

Effects of Coopetition on Firm Performance and Implications for Economic Growth for SADC Countries

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Abstract

Competing and collaborating with competitors at the same time (coopetition) has proved to be an effective strategy for SMEs in developing countries. The strategy aids in the survival of small business through resource sharing, knowledge transfer and innovation performance. This article aims to highlight the importance of coopetition through theoretical and empirical evidence by studying 355 companies in SADC countries to examine the effect of collaboration on firm performance and to further infer coopetition as a driver for economic growth through firm performance in SADC countries.

Keywords

Coopetition, SADC, Firm Performance, Economic Growth

1. Introduction

For many years in developing countries, big businesses have enjoyed extensive support from government, financiers, and other stakeholders. This situation is changing quickly in many economies of the world, as the focus shifts towards the development of SMEs. SADC economies have seen big businesses struggle to survive, characterised by downsizing and retrenchments of thousands of people in the past few years (Lechner, Soppe, & Dowling, 2016). This situation has forced individuals to start their own businesses not only for survival but also to create wealth.

Without a doubt, the propagation of SMEs is a good thing since the development thereof contributes significantly to job creation, economic welfare and social stability (Audretsch, 2007). In countries, such as Japan, SMEs are responsible for the bulk of the country's business establishment. In the US, SMEs have introduced innovative products and services, created new jobs and opened new markets.

More surprising is the failure rate of SMEs. Some fail at infancy, whilst others a few years from start-up. For example, it is estimated that 50 percent of all start-ups fail within their first year and 70 to 80 percent within the first three to five years (Zulu-Chisanga, Boso, & Leonidou, 2016). The failure rate can largely be attributed to lack of funding, minimal infrastructure and extremely competitive environments, especially with pressures from bigger businesses (Mthanti & Ojah, 2017). SMEs operate in the same environment as their larger counterparts but without the benefits of relatively easy access to funding, human resource and strategic benefits of economies of scale (Guerrero, Urbano, Fayolle, Klofsten, & Mian, 2016).

To survive and mitigate the risk of failure, a number of SMEs have embarked on collaborative strategies to increase their innovative activities and know-how (Narula, 2004). Due to the acceleration of technological changes, many small firms experience difficulty in becoming innovators and are often pushed out of the market and forced to close shop (Schiavone & Simoni, 2011). Collaboration and innovation are regarded widely as important change process that sustains business development in increasingly competitive markets (Franco, 2003).

Due to their limited financial and human resources, SMEs need to compete and form collaborative agreements with other firms to overcome some of these constraints and improve the level of innovation and overall entrepreneurial orientation (Mthanti & Ojah, 2017). Some SMEs have been successful in their collaborative relationships and others have failed (Franco, 2003). Those that have been successful enjoy sustainable growth and are able to compete in their respective markets against bigger businesses (Franco, 2003).

Literature on successful coopetitive relationship is based on studies done on well established companies in developed economies. Some examples would include the Dell and IBM coopetitive relationship (Bandura, 2006), IBM and Microsoft (Kessler, 1998) and SAP with Oracle (van der Aalst, 2002). None of the research focuses on SMEs and the coopetitive relationships thereof in the context of developing regions and more specifically the SADC countries.

2. Problem Statement

The summation of successful coopetition by literature ignores the challenges faced by SMEs in SADC countries. Rather these conclusions are based on economies with vast resources and adequate skills and may not be as effective or relevant in the conditions and challenges faced by SMEs in the SADC and/or emerging economy regions.

Further enquiry is needed based on empirical evidence of the SMEs that have had successful competitive and collaborative relationships, as to exhume the effects of these successful relationships on firm performance in the context of SADC. Knowing what determines a successful coopetitive relationship will help more SMEs in their efforts to collaborate and achieve their sustainable growth goals, which may lead to strengthened positions in their competitive environments. Without this knowledge, we will continue to see more sadly tap-rooted, SMEs fail as the market becomes increasingly complex and small businesses seek to form collaborative agreements based on trial an error. Intra-industry collaboration is perceived as a major source of a company's competitive strength and vital to a firm's survival in an economic environment where innovation tends to be costly and timing of market entry is critical (Yan, Zhai, & Fan, 2013). Coopetitive relationship is seen as a hugely promising way to reduce the risks and costs associated with industrial innovation (Dorn et al., 2016) and it is important to investigate the effects of coopetition on firm performance.

