MEASURING CONCENTRATION AND PARTICIPATION IN THE SOUTH AFRICAN ECONOMY: LEVELS AND TRENDS

SUMMARY REPORT OF FINDINGS AND RECOMMENDATIONS

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a growing, deconcentrated and inclusive economy

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01 FOREWORD

1. The Preamble to the Competition Act No.89 of 1998 ("the Act") begins by recognising that Apartheid had left the country with an economy characterised by excessive levels of concentration of ownership and control, as well as a lack of participation by all South Africans. The Apartheid regime actively promoted national champions in different sectors, developed industrial state-owned enterprise (SOE) monopolies and agricultural cooperatives that were later privatised and condoned industry cartels in its efforts to promote self-sufficiency and the economic interests of a minority. This era also saw the emergence of a few conglomerate holding companies that held investments in businesses across much of the economy, resulting in an excessive concentration of wealth on the Johannesburg Stock Exchange (JSE).

2. While these conglomerates were generally unbundled in the initial post-Apartheid period, selling off non-core businesses, the individual businesses that dominated particular industries often remained intact and could continue to command certain sectors given their market position. The introduction of the Competition Act and other economic policies may have made a material difference to the economic structure inherited by the democratic government, but challenges around the concentration of ownership and a lack of participation remain. Previous pioneering research conducted by the Competition Commission ("Commission") on concentration levels (Extent of Market Concentration in South Africa's Product Markets, 2019), which was based on 2,150 merger filings, found that the economy remained highly concentrated fifteen years since the Act was promulgated. This is despite the substantial growth in the economy over this period which could have promoted a greater spread of ownership.

3. Whilst high or growing concentration does not always equate to a lack or deterioration in competition, academic studies have sought to differentiate between efficient and inefficient periods of growing concentration.[1] Efficient periods are generally associated with "tougher price competition, intangible investment and increasing productivity of leaders" which results in growing shares for efficient leading firms but which occur off low levels of concentration.[2] Inefficient concentration growth occurs where there are entrenched leaders resulting in lower levels of competition and higher entry barriers, and where concentration is associated with "lower investment, higher prices and lower productivity growth". These studies of the US economy find that more recent increases in concentration have been inefficient.

4. US studies have also associated increased concentration with a lower labour share of GDP, contributing to wealth inequality as the rewards to capital outstrip those to

1 Philippon, T. (2019). The Great Reversal: How America Gave Up on Free Markets. *Harvard University Press*. ISBN: 9780674237544.

2 Covarrubias, M., Guitérrez, G. & Philippon, T. (2019) "From Good to Bad Concentrations?" U.S. Industries over the Past 30 Years. *NBER Working Paper Series, Working Paper 25983*, September 2019. Available at: https://www.nber.org/system/files/working_papers/w25983/w25983.pdf

labour.[3] More recently the Organisation for Economic Co-operation and Development ("OECD") has sought to highlight concerns around increasing levels of concentration globally and not just in the US.[4] The OECD also emphasised the importance of competition law and government regulation in preventing growing concentration of the inefficient type, and highlighted the difference in enforcement between Europe relative to the US as a factor that may explain the lack of growing concentration in Europe.

5. In the South African context, concentration is of particular concern because it is generally not associated with efficient forms of growing concentration, but rather inefficient forms. This is because the economy inherited a concentrated market structure from the Apartheid era, with entrenched leaders that remain dominant today. Inefficient concentration is associated with higher margins and is seen to impose a structural constraint on growth. Persistent concentration by historically dominant firms is also associated with a lack of transformation of the economy, denying opportunities to those that were historically excluded to participate and grow their share of economic value. The skewed economic structure in South Africa is evident from the fact that amongst tax-paying firms, SMEs contribute only 24% of total firm turnover relative to the 50-60% cited by a recent OECD study. Given that SMEs generally are more employment intensive in comparison to large firms, with tax-paying or formal sector firms contributing 38% of employment in South Africa, the skewed economic structure will also constrain employment generation and contribute to household inequality.

6. Consequent to the previous research on concentration, the Competition Amendment Bill (13 February 2019) was promulgated with the specific aim of adequately equipping the Commission to address "*two persistent structural constraints on the South African economy, namely, the high levels of economic concentration in the economy and the skewed ownership profile of the economy*". Importantly, the Bill provided for a strengthening of abuse of dominance and market inquiries that may result in structural remedies as tools to reduce concentration in the economy. This is in the context where tools, such as merger control, can only prevent concentration from getting worse and not reduce it.

7. Following the amendments, this study seeks to deepen our understanding of the patterns of concentration and participation in the South African economy. It does so through a detailed assessment of both the levels and trends of concentration and participation over the past 5-10 years across 178 industries.[5] Moreover, the methodology used in the study provides the basis for future updates using the same consistent measures, enabling the Commission to continue to track changes to concentration and participation going forward. This study should be considered as complementary to concentration studies based on merger filings, which usually have the added benefit of access to source data that is from the market participants themselves and also considers defined competition markets.

8. The study has sought to measure levels and trends in concentration and participation through collating sectoral data that is consistently collected over time by an organisation, be it a government department, regulator, statistical agency or industry association. These data sources are supplemented by annual reports, which are also consistently produced and

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3 See Autor, D., Dorn, D., Katz, L., Patterson, C., & van Reenen, J. (2017). Concentrating on the Fall of the Labor Share. *American Economic Review*, 107, pg180-185.

4 OECD. (2018). Market Concentration. *Directorate for Financial and Enterprise Affairs, Competition Committee, unclassified, DAF/COMP/WD(2018)46*. Available at: https://one.oecd.org/document/DAF/COMP/WD(2018)46/en/pdf?_ga=2.177995814.24613705.1620807764-134697386.1536922982

5 Note that not all sectors have information on both concentration and participation, or trends over time. For this reason, the sample used in certain analyses is lower than the full sample of 178 sectors.

merger investigations where gaps exist. The Commission has contacted more than 80 industry bodies, regulatory bodies, and government departments belonging to various sectors and subsectors. The success of this initiative is based on their willingness and support in supplying the required data.

9. The study has sought to provide measures at a detailed sub-sector level and across the various layers of the value chain for all major sectors of the economy. The sub-sectoral analysis will in most instances reflect the competition markets that are the subject of merger control or conduct investigations. Investigations may examine narrower product or geographic markets or broader sources of competition, such as imports, depending on the context. This reflects the fact that concentration does not necessarily equate to a lack of competition in every case, as was also identified in the Commission's earlier analyses of merger investigations. Concentration may also occur for sound reasons, such as the growth of innovative firms or the exploitation of scale economies to drive efficiencies.

10. There are gaps in the study's sectoral coverage where data is not readily available, and the Commission will aim to fill these gaps in subsequent updates to this report. It is also likely that some of the data sources may be incomplete. For instance, industry associations may not include membership from the entire industry. However, these datasets will generally include all the largest players and may exclude some of the smaller firms. This is unlikely to create a material bias in the findings of levels of concentration or the relative extent of concentration across time or sectors.

11. The study primarily uses concentration ratios and represents data at an aggregated level in order to protect confidential information and adhere to the Commission's information exchange guidelines. Some firm-specific information, that is already in the public domain is provided.

12. The study's detailed sectoral analysis is bolstered by national datasets to provide broader insights around the level of concentration at a broader sectoral level, the distribution of firm income across firm sizes, the level and trend in the participation of SMEs, the evolving entry/exit of firms across firm size categories and the transitioning between firm size categories. Specifically, the study has made use of the Administrative Tax Data based on the South African Revenue Services ("SARS") database which provides turnover by broad sector for tax-paying registered firms. This dataset has also enabled the Commission to develop a measure of the inequity in firm wealth distribution by applying the Gini coefficient to firm income within broad sectors.

13. The imperative for addressing high levels of concentration and low levels of participation in the economy extends beyond the Commission to all areas of government and civil society. Regulatory frameworks, licensing processes and procurement across government directly impacts on the spread of ownership and opportunities for effective participation in the economy, both of which ultimately impact on concentration. Similarly, civil society conduct has an opportunity to support the spread of ownership and enhance participation through how business funding is directed, where products or services are sourced from, and how small and historically disadvantaged customers are treated.

14. This study, and future iterations of this study, seek to provide the basis for more strategic enforcement and policy around concentration in the economy. In particular, the study aims to aid the Commission and other spheres of government in making informed decisions to address concentration and broader participation in the economy in numerous ways, including:

    14.1. First, establishing absolute and relative levels of concentration at sectoral and sub-sectoral levels across the economy aids decision-making around prioritisation

and focus of institutional and government action.

14.2. Second, by focusing on trends as well as levels, it provides a means to detect adverse trends of increasing concentration or decreasing participation in sectors before such concentration becomes irreversibly entrenched. This is particularly important in the context of the Covid-19 pandemic, where concentration and participation will invariably have been impacted.

14.3. Third, an examination of trends and levels of both participation and concentration can provide important insights into where the barriers to increased participation may lie and where efforts to transform concentrated sectors may best yield results. The focus on value chains will also provide the basis for a more comprehensive course of action.

14.4. Fourth, it provides a quantitative basis for policy makers and institutions such as the Commission to determine whether efforts to reduce concentration and improve participation, at a sectoral or economy-wide level, are bearing fruit.

15. The Main Report begins with the broader analysis of concentration and participation from the SARS dataset. The study then proceeds to take a deep dive into the different sectors of the economy with a chapter dedicated to each sector or sub-sector (in the case of agriculture) of the economy. These chapters typically cover various levels of the value chain as well as different sub-segments of the particular sector in order to meaningfully understand these industries. For example, the grain sector covers five levels of the value chain and nine types of grain. Within these segments the chapter provides an assessment of levels and trends in concentration ratios and overall participation where available. Chapters also include discussions about the notified mergers that have occurred in that particular sector over the last decade (2011-2020) to assess whether mergers contributed to changes in concentration over the specified period. The Main Report is essential reading for those stakeholders wanting a more comprehensive view of individual sectors.

16. The Summary Report seeks to provide some of the more interesting findings from individual sectors covered by the Main Report, but also some of the aggregate and cross-sectoral findings that emerge from the study which provide economy-wide context to patterns of concentration and participation. This includes a categorisation of sectors by concentration levels, correlating levels of concentration with changes in concentration and participation in the industry. The Summary Report is essential reading for all stakeholders interested in patterns of concentration and participation in the South African economy.

02 SUMMARY OF OVERALL FINDINGS

17. The focus of this section is on the detailed analysis of the national databases and sectoral deep dives that provide some interesting overall insights into the levels and trends of concentration and participation in the economy. A summary of the more important findings per sector are outlined later in the report.

2.1 PERSISTENCE OF HIGH LEVELS OF CONCENTRATION

18. There are two commonly accepted tools used to measure the level of concentration in any given market. The first is the Herfindahl-Hirschman Index ("HHI") which computes the level of concentration in any given market by summing the squared market share values of all competing firms in the market.[6] The second tool, that is widely used to measure concentration are concentration, ratios that more directly measure the degree of concentration in market shares of the "Nth" largest firms in the industry or market.[7] Concentration ratios are generally more widely reported in the literature given the difficulty in obtaining data for all firms operating in the market to sufficiently determine the HHI. This study makes use of concentration ratios. Previous research on merger findings made use of HHI measures and reached similar conclusions on the extent of concentration.[8]

19. Jurisdictions such as the US and the EU make use of the HHI measure to classify sectors as either unconcentrated, moderately concentrated or highly concentrated. Most agencies follow the US classification. Academic studies have sought to correlate these HHI measures with concentration ratios in order to classify sectors based on concentration ratios alone.[9] This study has made use of that classification as set out in the table below.

20. The study has classified all 144 sectors using the US classification of concentration level. For highly concentrated sectors, the study further delineated those sectors where there was a presumptively dominant firm (i.e. one firm with a share of more than 35%[10]) and those where there is not one dominant firm but rather an oligopolistic structure.

21. As set out in the figures below, of the 144 sectors of the economy examined by the study, 69.5% were found to be highly concentrated, with 40.3% of sectors being highly concentrated with a presumptively dominant firm. Only 9.7% of sectors were found to have unconcentrated markets.

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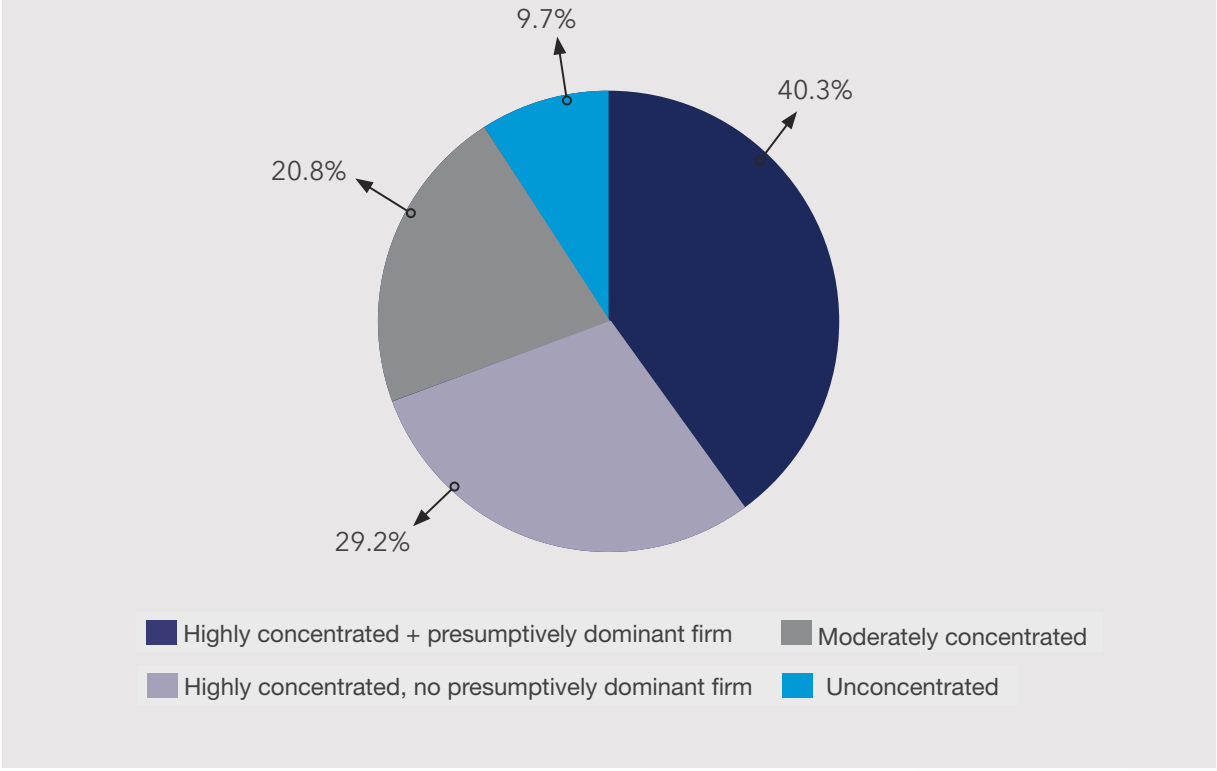
6 HHI ranges between 0 to 10 000
7 For example, a CR4 would refer to the concentration ratio/combined market share of the top four firms in the market or industry
8 Buthelezi, T, Mtani, T & Mncube, L (2019) The extent of market concentration in South Africa's product markets, Journal of Antitrust Enforcement, 2019,0, pg 1-13
9 Pavic, I., Galetic, F. & Piplica, D. (2016). Similarities and differences between the CR and HHI as an indicator of market concentration and market power. *British Journal of Economics, Management & Trade*, 13(1), pg 1-8.
10 Section 7 of the Competition Act

Table 1: Classification of Concentration Based on HHI and Concentration Ratios

	Unconcentrated	Moderately Concentrated	Highly Concentrated
HHI Classification			
US DOJ HHI classification[11]	HHI<1500	1500≤HHI<2500	HHI≥2500
UK/EC HHI Classification[12]	HHI<1000	1000≤HHI<2000	HHI≥2000
Concentration Ratio *N Classification*			
CR2	<26%	26%-35%	>35%
CR3	<37%	37.5%-50%	>50%
CR4	<45%	45%-60%	>60%
CR5	<52.5%	52.5%-70%	>70%

Source: Definitions in line with Pavic et al (2016), adjusted to other CRN's where CR4 not available

Figure 1: Concentration across industries



Source: Own calculations.

22. An examination of the sectors which are highly concentrated **with** a presumptively dominant firm reveals that some broader sectors are more strongly represented than others including:

11 Department of Justice and Federal Trade Commission (2010). Horizontal Merger Guidelines. Available at: https://www.justice.gov/atr/horizontal-merger-guidelines-08192010#2d

12 European Commission (2004). Guidelines on the assessment of horizontal mergers – Commission notice (2004/C31/03)

22.1. Farming inputs (various seeds and seed treatment, fertiliser)

22.2. Agro-processing (grain processing for human consumption, fisheries, ostrich meat and leather)

22.3. The so-called sin industries (alcohol, gambling and cigarettes)

22.4. Healthcare (medical schemes and administration, pathology)

22.5. Communications (mobile, fibre to the home, publishing and broadcasting)

22.6. Upstream steel value chain (iron and ferrochrome mining, steel production) and chemicals (incl. plastics and ethanol).

23. The list of highly concentrated sectors **without** a presumptively dominant firm still see many of the same broad sectors represented but with the notable additions of financial services and transport:

23.1. Farming inputs (grain storage, fungicides and insecticides, animal feed)

23.2. Agro-processing (grains processing for animal consumption, bread, poultry, sugar processing)

23.3. Healthcare (hospitals and pharmacies)

23.4. Transport (airlines and commercial vehicles)

23.5. Financial services (all areas of insurance, banks)

23.6. Petrochemicals (refineries)

24. The list of sectors includes numerous instances where there is a persistence of dominance since the Apartheid era, including steel (Arcelor Mittal, previously Iscor), chemicals (Sasol), Beer (AB InBev, previously SAB), publishing and broadcasting (Naspers) and fisheries (Sea Harvest and I&J). