC and reversed its implementation. The difficulty of applying target costing may explain their decision. According to Homburg et al. (2021:845-858), while thinking about the goals of an organisation, it becomes clear that you need to learn everything there is to know about target costing, from its core assumptions to its relevance, in order to successfully implement the process. The twin objectives of achieving low cost and good product quality, which are crucial for ensuring customer satisfaction, are often in conflict with one another. Hence, the objectives of target costing are to improve financial performance, and achieve improved processes, product development, reliable pricing, better coordination between production and marketing, and better emphasis on cross-functional jobs (Zengin & Ada, 2010:5593-5611).

Stating a contrary position, a study conducted by Umelo (2021:124-133) on the assessment of strategic management accounting applications and return on equity of listed production firms in Nigeria, found that the implementation of target costing exhibits an insignificant and adverse influence on financial performance. The author's finding is in direct conflict with scholars such as Chandrarin et al. (2019:23-49) and Samuel and Juliana (2019:125), who found that the application of target costing does have a significantly positive impact on company financial

performance.

There is a general agreement amongst these authors (Umelo, 2021:124-133; Chandrarin et al., 2019:23-49; Samuel & Juliana, 2019:125) on the fact that target costing has an impact on financial performance. However, their differences are in the direction of that impact. Their differences may be predicated on the approaches that were employed to gather the data, and the methods of analysis. In the case of Umelo (2021:124:133), secondary data from 25 publicly traded manufacturing companies was the basis of this research, and data analysis included ordinary least squares estimator, fixed effects and random effect models, and panel data analysis. In contrast, research conducted in the Asia-Pacific region by Chandrarin et al. (2019: 23-49) used surveys, descriptive-quantitative analysis, and multiple regression to determine the impact on the internal and external competitive environments of the companies studied. Finally, Samuel and Juliana (2019:125) conducted their research in the Nigerian manufacturing sector. The research approach used was a descriptive one. The sample included all publicly traded firms in the food and beverage industries. On the basis of subjective qualitative criteria, they chose five publicly traded food and beverage firms, and 100 questionnaires were administered. Statistical Package for the Social Sciences (SPSS) was used for the analysis.

Research conducted in the past has demonstrated that the implementation of target costing is particularly appropriate in sectors characterised by robust and expanding competition, wherein goods and services have a relatively short life cycle (Paschia 2016:21-28). This justifies entities' efforts to consolidate their market positions and effectively respond to market fluctuations, in accordance with the principles of demand and supply. Current literature is interested in the fact that target costing is prevalent in industries where intense competition has compelled businesses to cut costs so as to enhance financial performance (Gu & He, 2019:75-86). In addition, companies operating outside of competitive markets may display a reduced sense of urgency regarding cost reduction, as they are not subject to the typical pressures that arise from competitive forces. According to Alawaed (2022: 51-62), in highly competitive sectors, target costing sets the targeted product cost, based on a competitive pricing, to maximise profit. Prior research has highlighted the importance of TC and other cost management measures in highly competitive economic environments (Homburg et al., 2021:845-858).

In contrast to the above, the findings of the study conducted by Gonçalves et al. (2018:378-384) did not provide support for the presumed relationship between the adoption of target costing and competitiveness on the operating environment. The literature supports the position that the use of target costing tools has been shown to improve the chances of getting a competitive edge, and thus increasing profits (Ahmad, 2022:1353-1372). Nevertheless, Zanella (2020:129-141), found that the use of the cost-plus pricing approach is indicative of a corporate climate lacking in competitiveness. The majority of firms which used target costing have reported that it effectively addresses consumer expectations and reduces costs, and positively influences financial performance (Celayir, 2020:1308-1321). Furthermore, these enterprises have recognised that by adhering more closely to target costing principles, they may leverage this approach as an instrument for gaining a competitive edge. However, it has also been noticed that enterprises that do not formally adopt TC

are still internally adhering to the broad principles of the approach. Research indicates that using target costing helps firms to become more competitive and to achieve the objectives of enhancing quality, decreasing expenses, accelerating product delivery and achieve financial profitability (Jaf et al., 2015:84-99).

