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A descriptive analysis of barriers to entry in South African markets

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Abstract: Over the past few years, the ease and likelihood of doing business in South Africa have deteriorated due to various factors, including the political and economic environment. At the lower level, rival firms face significant barriers to entry, which is the focus of this study. Using secondary data from the Competition Commission of South Africa, this study performs an in-depth analysis of barriers to market entry in South Africa. The findings reveal that barriers to entry are more prevalent in intermediate and larger mergers than in small mergers. Strategic barriers at the lower level are dominated by technical know-how, substantial investment in marketing, and long-term contracts. Regulatory barriers, on the other hand, are mainly driven by licensing, registration restrictions, exclusive rights, and standards and safety requirements. Structural barriers include capital investment costs, economies of scale, and initial start-up costs, the chief barriers rival firms face. When stratified by economic sector, the findings indicate that the manufacturing, real estate, wholesale, and retail trade sectors are characterised by significant barriers to entry.

Keywords: barriers to entry, descriptive analysis, rival firm, mergers and acquisitions

1. Introduction

There are several ways in which competition can be fostered in a specific market, including through the establishment of new firms and the expansion of existing firms. New firms foster innovation through new and efficient production processes, create employment, and additional sources of supply and revenue for the state (Vickers, 2007). This benefits both consumers and producers in that consumers will have a wider variety of choices and, consequently, bargaining power, while producers of intermediate goods will benefit through increased demand for their goods and services. It is worth noting, however, that numerous factors can deter entry and expansion in a

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particular market, preventing gains in efficiency and market dynamics. These factors are known as barriers to market entry, which this study aims to explore in detail. There are three categories of barriers to entry, namely, regulatory, structural, and strategic barriers.

In a country like South Africa, where the ease of doing business has been deteriorating over the past few years, as witnessed in the Ease of Doing Business Report (2019), eliminating barriers to entry becomes crucial to fostering innovation and reducing market concentration. South Africa's ease of doing business rank declined from 69th in 2014 to 84th in 2019. Although several factors can be attributed to this, such as the political and economic landscape, evidence has emerged in other countries (see Couto and Barbosa, 2020) that barriers to market entry also deter competition. Meanwhile, several studies (i.e., Audretsch, 2007; Smith, 2010) have indicated that introducing new market players is associated with higher economic growth. Small and Medium Enterprises (SMEs) in countries such as India contribute nearly 30 percent to the Gross Domestic Product (GDP) and are responsible for the employment of 110 million laborers (Dwivedi, 2022). Similarly, in China, SMEs make up nearly 60 percent of the country's GDP and 79 percent of total employment (OECD, 2022).

This is evidence that introducing and expanding small firms is essential to alleviating socio-economic issues of unemployment, inequality, and poverty, which are far more prevalent in South Africa and Africa. However, what is not empirically evident is how barriers to entry affect the introduction and expansion of new firms in South Africa. Against this backdrop, this study attempts to (i) examine the variety and relevance of barriers to entry, (ii) identify the underlying dimensions of entry barriers and (iii) link barriers to entry to market concentration across different sectors. The study will use time series data from the Competition Commission of South Africa ("the Commission") merger database.

The rest of the study will be arranged as follows: Section 1 will provide an introduction to the study and outline the objective and contribution of the study to the existing body of literature. Section 2 will provide an in-depth overview of international literature on barriers to entry. Section 3 will unpack the empirical approach to be executed, while section 4 will summarize the findings and discussion. Lastly, Section 5 will provide a conclusion to the study and a summary of recommendations in line with the study's findings.

2. Literature review

Barriers to entry remain debated in the economics fraternity (Roberts, 2017). This is because there is no uniformly developed framework for analyzing barriers to entry and what constitutes barriers to entry. Although this remains the case, the level of market harm caused by barriers to entry is irreparable. Higher levels of barriers to entry imply that dominant firms can enhance their market position, charge higher markup rates, and earn abnormal profits to the detriment of downstream consumers and rival firms. Some of the most common barriers to entry include economies of scale, access to distribution channels, product differentiation, government regulation, initial start-up costs, and capital requirements.