3. Coopetition

There are several well-established dichotomy approaches to the definition of coopetition. Coopetition can be defined as a process based on simultaneous and mutual cooperative and competitive interaction between two or more parties (Dorn et al., 2016). By working together firms are able to increase customers service and capture a larger market at a lower cost than either firm would be able to attain on its own (Thomason et al., 2013). Companies that have been viewed in the past as competitors are increasingly cooperating to achieve competitive advantage.

Research suggests that SMEs face many challenges compared to their larger size counterparts. Gnyawali and Park (2009) argue that small enterprises are vulnerable due to limited market presence, high costs of R&D and limited resources and capabilities to advance technological innovation. As a result, researchers have suggested that collaboration is key for strategy and performance of SMEs. These alliances help SMEs to compete with larger rivals, access resources and enter into new markets. Gomes-Casseres (1997) argued with examples that SMEs need alliances with competitors so they can attain economies of scale, scope in R&D and develop technological standards. In his research of Mips Computer systems, he concluded that the company although small with less than 1000 employees was able to take on bigger rivals such as IBM and Hew-lett-Packard by creating a vast network consisting of small semiconductor firms (Gomes-Casseres, 1997).

There is no doubt about the growing importance of coopetition as a strategy for both SMEs and larger companies. Eikebrokk and Olsen (2005) demonstrated empirically that coopetition among small firms helped to enhance novelty of their business and combined complementary strengths in product and technologies (Eikebrokk & Olsen, 2005). Mione (2009) argued that common norms and technologies are created when small firms work together and they compete to sell their technologies (Mione, 2009). It is also suggested that coopetition may have a positive impact on profits (Powell, White, Koput, & Owen-Smith, 2005).

In their seminal work, Nalebuff, Brandenburger and Maulana (1996) used

game theory to develop the concepts of coopetition and to highlight the different strategies that can be used by each player given their position in the game. Each player can have one or multiple roles and the role determines how they play the game. In traditional theories, there were only win-lose scenarios and recent literature has emerged with win-win scenarios.

In classical economic theory, competition has been viewed as the main driver for economic stimulation and collaboration viewed negatively to imply collusion. It is only recently that collaboration and cooperation has been unburdened of the negative connotation (Nalebuff, Brandenburger, & Maulana, 1996). Porters work on bargaining power of entities has helped develop the benefits that could stem from coopetition relationships.

The coopetitive process can be influenced by the environment in which the players compete, and while the external environment plays a role, internal firm characteristics may determine the simultaneous degree of collaboration and competition, and ultimately the success of the coopetitive relationship. Contrary to the competitive paradigm, the cooperative paradigm stems from the realisation that pooled resources, skills and capabilities can result in a positive sum structure or a win-win situation (Thomason et al., 2013).

3.1. Theories of Coopetition

Three theoretical streams provide a conceptual basis for coopetition, namely, Resource Based View including knowledge-based view, Network theory and Game theory.

3.1.1. Resource Based Theory

It is undeniable that many SMEs face challenges in their endeavours to compete in their respective markets and one of the main impediments is limited resources. Some of these resources include in-house knowledge, technological innovation, skilled personnel, efficient procedures, capital and R&D amongst others (Abor & Quartey, 2010). Resource based theory helps us to understand the mechanism by which a firm can achieve a competitive advantage using its resources to position itself ahead of competitors. If a resource is controlled by a monopolistic group, it will, when all other conditions remain the same, diminish the returns available to other users, as in a case of a patent holder (Wernerfelt, 1984).

It is well known that efficient production process can lead to higher returns if it cannot be bought in an open market and it can serve as entry barrier against competitors. Similarly, economies of scale can lead to high returns for the firm. One of the advantages of coopetition amongst SMEs is that it allows the firms in the relationship to achieve economies of scale which leads to higher returns and the ability to compete in the market against larger companies.

Knowledge of skilled labour is one of the important resources in a firm and often SMEs suffer in the market due to their inability to afford skilled labour. Coopetition encourages knowledge sharing between the entities. If the firms execute the experience curve strategy effectively, competitors should battle with the firm to lower costs. However, if the experience leaks to the competitors, this will have adverse effects on the firm. Thus, skilled labour retention is important for SMEs and higher returns may lead to the affordability thereof.

Another key resource is technological leads which allow the firm higher returns and enables it to keep skilled labour so the organisation can develop further ideas and generate returns to fund R&D. On the other hand, competitors can reinvent the firm's ideas with much less effort than what it took the first firm (Barney, 2001), it is important for SMEs to keep growing and advancing technologies to keep abreast of the competition.

In general, resources can be used to produce more than one product and a resource is only as valuable as it creates a resource position barrier. Firms should strive to harness the resources that are scares in the market and which the competitors will find difficult to obtain. Furthermore, in coopetitive situations, while resources sharing is important, companies should look for resources that combine well with what they have and which create value as perceived but which no one currently have or they are among the few who succeed in building these resources. An example is managerial skills which can be analysed much like technological leads. When two or more companies enter a coopetitive relationship, the combined managerial skills can serve as resource barrier for the other firms and may lead to higher returns for the firms in the relationship (Wernerfelt, 1984).

While neo-classical microeconomics assumes that in general, resources and capabilities are elastic on the supply side, resource-based view acknowledges that some resources may be inelastic in supply as indicated in the work of Ricardo (1891). The author examines the kinds of profits that can be generated by the factors of production given the fixed supply of fertile land in the farming industry. Of course, when demand for a certain resource (factor of production) increases, the price of acquiring that resource will increase and ultimately the supply of the resource will increase (Ricardo, 1891). For example, a shortage of skilled managers in a particular market will increase the price of hiring these managers and may cause and increase in the number of people with the required skills to move into that market, either by training to acquire these skills or moving from other markets.

The inelasticity implies that firms that possess these resources may be able to generate above average profits (Barney, 2001). When faced with the challenge of resource shortages, SMEs may opt to develop coopetitive relationships in order to share and benefit from pooled resources which each firm would otherwise not have individually. The aim is to create a situation where a firm's resources position makes it more difficult for other firms to catch up. RBV is also useful when SMEs are trying to enter new markets, a resource matrix can be used to take stock of the company's current resources and the additional resources needed to enter the new market successfully.

In addition to the neo-classical microeconomics perspective, resource-based view can be aligned to structure conduct performance (SCP) based theories of industry determinants of firm performance and evolutionary economics (Barney, 2001). Each perspective depends on the context of analysis and all are equally useful. Resource based theory established in accordance to evolutionary economics focuses on the ability of firms to develop superior performs in changing environments through deferential ability to develop new capabilities. These capabilities generate rents that are Ricardian in nature (Barney, 2001). The neo-classical economic resource-based theory is appropriate for studying the rents generated by these capabilities and evolutionary economics for analysing how these capabilities are developed. Both frameworks are appropriate for the Schumpeterian analysis of entrepreneurship (Schumpeter, 1949). Inherent in microeconomics is the equilibrium analysis that is useful for modelling rents generated by new capabilities, as often done in Game theory.

3.1.2. Game Theory in Coopetitive Studies

Game theoretical models are used in many situations to analyse various markets and are rarely used in the case of coopetition. This is because coopetition is generally viewed as a management concept and not necessarily an economics concept and game theory uses seemingly complex mathematics. Secondly, game theory is unsuitable to the aim of coopetition models, which is to bring sophistication to certain concepts such as value net. Thirdly, coopetition studies use case study methods that involve observing companies, industries and countries over a certain period and game theory models are not readily available for such a task (Okura & Carfi, 2014).

Even though game theory is rarely used in coopetition studies, several authors have published important work on the topic using game theory. Brandenburger and Nelebuff (1996) used game theory in their analysis of coopetitive situations; Gnyawali and Park (2009) used game theory approach in coopetition situations and the advantages of using game theory in coopetition have been amply set out by Okura (2007, 2008, 2009, 2012) and Ohkita and Okura (2014). Pesamaa and Eriksson (2010) showed that game theory is useful in describing interdependent decisions of investigating actors. Lado et al. argued that behaviour in interfirm relationships can be explained by game theory (Lado, Boyd, & Hanlon, 1997). Ghobadi and D'Ambra (2012) speak extensively about knowledge sharing as they summarized the strengths, weaknesses and characteristics of game theory in coopetitive relationships. Figure 1 below, outlines the relation of coopetition to economic theory. Through Game Theory, firms in coopetitive relationships can achieve zero-sum games and attain the desired payoffs and equilibrium. The effects of which have a chain reaction in management, financial economics and ultimately, macroeconomics from a point of view of Growth Theory.

3.1.3. Network Theory

Network theory is based on the study of interactions between agents in a network



Figure 1. Coopetition in economic theory. Source: Stein (2011).

that can be represented graphically (Lin, 1999). The theory is by far and large an extension of social capital theory as it creates social capital for the community and individuals. These networks also create categorical differences in the market when two or more communities interact in a network-like manner that is different from other networks, subsequently providing an alternative to markets and hierarchies (Powell et al., 1990). In communities, such as Silicon Valley, networks are the defining feature to innovation and they create trust among the agents in the network (Powell et al., 1990). They also encourage conformity and synergy between the firms through the diffusion of knowledge and technology (Baruch & Lin, 2012). Examples of networks include; social network among individuals, such as friendship, formal contractual relationships between firms and affiliations to certain industry bodies.

In the context of coopetition, firms in coopetitive relationships form a network in which resources, knowledge and technology can be diffused. Coopetition encourages stronger relationships within the network as trust is fostered and greater synergy in the objectives of the firms is developed (Baruch & Lin, 2012).

3.2. Coopetition and Firm Performance

The topic begs the question whether small firms that engage in coopetition perform better than those that do not? And whether strong coopetitive tendencies result in larger performance gains than weaker coopetitive tendencies? Extensive evidence exists to suggest that coopetition may enhance performance. Of course, it may depend on the measure of performance that is employed in the context. While profit is most common measure of performance among SMEs, there is a wide array of other measure, both financial and non-financial such as innovativeness and market position (Morris et al., 2007).

Combs and Ketchen (1999) demonstrated that relationships among

non-competing firms have potential to reduce costs resulting in higher profits for all partners. This was done using profit as performance indicator. Coopetition in its essence requires structural changes, more so for firms with limited scope and scale. Firms in coopetitive relationships often change the organizational structure to support the new inter-firm relationship and allow for the easy flow of resources and information. Meijaard, Brand and Mosselman (2005) recorded evidence that organisational structure affects firm performance.

Competitive position is another important performance indicator (Ritala, 2012). Coopetition is considered as way for firms to gain competitive advantage in their respective markets. Ritala (2012) argues that firms participating in coopetition will have enhanced competitive positions depending on the degree of coopetition. One can also strengthen their competitive position by leveraging off their partner's resources (Dussauge, Garrette, & Mitchell, 2000).

Direct Effects of Coopetition Alignment on Firm Performance

Recent research has produced considerable evidence that coopetition is beneficial to the innovative output of firms in general. For example, Quintana-Garcia and Benavides-Velasco (2004) found that it was beneficial in the introduction of new product lines compared with other types of collaboration. Other studies have reported similar conclusions, suggesting that coopetition, as a particular type of R&D relationship and knowledge source, helps firms to generate both incremental and radical innovations (Belderbos, Carree, & Lokshin, 2004; Tether, 2002). Furthermore, it has been shown that including competitors in the R&D relationship portfolio is beneficial in terms of innovation output (Belderbos et al., 2004). On the other hand, classical economics literature implies the opposite—coopetition is seen as a vehicle for price discrimination, thereby mainly improving profitability and lowering the incentive to innovate.

However, the competitive environment has become more global, rapid and unpredictable in recent years. This development has not only strengthened the motivation to engage in various types of alliances in general (Contractor & Lorange, 2002) but has also resulted in increased collaboration among competitors in value-creating and innovativeness-enhancing rather than collusive practices (Gnyawali, He, & Madhavan, 2008; Gomes-Casseres, 1997; Jorde & Teece, 1990; Walley, 2007). Thus, in the context of this study, including a set of competitors in the firm's alliance portfolio is suggested to be positive for innovation performance. Hence, the following hypothesis is put forward.

*H*1*a*: *Coopetition alignment is beneficial to a firm's innovation performance.*

While there is already considerable evidence that coopetition is beneficial to innovation performance, there is much less evidence concerning its effects on market performance. Much of the extant quantitative research has been conducted on the level of individual alliances (e.g. Kim & Parkhe, 2009) rather than of the firm and its alliance portfolio. The most notable evidence on the firm level is provided by Luo, Rindfleisch and Tse (2007), who found that coopetition was

beneficial in terms of return on equity up to a certain threshold. Existing conceptual and qualitative analyses imply somewhat similar results, at least when the issue is approached from the alliance portfolio perspective.

In fact, the strategy of allying with strategically chosen competitors and competing fiercely with others could be considered potentially superior in terms of combining the benefits of both collaboration and competition (Lado, Boyd, & Hanlon, 1997). For example, in developing mobile telephony technologies the Finnish-based firm Nokia has adopted the strategy of collaborating with a diverse portfolio of partners, including some carefully selected competitors (Dittrich & Duysters, 2007). Based on these issues, it is reasonable to suggest that coopetition alignment has a positive effect on performance of the firms in the market.

H1b: Coopetition alignment is beneficial to a firm's financial performance.

SMEs face many challenges in the market in which they compete, with limited resources, they strive to survive by competing effectively. Coopetition strategy allows for small firms to do so with the aim of increasing profitability by efficient use of resources to lower costs, improve productivity, higher customer satisfaction and increase market share. For the purpose of this research, profit, sales growth and competitive position will be used as performance indicators.

H1c. Coopetition alignment is beneficial to a firm's strategic performance.

Strategic performance comprises of, amongst others; customer satisfaction, employee satisfaction, increase in number of employees and social performance. Coopetition, according to Chin et al. (2008) has a positive effect on a firm's strategic performance, that is, it enhances customer satisfaction and employee satisfaction.

For the purpose of this research, innovation performance, financial performance and strategic performance are considered for inclusivity and ease of measurement among the SMEs as depicted in **Figure 2** below inclusive of the subsets of financial performance and strategic performance.

Based on **Figure 3** below derived from the preceding argument, it is suggested that successful coopetition has a positive influence on firm performance. Morris et al. (2007), found in their model linking dimensions of successful coopetition (trust, mutual benefit and commitment) that mutual benefit and commitment have a positive significant effect on performance and the t-value for the trust dimension was non-significant. Furthermore, in the multi-group analysis of younger versus older firms, it was found that there was no difference and the results held true for both. It is therefore evident that coopetition is important for SMEs in that it enhances performance of the firms.

According to Oxley, Sampson and Silverman (2009), there are two explanations as to why coopetition can increase firm performance: 1) some alliances "soften" the competition in the industry, making the business more profitable for all, and 2) alliances may lead to increased competitiveness only among the partnering firms, increasing their performance in relation to that of all other



Figure 2. Dimensions of firm performance. Source: Brito (2012).



Figure 3. Relationship between successful coopetition and firm performance. Source: Articulated by author.

firms. These benefits of coopetition, in the sense of competitive dynamics, may explain why a coopetition strategy could be beneficial in conditions of both low and high competition intensity. In the case of low competition intensity, the two aforementioned benefits of coopetition (competition-tension-lowering and competitiveness-enhancing effects) provide strong reasoning for the use of such strategy. First, coopetition has the potential to affect the competitive dynamics within an industry (Bengtsson, Eriksson, & Wincent, 2010; Gnyawali & Madhavan, 2001; Roy & Yami, 2009), and such the impact is likely to be stronger when there are not that many competitors offering similar products.

Classical economics literature has long been suggesting that collaboration between competitors lowers or softens competition within industries (Lamoreaux, 1985; Pate, 1969). In contemporary legislative and technological environments, such "softening" is not necessarily a cartel-like agreement aimed at colluding against consumers or suppliers (e.g. Gnyawali, He, & Madhavan, 2008; Jorde & Teece, 1990; Walley, 2007), at least when the competition has not completely disappeared (for a discussion, see Bengtsson, Eriksson, & Wincent, 2010). It may rather be a shift in competitive forces towards a more favourable positioning from the point of view of a focal firm engaging in coopetition (Roy & Yami, 2009). In fact, Dussauge, Garrette and Mitchell (1998) found that certain types of coopetition alliances—so-called quasiconcentration alliances—lower the competitive pressures within industries, while the effect was not as visible in other types.

However, even in these instances allying with the fiercest rivals can ease the competitive pressure from the perspective of the firm more than from the perspective of the whole industry. The reasoning, according to the literature on strategic groups (Cool & Schendel, 1987; Thomas & Venkatraman, 1988) and the cognitive categorization of rivalry (Porac et al., 1995), is that firms perceive their rivals and competitive dynamics differently inside and outside of the industry. Thus, coopetition may improve performance from the perspective of the individual firm much more than from the perspective of the industry on account of the decreased firm-specific competition intensity.

Secondly, coopetition is also likely to have a competitiveness-enhancing effect under low competition intensity, and such effect is particularly strong when the competitive field is limited (e.g. Roy & Yami, 2009). As a recent example of such situation, Nokia and Intel have collaborated in developing the MeeGo smart-phone operating system, the logic being that together they can increase their competitiveness within a field in which there are only a few major competitors (iOS from Apple, Windows Phone from Microsoft, and Android from Samsung). In sum, when the two benefits of coopetition (decreasing competition tension and enhancing competitiveness) are considered within environments with low competition intensity.

It can therefore be concluded that, coopetition alignment is beneficial to a firm's innovation performance in conditions of low competition intensity and coopetition alignment is beneficial to a firm's market performance in conditions of low competition intensity. That is the collaboration continuum is greater than that of competition.

3.3. Application of Theories

The increase of SMEs in the SADC region is of paramount importance for economic growth and to address the socio-economic factors that continue to plague developing countries. Coopetition theory points to an alternative remedy for the not so successful current strategies of SMEs (Lechner et al., 2016). The conceptual bases of coopetition reside in the Resource based view and Game theory. A syncretic model proposing that "success in today's business world often requires that firms adopt both competitive and cooperative strategies simultaneously"

(Lado, Boyd, & Wright, 1992).

Game theory provides another perspective with a dynamic picture of the interactive process of competition and cooperation (Brandenburger & Nalebuff, 1996). Network theory on the other hand explains how competitors through coopetition can learn about their partners and have access to resources (Gnyawali & Park, 2009).

Coopetition and Economic Growth

The main aim of the investment in entrepreneurship and SMEs by the SADC governments is to address the socio-economic matters of poverty alleviation, reduction of unemployment and enhancement of economic growth. It is therefore important from a macroeconomic perspective to examine the effects of improving entrepreneurship (for instance via Coopetition) on the countries production function.

Understandably entrepreneurship may be exogenous as the population keeps growing and more entrepreneurs start businesses, however, the labour force's productivity may be influenced by other factors including technology to enable entrepreneurs to be more effective through sustaining long-term businesses that help address problems such as unemployment and poverty.

Drawing from Solow's (1956) growth model as a framework:

$$Y_t = F\left(K_t, L_t, t\right) \tag{1}$$

where *Y* is output, *K* is capital and labour is denoted by *L* with time *t*. The relationship of *Y*, *K*, *L* have been relatively easy to model mathematically, but modeling the effects of t has been rather problematic and often treated as exogenous over time (Holcombe, 1998) and attributed to the state of technology¹ A_r . The adjustment to address this model of t yields:

$$Y_t = F\left(K_t, L_t, A_t\right) \tag{2}$$

The implication is that; by investing in *K*, *L* and *A* will increase *Y*. Labour and capital predate transformation to economic growth; thus, it is the process by which they are combined (state of technology) that creates sustained economic growth. The success attributed to the investment in technology that is research and development is undeniable. However, the results of the research need to be applied to make SMEs' production less costly or to invent new products and services. This is the precise role of entrepreneurship (Holcombe, 1998).

$$Y_t = F\left(K_t, A_t L_t\right) \tag{3}$$

The general environment is given by the Cobb-Douglas function (Romer, 1989):

Y

$$Y_t = K_t^{\infty} \left(A_t L_t \right)^{1-\alpha} \tag{4}$$

The labour augmenting technical progress implies that the technology is ap-¹State of technology is equivalent to knowledge or effectiveness of labour. A and L enter multiplicatively. AL is referred to as effective labour and technological progress that enters in this manner is known as labour-augmenting or Harrod-neutral (Solow, 1956). plied to labour to make it more efficient. Individual firms do not exhibit increasing returns, but the entire economy does since the division of labour is limited by the extent of the market. By increasing the number of firms the market is increased and allows firms to be more productive by becoming increasingly specialized (Nirei & Aoki, 2016). Therefore, strategies such as coopetition would contribute to A through resource sharing, knowledge transfer and the benefits from economies of scale and thus allow SMEs to evolve over time, becoming more productive and more sustainable. This, in turn, may lead to the establishment of more SMEs—a Smithian view² of economic growth.

4. Methodology and Results

Ultimately the relevance of the study anchors on whether coopetition improves firm performance. This is mainly to drive strategy formulation among SMEs while they strive to compete in a complex market. The preceding literature stated in detail the challenges faced by most SMEs in SADC and the research proves helpful by confirming the impact of coopetition on firm performance.

Structural Equation Modelling (SEM) was used to analyse the results of 355 respondents comprising of small to medium sized firms in SADC countries as depicted in **Figure 4** below. An electronic survey was sent out to over 1000 participants across all SADC countries and the results were received through survey monkey and analysed using SPSS, AMOS and STATA. The results show a positive and significant effect of coopetition on firm performance.

The coefficient values of double-headed arrows indicate the bivariate correlation coefficients between two (2) latent variables. For example, the correlation coefficient between Successful coopetition and Firm performance is 0.82. Meaning when one of these two variables increase of 1 standard deviation, the other variable also increases of 0.82% of its own standard deviation. All these correlations are statistically significant at 99% interval confidence.

This means that coopetition remains a viable strategy for SMEs to adopt. It will help companies with their innovation efforts, the results indicated a high β value of 0.9 indicating strong regression. As discussed previously, one of the benefits of coopetition is resource sharing, particularly in R&D. Through this strategy, firms will have a better chance to access new markets, launch new products, improve production efficiency and access to new technologies.

Secondly, firms' strategic performance improves. Strategic performance comprises of elements such as customer satisfaction, new product development and employee satisfaction. The respondents strongly agreed that coopetition has helped with the strategic performance of their firms.

Majority of the respondents also confirm that coopetition has resulted an increase in turnover due to increase in sales. Part of the increase can be attributed to improvements in the value chain due through innovation performance, access

²"The Smithian view of growth focuses less on the quantities of factors of production and more on the processes that are used to combine them into aggregate output" (Audretsch, 2007).



Figure 4. SEM results.

to resources that were otherwise not available to individual firms, this includes new customers, technical knowledge and management skills. It can be concluded that H1a, H1b and H1c are accepted, where H0 is coopetition does not have a positive and significant effect on firm performance.

5. Conclusion

Theory is clear on the benefits of coopetition and the ultimate results when implemented and applied correctly. With the growing number of SMEs in the SADC countries, coopetition would serve as a meaningful aid for cross country relationships between SMEs. This will facilitate imports and exports, access to bigger markets through coopetitive partners, cross country learning, access to new technologies and skills, promotion of innovation considering the 4th Industrial Revolution. Furthermore, the exponential growth of SME in both the size of the firms and the number of firms entering the market will have a positive effect on economic growth as defined. Resource Based Theory, Network Theory and Game Theory provide theoretical evidence of the competitive advantage that can be achieved by competing firms through the generation of above average profits and access to vital resources. It is therefore recommended that governments, trade ministries and industry bodies promote cross country industrial collaboration between SMEs within SADC and adopt policies that make trading easier and lessen SME reliance on government whilst fostering an entrepreneurial culture.

Although comprehensive, the study was not all inclusive. Geographically it was limited only to SADC. It is recommended that a similar study is conducted in different regions, West Africa, East Africa, North and Central Africa to determine whether the results will be the same. Each region has its unique challenges and different cultures of entrepreneurship. The demographics are different, and this may present different results. This could be useful to the African Union and its trade agreements as well as contribute to coopetition theory. A larger sample should be obtained to give future studies more depth. This may result in uncovering hidden themes that may be beneficial to the overall theory of coopetition. The behavioural differences in the sample demographics should be investigated further.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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