Among the most important takeaways from the study by Al-hosban et al. (2023:194-209) is the conclusion that getting a competitive edge in the labour market is possible through the application of a target costing strategy. Other studies found that the application of target costing can assist companies to attain a cost advantage, and produce goods of superior quality, thereby enabling the firm to secure a position of competitive advantage (Abdullah & Senan, 2019:1543-1552; Alobaidy 2022:3997-4007; Adigbole et al., 2022:139-165). According to Pramono et al. (2023:1-12), the implementation of target costing heightens the company's focus on the demands and preferences of its clientele, thereby augmenting the competitive edge of companies that utilise innovative management accounting instruments, in contrast to those that abstain from such practises. Al- Khateeb et al. (2019:425) came to the conclusion that the utilisation of the target costing resulted in a significant competitive advantage. This conclusion is consistent with the findings reached by earlier researchers. Research results indicate that businesses need to employ target costing systems in order to develop, transmit, acquire, and exchange knowledge in order to enhance their competitiveness and performance (Gatuyu, 2020:27-32).

According to Sevim (2019:1-7), two key insights on pricing and promotion have emerged as a result of the adoption of target costing. The first is that most companies are realistic about how little influence they have on pricing. The second is that the design phase accounts for a disproportionate share of total product costs. According to the scholarly works of Al-hosban et al. (2023:194-209) and Alawaed (2022: 51-62), there is concurrence that the implementation of target costing positively impacts the overall competitiveness of a business enterprise.

Despite this, in the study conducted by Gonçalves et al. (2018:378-384), it was observed that no significant correlation was established between target costing and the level of competitiveness. The divergence in perspectives about the influence of target costing on business competitiveness may be ascribed to the differences in the geographical locations where the studies were performed. The research done by Alawaed (2022:51-62) took place in Portugal, whereas the study conducted by Al-Hosban et al. (2023:194-209) was conducted in Aqaba City, Jordan. Alawaed did his studies in a factory located in Al-Hillah. Furthermore, the adoption of target costing in manufacturing companies has been found generally, to result in only limited enhancements to their competitive positions (Adigbloe et al., 2022:139-165). In addition, the research findings of Umelo et al. (2021:120-130), indicate that the implementation of target costing has a detrimental impact on return on equity; however, this effect was not statistically significant.

These findings offer a different viewpoint from that of the study by El-Dyasty (2007-1-63), who came to the conclusion that target costing implementation has the capability to improve a company's survival and

competitive capabilities. The conflicting results highlighted in these studies suggest that the effect of TC in manufacturing may have different effects on different organisations based on variables including market circumstances, company size, and industry dynamics. Therefore, to fully grasp the complicated nature of target costing implementation and how it impacts the many facets of a company's performance, more study is necessary.

It is clear that, while target costing may not always directly improve competitiveness or financial metrics, it can still contribute to the determination of the future course and viability of an organisation. Previous studies found that, instead of shaping a product's selling price by adding a profit margin to the unit cost, management may opt to use a target costing technique to ensure that it always sells its products at a predetermined profit (Sevim, 2019:1-7).

The study conducted by Samuel and Juliana (2019:125), suggests that managers should demonstrate their effectiveness in the application of target costing and product costs within the context of their own company conditions, with the aim of enhancing profitability. Therefore, it can be concluded that this approach is not only a means of reducing costs or a framework for control, but rather an integral component of a profit management. Moreover, by using product cost analysis and target costing to their full potential, executives are able to proactively establish prices that not only include expenses but also optimise profitability. This approach enables organisations to synchronise their pricing strategy with the unique market circumstances and client preferences, eventually resulting in enhanced profitability.

Other research indicates that target costing is a crucial instrument used by managers to proactively manage and enhance earnings, as opposed to being merely a cost reduction strategy, or a means of cost regulation (Masadeh, 2023:1-47). According to Al-Hosban et al. (2023:194-209), continually decreasing costs generates a super-profit, or surplus over the gross margins for the company, thus providing the company a base from which to gradually lower the price of the product and thereby to remain competitive, and ultimately, to improve financial performance. Various researchers have indicated that the target costing method is crucial in its support of the performance of businesses by maximising the value of the company through optimal utilisation of the available resources. By doing so, target costing methods reduce production costs and reveal idle energy that, once brought into line with company strategy, is able to realize improved financial performance, support competitiveness and maximise its value (Elgaby & Abou, 2023:353-430).

According to Chen and Du (2022:28-32), in the arena of enterprise economic management, target costing is not solely a mechanism for cost control, but rather an holistic process that involves the coordination and strategic planning of costs and benefits within the enterprise. This holistic process involves thorough analysis of cost structures, market conditions, and internal capabilities, to align product pricing with customer expectations while maintaining profitability. By continuously assessing and adjusting the target cost throughout the product development cycle, businesses can ensure sustainable growth and long-term success in a dynamic market.

Scholars such as Toosi and Chamikarpour (2021:31-47) support this finding and further indicate that the target costing method facilitates more accurate cost estimates, mitigates the threat of poor

financial performance, and accelerates the creation of high-quality goods. Thus, it is also a method of controlling the future earnings of a business. According to Ilemona and Sunday (2019:1-5), in order to attain a satisfactory level of profitability necessary for their success, manufacturing enterprises must effectively control their product costs in relation to the market-determined price or the price established by the firm itself; its aim is to achieve important goals such as enhanced market penetration, particularly for newly introduced products. Researchers indicate that the use of lean accounting procedures might assist businesses to reduce production costs by identifying and capitalising on untapped energy resources. Furthermore, the study by Al-Saad (2022:160-163) found that the adoption of lean accounting methodologies, such as target costing, has a visible influence on the pricing strategy employed by organisations. According to Wickramasinghe and Wickramasinghe (2017:160-163) the "lean" business concept is a system that emphasises efficiency, waste reduction, and a strong understanding of client needs. Many firms have embraced this approach to focus their perspectives and efforts on enhancing their operations. Lean principles may benefit companies of many sorts, sizes, and sectors seeking to enhance their competitive edges, operations, and earnings in both regional and worldwide markets. However, Panwar et al. (2018:158-169) found that lean accounting models designed for sectors producing discrete/custom products are not ideal for industries with distinct processes, products, supply chains, and market characteristics. Lean models may simply not be suitable for all industries.

Research has further indicated that, in conventional marketing systems, the cost and prices of products are not determined until the end of the product creation process; and if the price is higher than the market price, the design process must start over (Azimovna, 2021:38-39). Therefore, target costing reduces the time and money spent on the design process. Further studies have found that target costing ensures that a product may be manufactured at its life-cycle cost, and that this yields a profit margin at the anticipated selling price, without compromising on quality or features (Al-Refai & Poornima, 2021:10-14). Furthermore, it has also been found that a target costing strategy is one that may contribute positively to simultaneously maximising the objectives of both cost reduction and maintaining high-quality goods.

According to Datar and Rajan (2018:525-526), target price is affected by three variables; consumers, who drive product interest, and sales. Quality is what the buyer is after. This is happening because economic units have the information and confidence to lower prices without risking loss, which in turn encourages rivals to do the same. According to Hammami et al. (2019:223-250), companies frequently struggle to find the right balance between meeting the demands of their consumers for high-quality goods, and the pressure to keep prices low, brought on by an intensely competitive market. However, the use of contemporary cost management strategies helps companies to improve economic performance, improve the efficiency of their workforce, reduce the time it takes to render services to customers, and reduces overall expenses. Research indicates that product design and development plans can be used to strategically allocate resources and estimate expenses throughout the

formulation of profitability strategies (Albalaki et al., 2019:1-19). According to Mozan and Almashkor (2022:34-41), the target costing approach is based on the objective of cost reduction. Hence, it is not essential to wait until the completion of the manufacturing process before starting cost-cutting management strategies when using this technique. According to Hint et al. (2018:181), target-costing enables the realisation of benefits through historical cost analysis, with a particular emphasis on scrutinising profitability and market positioning in management accounting. Considering the results of the research study that Erasmus (2021:1-14) carried out, target costing has the potential to be an effective method for calculating the overall cost of creating a product throughout the course of its existence, which can then be used to meet quality requirements, while still generating a satisfactory profit for the company. Scholars such as Afonso et al. (2008:559-568), examined how time-to-market and target cost affected new product development, and found that target costing and resultant faster delivery of product to competitive markets can boost financial performance, and that businesses that can streamline new product development to create a low-cost, high-quality time cycle, are more likely to succeed. Additionally, the research revealed that organisations which use target costing practises also have enhanced cost management capabilities throughout the product development phase, leading to increased financial performance. This highlights the need to establish the expenses of attainable goals at the outset, and consistently evaluating and modifying them throughout the product development phase. Furthermore, Afonso et al. (2008:559-568) also found that the capacity to promptly introduce novel items into the market enables enterprises to exploit market trends, and to maintain a competitive edge that eventually results in enhanced sales and market dominance. Additionally, the research findings indicate that enterprises that possess streamlined product development procedures also see enhanced levels of consumer satisfaction.

Through prompt and agile responsiveness to market needs, and a steadfast commitment to producing goods of exceptional quality, these organisations are capable of cultivating robust client loyalty, and attaining a distinct competitive advantage. In essence, this not only enhances revenue generation but also facilitates client acquisition and market expansion. In contemporary company environments, the implementation of effective techniques for product creation is of paramount importance in facilitating the attainment of profitability and sustained growth. Studies have shown that there is a statistically significant link between the product structure and the target cost approach; thus, the target costing approach aids in the development of profitable products and increases overall investment by emphasising the evaluation of product success probabilities prior to allocating productive resources. In addition to facilitating an increase in sales volume through a pricing mechanism predicated on the target cost, it contributes to cost reduction throughout the production process from its inception, while conserving product quality (Masadeh, 2023:1-47).

METHODOLOGY

The data for this study came from a combination of interpretivist and positivist approaches; the former involved reading respondents' answers and drawing conclusions about the relationships between variables using qualitative data; the latter relied on quantitative statistical analysis of

numerical data. The target population of this study was all trading state-owned entities in South Africa. The reason for using all the trading SOEs was ensure that none of the trading SOEs are excluded. The population for qualitative analysis comprised 126 senior executives from 21 trading SOEs. The executive cohort from each SOE comprised the CEO, the CFO, the COO, the General Manager: Corporate Service, and two officials from the Operations department. Thus, the six executives from each of the 21 companies gives a total of 126 executives. The population for the quantitative analysis was the 21 SOEs and data was extracted from their financial statements covering a period of 10 years from 2012-2021 financial years.

DATA ANALYSIS AND FINDINGS

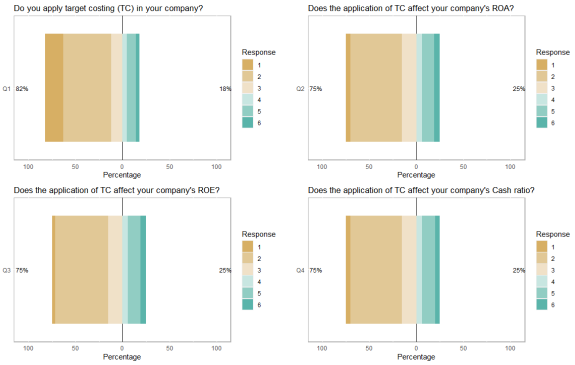
Data was analysed to examine the level at which the application of target costing affects financial performance (ROA and ROE and Cash ratio)

Response rate

Responses to questions (Likert scale responses)

Table 4.3 indicates that 82% of the participants disagreed, to varying degrees, that their companies used TC. The majority of the 82% fall into the "disagreed" category, while the remaining 18% were positive, indicating "strongly agreed" and "agreed" with the question on whether their company applied TC.

The majority (75%) disagreed with the questions whether the application of TC affected their company's ROA, ROE and Cash ratios respectively; while the remaining 25% positive responses either "strongly agreed" or "agreed" with the questions.



Notes: 1, 2, 3, 4, 5, and 6 represents Strongly disagree, Disagree, Not sure, Somehow, Agree, and Strongly agree, respectively. Q1 - Q4 refer to the question numbers.

Figure 4.3: Responses to questions (Likert scale responses)

Source: Author's computation using likert package in r

The percentage breakdown of data presented in Figure 4.3 is provided in Figure 4.4 below.

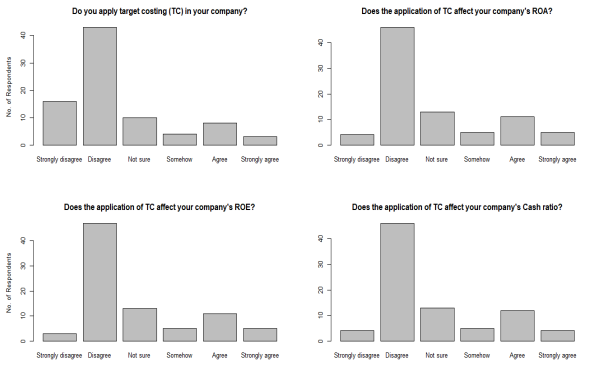


Figure 4.4: Responses the four Questions, expressed as percentages

Source: Author's computation using feedback from the respondents

Descriptive statistics

Table 4.6: Descriptive statistics of responses to questions

	Number of observations	Minimum	Median	Mean
Do you apply target costing in your company?	84	1	2	2.452
Does the application of TC affect your company's ROA?	84	1	2	2.857
Does the application of TC affect your company's ROE?	84	1	2	2.869
Does the application of TC affect your company's Cash ratio?	84	1	2	2.845

Source: Author's estimations

Table 4.6 shows that there were more respondents who disagreed with the questions than those who agreed, resulting in overall mean values of less than 3. These findings are consistent with Figure 4.4, which depicts tall bars for the "disagree" category of questions. Figure 4.3 also displays high percentages on the left side of neutral (strongly disagree, disagree, and not sure.

Ordinal Regression Analysis

The research seeks to examine the influence of target costing on ROA, ROE, and Cash Ratio. Accordingly, Questions Q2 - Q4 are modelled as a function of Q1. The evaluation of whether the proposed models are fit for purpose is provided below.

Goodness of fit of data model

Table 4.7: Null and Residual Deviance Results

	Number of Parameters	AIC	LogLik	LR. Stat	df	Pr (>Chisq)
Null deviance (Q2)	5	239.42	-114.710			
Residual deviance (Q1)	10	182.55	-81.273	66.875	5	<0.001
Null deviance (Q3)	5	234.24	-112.120			
Residual deviance (Q1)	10	176.35	-78.176	67.888	5	<0.001
Null deviance (Q4)	5	237.54	-113.770			
Residual deviance (Q1)	10	188.35	-84.177	59.188	5	<0.001

Note: The p-value is a test of significance for H0 that there is no difference between the null and residual deviances. Reject H0 if the p-value <0.05.
Source: Author's estimation

Table 4.7 shows that the AIC values of the residual deviance are lower than those of the null deviance for all specifications. Furthermore, the p-values are below 5%. These results suggest that target costing is a useful predictor of ROA, ROE, and cash ratio. The ordinal regression analysis shown below determines whether it influences performance positively or negatively.

Table 4.8: Estimated Results of the Ordinal Regression Model

Dependent Variable:		Estimated Coefficient	Standard Error	t-value
Does the application of TC affect your company's ROA?	Disagree	1.378	0.760	1.776
	Not sure	3.163	0.273	3.410
	Somehow	3.341	1.141	2.927
	Agree	6.873	1.390	4.945
	Strongly Agree	8.830	1.452	3.849
	Intercepts:			

Dependent Variable:		Estimated Coefficient	Standard Error	t-value
	Strongly disagree| Disagree	-1.799	0.579	-2.734
	Disagree| Not sure	2.446	0.486	3.267
	Not sure|Somehow	3.809	0.237	4.624
	Somehow |Agree	4.636	0.908	5.204
	Agree|Strongly Agree	8.201	1.456	5.633
Does the application of TC affect your company's ROE?	Disagree	1.720	0.883	1.949
	Not sure	3.473	1.018	3.411
	Somehow	3.652	1.217	3.001
	Agree	7.185	1.452	4.949
	Strongly Agree	9.364	1.037	0.148
	Intercepts:			
	Strongly disagree| Disagree	-1.952	0.714	-2.734
	Disagree| Not sure	2.757	0.858	3.213
	Not sure|Somehow	4.121	0.925	4.457
	Somehow |Agree	4.947	0.985	5.024
	Agree|Strongly Agree	8.514	1.515	5.619
Does the application of TC affect your company's Cash ratio?	Disagree	1.436	0.771	1.862
	Not sure	3.123	0.923	3.388
	Somehow	3.059	1.210	2.527
	Agree	6.855	1.388	4.939
	Strongly Agree	8.914	1.876	4.751
	Intercepts:			
	Strongly disagree| Disagree	-1.784	0.654	-2.728
	Disagree| Not sure	2.421	0.743	3.257
	Not sure|Somehow	3.760	0.817	4.602
	Somehow |Agree	4.580	0.884	5.179
	Agree|Strongly Agree	8.201	1.445	5.677

Note: In general, a t-statistic of 2 or more is considered statistically significant.

Source: Author's estimation using the polr function of the ordinal package in R.

While descriptive statistics and Likert scale data analysis show that most of respondents expressed disagreement with the hypothesis that the application of TC affects SOE performance, Table 4.8 indicates that the application of TC does have a statistically significant positive impact across all categories and financial performance metrics. This implies that, whether one agrees or disagrees, TC boosts SOEs' ROA, ROE, and cash ratio.

The intercept coefficients show that the impact improves from the "strongly disagree" category to the "strongly agree" category, with the "disagree" category threshold separating deleterious and decisive impacts. These findings suggest that SOEs' management's perceptions of TC are important in determining its impact on SOEs' financial performance. Simply put, TC enhances the financial performance of SOEs to an increasing extent as management develops a positive perception of it. It is important to note that an increasingly positive attitude toward TC is accompanied by increasing skills and knowledge in its application. As a result, these results can be used as an indicator of whether the SOEs' management possesses the necessary TC application skills or not.

Diagnostic tests

The study used Brand-Wald test to validate the proportional odds assumption. At a significance level of 5%, the findings indicate that only the Omnibus variables are significant, while all other predictors are insignificant, with p-values of 1 across all specifications. The conclusion that may be drawn from this is that the null hypothesis of the proportionate odds assumption cannot fall. Further robustness tests were conducted

to check the validity of the coefficients, and the results are displayed in Table 4.9 below.

Table 4.9: z-test of coefficients results

Dependent Variable:	Does the application of TC affect your company's ROA?	Does the application of TC affect your company's ROE?	Does the application of TC affect your company's Cash ratio?
Do you apply target costing in your company?			
Disagree	1.378*	1.720**	1.436*
	(0.761)	(0.882)	(0.771)
Not sure	3.163***	3.473***	3.123***
	(0.273	(1.018)	(0.922)
Somehow	3.341***	3.652***	3.059***
	(1.142)	(1.217)	(0.210)
Agree	6.873***	7.185***	6.855***
	(1.390)	(1.452)	(1.388)
Strongly Agree	8.483***	9.364	8.914***
	(1.452)	(1.037)	(1.876)
Intercepts:			
Strongly Disagree| Disagree	-1.799***	-1.952***	-1.784***
	(0.579)	(0.714)	(0.654)
Disagree| Not sure	2.445***	2.757***	2.421***
	(0.486)	(0.858)	(0.743)
Not sure| Somehow	3.809***	4.121***	3.760***
	(0.238)	(0.925)	(0.817)
Somehow| Agree	4.636***	4.947***	4.580***
	(0.908)	(0.985)	(0.884)
Agree| Strongly Agree	8.201***	8.514***	8.201***
	(1.456)	(1.515)	(1.444)

Notes: *, **, and *** depict significance at 10%, 5%, and 1%, respectively. In parentheses are standard errors.
Source: Author's computation using coeftest function in R.

Tables 4.8 and 4.9 show consistent outcomes, indicating that the findings are valid and can be relied on for policy development.

CONCLUSION AND RECOMMENDATIONS

The second objective of this research was to determine the degree to which the adoption of Target Costing (TC) has an impact on the financial performance of SOEs. A detailed examination of the data, shown in Table 4.7, demonstrates that the related p-values are much lower than the traditional significance threshold of 5%. This empirical observation offered compelling evidence that TC may actually serve as a beneficial tool for forecasting financial performance metrics such as return on assets, return on equity, and cash ratio. Consequently, this discovery provides persuasive proof of the influence of TC on financial performance.

Upon closer examination of the results, as shown in Table 4.8, it becomes evident that the deployment of TC has a beneficial effect on all the financial performance measures described earlier. Importantly, this effect is not only supported by evidence of the raw data, but also has a high level of statistical significance. Once again, it is clear that the opinions held by SOE management about TC have a significant impact on its on effect on financial performance and the degree of application in the SOE. Therefore, a positive attitude towards TC amongst SOEs' management is directly linked to its adoption, and improved financial performance. Conversely, a less optimistic view is connected with less favourable results and poor implementation. The acknowledgment of the interdependent impact that skill and awareness have within this framework is critical. As stated earlier, the perceptions of management are intrinsically related to the competencies and levels of cognizance of the individuals involved. Senior management cohorts that do not possess the necessary knowledge and skillsets generally display a more sceptical

stance towards the adoption of TC. Conversely, those that possess the necessary awareness and skillsets eagerly implement TC methodologies, consequently capitalising on the advantages that ensue. The complex interplay between a combination of skill, awareness, managerial perception, and financial performance highlights the inherent complexity of strategic cost management decision-making in SOEs. Through providing an understanding of these complex connections, this research provides a valuable contribution to the advancement of knowledge regarding the interplay between managerial competencies and attitudes, and organisational performance outcomes, as they pertain to strategic cost management initiatives.

This paper, and its conclusions about the impact of target costing on financial performance, fulfil the main objective of this research.

This research only focused on one element of SCM, being TC. Subsequent research might broaden the scope of the studied variable, specifically focusing on the widest details in the area of SCM. Expanding the range of SCM variable would provide a more thorough comprehension of their influence on financial performance, and should enable the discovery of new factors that affect the operations of SOEs. An expanded examination of strategic cost management elements would improve the accuracy of the evaluation of conduct of state-owned enterprises in different situations, and their impact on their financial performance measures.

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