Economies of scale occur when production costs decrease with each additional unit of output produced. Incumbents can use this to their advantage by increasing the level of output produced. By so doing, the incumbent firm will be able to incur less costs per unit of output, thereby charging lower prices to enhance its stance in the market. Government regulation in the form of licensing requirements and standards can likewise deter or limit entry into a particular distinct product market. Examples of such markets include the market for the provision of fossil fuels and medical products. Certain markets are characterized by limited access to distribution channels. In such markets, rival firms face limited access to wholesale and retail channels or exclusive long-term contracts between incumbents and distributors. Other authors, including Mncube (2013), have gone as far as to show that in certain distinct markets, firms can deter entry through below-cost pricing, also known as predatory pricing.

Couto and Barbosa (2020) examined the impact of barriers to entry in a sample of 168 small and large Portuguese firms. The data were analyzed using factor analysis, revealing that capital costs and requirements, cost disadvantages, and sunk costs are significant barriers to market entry. Furthermore, the study revealed that SMEs face significant barriers to entry relative to micro-enterprises. A similar study by Rahman, Uddin, and Lodorfos (2017) explored barriers to entry into foreign markets. The target group consisted of 212 Bangladesh SMEs. The data was examined using an econometric procedure, including the Partial Least Square-based Structural Model (PLS-SEM). The empirical findings revealed that economic and social factors such as political instability, foreign language, corruption, and legal procedures are potential barriers to SME internalization. Heger and Kraft (2008) scrutinized the effects of perceived threats to entry and profitability. Using information from managers, the findings revealed that entry barriers significantly impact perceived profitability.

Further, the findings revealed that the relative number of competitors in the relevant market has a material impact on perceived profitability.

A more recent study by Xhavit, Vjosa, Marija, and Enis (2019) analyzed the effects of entry barriers on the profitability of rival firms and incumbent firms following the exit of rival firms. The study uses a sample of 107 executive managers of firms operating in the Republic of Kosovo. The study found that several barriers to entry, including economies of scale, product differentiation, capital requirements, switching costs, access to distribution channels and cost advantages, have a positive and statistically significant impact on incumbent firms' profitability, especially following rival firms' exit. The study further revealed that rival firms perceive capital requirements as the most significant barrier to entry, while access to distribution channels is perceived as the least significant barrier to entry.

Locally, Roberts (2017) examined the nature and extent of barriers to entry in South African markets. The study adopted a desktop approach to draw on the literature on barriers to entry and their implications for competition policy. The study finds that access to distribution channels, including supermarkets, plays a crucial role in enhancing the capacity of suppliers to access customers. Also, because customers are usually reluctant to switch to unfamiliar brands, this implies that new entrants and smaller firms incur significant costs to penetrate the market and build brand awareness.

3. Methods

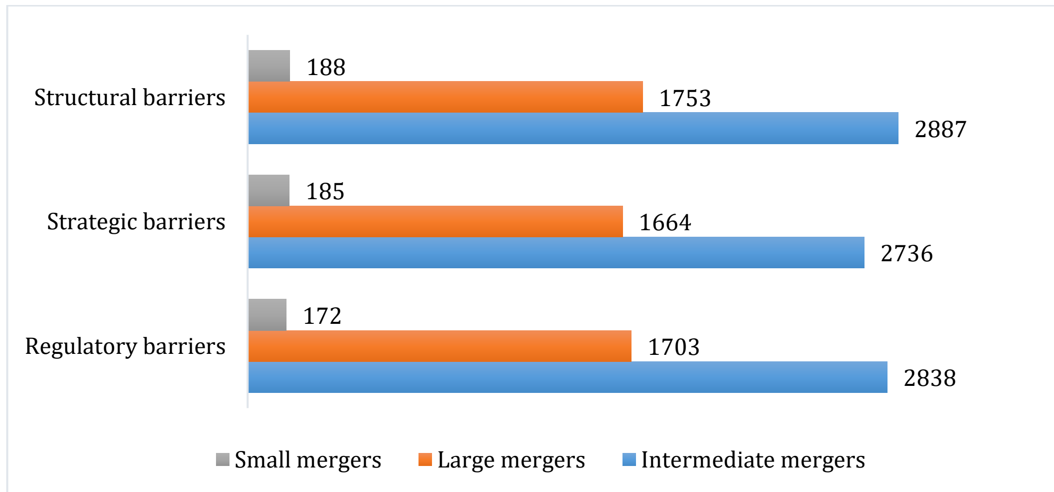
In the 21st Century, decision-making is informed mainly by the amount of information and data. Therefore, the collection, presentation, and interpretation of numeric data in the form of statistics is of primary importance. Marshall and Jonker (2010; 4) note that "statistics allow the research outcome to be used for evidence-based practice, thereby narrowing the theory-practice gap." This study used numeric monthly time series data from January 2011 to March 2021. The data was collected from the Commission's merger database. The data capture various mergers assessed by the Commission, including the size and complexity of the merger, economic sector, overlaps, product market, barriers to entry, and public interest. Notably, the study made use of descriptive analysis to assess the data.

Descriptive analysis is used to illustrate the individual characteristics of the raw data. This can range from the mean, median, data distribution, standard deviation, frequency, percentage, percentile, minimum and maximum values. The commonly used measures are the mean and the standard deviation. The mean measures the midpoint of a spread of scores, while the standard deviation measures the spread of the data (Sharma, 2019). A lower standard deviation implies that the data points are closer to the mean, while a higher standard deviation value implies that the data points are spread out. It is worth noting, however, that the measure choice depends on the study's objective. For this study, we used the percentile and percentage figures across various segments of the data using Pivot tables pioneered by Microsoft Excel. The findings are provided in the next section.

4. Empirical analysis

This section summarizes the descriptive statistics on barriers to entry stratified by economic sector, merger size, and complexity. Figure 1 illustrates barriers to entry by merger size. The bulk of the barriers to entry, including structural, strategic, and regulatory barriers, were recorded in intermediate mergers, followed by large and small mergers. Intermediate mergers and acquisitions refer to transactions wherein the value of the proposed merger equals or exceeds R600 million (Competition Commission, 2022). Large mergers, on the other hand, are those mergers wherein the combined annual turnover or assets of both the acquiring and transferred firms are valued at or above R6.6 billion.

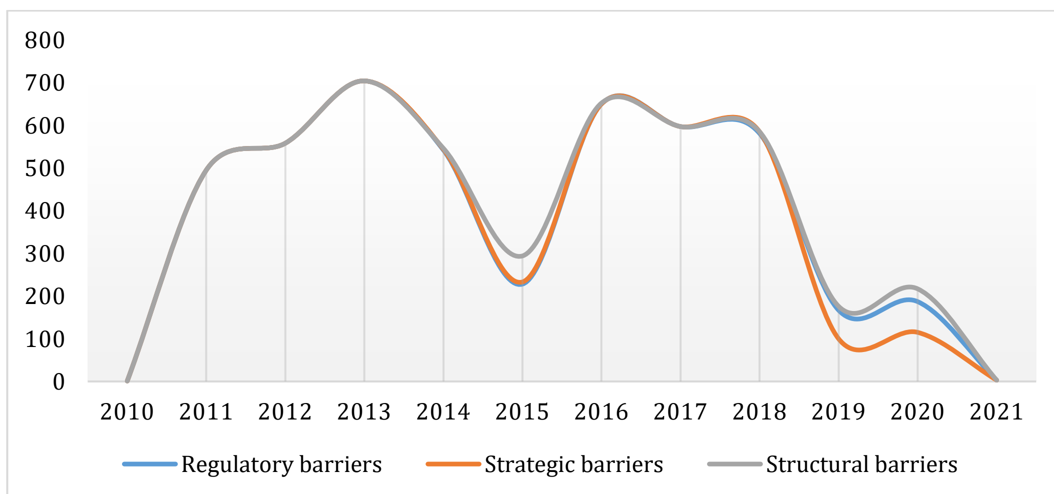
Figure 1: Barriers to entry by merger size



Source: author's computations

The trend in barriers to entry (see Figure 2) indicates that barriers to entry have been on the rise in South Africa since 2010 or even prior (study limited to 2010). During 2013 however, the number of barriers to entry recorded fell sharply even though the proceeds were short-lived since the trend continued to rise a year later. On the upside, from 2018, it appears that barriers to entry have been declining altogether. However, it is sufficient to note that the number of barriers to entry recorded depends on the volume of mergers and acquisitions filled. Also, it is reasonable to assume that post-2018, most cases filled at the Commission were mostly Section 8(a)[1] cases given several restrictions on the sale of luxury and essential goods.

Figure 2: Barriers to entry between 2010 and 2021



Source: author's computations

In other words, suppliers of essential and scarce goods had an opportunity to charge excessive prices, albeit prohibited by the law (see Keleme & Moeketsi, 2020). Further observations from Figure 2 indicate that structural barriers were relatively higher than strategic and regulatory barriers during the period under study. Figure 3 below demonstrates barriers to entry by the complexity of the merger, measured by phase. Generally, phase 1 mergers are less complex than phase 2 mergers, while phase 3 mergers are regarded as the most complex. Notably, less complex mergers are characterized by quick turnaround times. It is undoubtedly clear that most barriers to entry were recorded in phase 1 mergers, while phase 2 and phase 3 mergers were competing between structural and strategic barriers, respectively.

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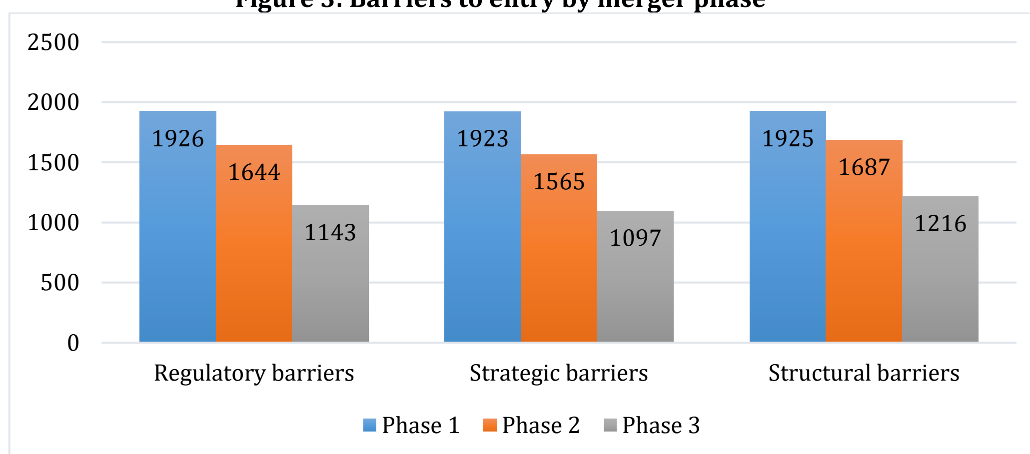
[1] Section 8(a) of the Competition Act 89 of 1998 prohibits dominant firms from charging excessive prices to the detriment of consumers.

Figure 3: Barriers to entry by merger phase



Source: author's computations

Barriers to entry were likewise analyzed by type. The findings are provided in Table 1 below. At the lower level, strategic barriers are primarily dominated by technical know-how, substantial investment in marketing, long-term contracts, and loyalty schemes. A combination of licensing, registration restrictions, exclusive rights, and Standards and SPS requirements essentially drives regulatory barriers, on the other hand. In the matter between Telkom SA Limited and Business Connexion Group Ltd[2], the Competition Tribunal of South Africa (the Tribunal) found that regulatory barriers in the form of spectrum scarcity and license requirements prevail in the market for Value Added Network Services (VANS).

When observing structural barriers, chief among the barriers rival firms face is capital investment costs, economies of scale, and initial start-up costs. In several matters (e.g., Pick 'n Pay & Boxer[3]; Masscash Holdings Pty Ltd & Finro Enterprise Pty Ltd[4]) decided by the Tribunal, it was revealed that structural barriers in the form of substantial capital requirements, technical know-how for operational efficiency and economies of scale largely characterize the grocery retail market.

Table 1: List of barriers to entry by type

Strategic barriers	**% Total**
Highly established incumbents	3%
Intellectual property rights and private standards	1%
Long-term contracts and loyalty schemes	**15%**
network effects	2%
Other strategic barriers	8%
Excess capacity	8%
Technical Know-how and investment in branding	**55%**
Pricing	7%
Regulatory barriers	
Government regulations that restrict number of licenses granted	1%
High compliance costs to industry regulation standards	2%
Other regulatory barriers	1%
Licensing/ Registration restrictions / Exclusive rights/permits	**87%**
Standards and SPS requirements	**8%**
State aid	0%
Tariff and trade barriers	1%
Structural barriers	
Capital investment costs	**65%**
Costs associated with investment in specific assets	2%
Economies of scale	**12%**
Initial set-up costs	**17%**
Marketing and promotional costs, Capital investment costs	1%
Network effects/ Reliance on scarce resources	3%
Other structural barriers	1%

Source: author's computations

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[2] Telkom SA Limited & Business Connexion Group Ltd [2007] ZACT (51/LM/Jun06)

[3] Pick 'n Pay Retailers (Pty) Ltd & Boxer Holdings (Pty) Ltd [2002] ZACT (52/LM/Jul02)

[4] Masscash Holdings (Pty) Ltd and Finro Enterprises (Pty) Ltd t/a Finro Cash and Carry [2009] ZACT (04/LM/Jan09)

Finally, barriers to entry were stratified by economic sector and the results are tabled below. The results indicate that rival firms involved in the manufacturing, real estate, wholesale and retail trade are most likely to face significant barriers to entry relative to other economic sectors. The findings align with the Grocery Retail Market Inquiry (GRMI) which concluded that the grocery retail market is characterized by significant barriers to entry, especially in the higher value segments. Also, in a matter between Massmart Holding Limited and Moresport Limited[5], the Commission regarded barriers to entry in the retail market for outdoor equipment as high. Concerning manufacturing activities, it can be reasonably assumed that setting up a plant requires substantial capital investment and initial set-up costs. On the one hand, wholesale and retail trading is characterized by high distributional and marketing costs, which can impede a rival firm.

Table 2: List of barriers to entry by economic sector

Economic sectors	Regulatory barriers	Strategic barriers	Structural barriers
Agriculture, Forestry, and Fishing	6%	6%	6%
Construction	2%	2%	2%
Electricity & Gas	1%	1%	1%
Finance & Insurance	6%	6%	5%
General Services	2%	2%	2%
Health Care	3%	3%	3%
Hospitality & Tourism	2%	2%	2%
Manufacturing	**23%**	**22%**	**24%**
Mining & Quarrying	8%	7%	8%
Other Services	2%	2%	2%
Personal Services	2%	2%	2%
Real Estate	**18%**	**19%**	**18%**
Trade (imports)	0%	0%	0%
Transport & Communication	9%	10%	9%
Wholesale & Retail	**17%**	**18%**	**17%**

Finance and insurance comprises of financial intermediary services, banking and insurance.
General services include waste management, water and sanitation services.
Hospitality and tourism comprises of accommodation, food, beverages and tourist activities.
Personal services consists of cleaning, professional, research and education services.
Other services imply services that are uncategorised.

Source: author's computations

5. Market concentration

South African markets are not only characterized by significant barriers to entry but are also concentrated in nature. The Herfindahl-Hirschman Index (HHI) is a commonly used measure of market concentration, especially in the analysis of horizontal mergers. The HHI is calculated as the sum of the squared market shares of firms in a given market (Hays and Ward, 2011). An HHI value below 1500 implies that the market is unconcentrated, while an HHI value above 2500 indicates that the market is highly concentrated. Anything between 1500 and 2500 signals moderate concentration.

Bhandari (2010) argues that a perfectly competitive firm has no direct control over the price of its products and, therefore, cannot earn profits higher than those at the competitive level. On the contrary, an oligopolist or monopolist firm has direct influence over the price of its products and, as such, would be able to earn super-normal profits. Profitability, in this vein, is directly related to market power and, consequently, concentration. Bain (1951) revealed that profit rates are significantly higher in deeply concentrated industries characterized by substantial barriers to entry.

Evidence from the OECD (2018) suggests that markups and profit rates from the United States (US) have substantially increased, and so has concentration. In South Africa, a study by Buthelezi, Mtani, and Mncube (2019) found that nearly 71 percent of South African sectors have distinct markets with dominant firms. This, in their view, illustrates the extent to which South African markets are concentrated. The study revealed that dominant firms in distinct markets have an average market share of about 53 percent.

6. Conclusion and recommendations

The prime goal of this study was to examine barriers to entry in South African markets. The study employed secondary data from the Commission's merger database. Descriptive analysis was

[5] Massmart Holdings Limited and Moresport Limited [2006] ZACT (62/LM/Jul05)

utilized to organize, present and interpret the data. The study argued that the ease and likelihood of doing business in South Africa have deteriorated over the past few years owing to several factors, including significant barriers to entry and expansion and perceptions about the political and economic outlook. In sum, the study found that South African markets are characterized by substantial barriers to entry comprising structural, strategic, and regulatory barriers. Across sectors, barriers to entry are more prevalent in the manufacturing, real estate, wholesale, and retail trade sectors.

Also, using the desktop approach, the study provided evidence that concentration is linked to market power and profitability. This is an area that future research studies can further explore. In light of the above findings, the study recommends removing unnecessary government red tape and lead time, especially in the most critical economic sectors. Efficient economic regulation is necessary to issue licenses, guarantee network access, set competitive prices, and establish technical and service standards that protect consumers' access to reliable and competitive prices.

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Conflicts of interest

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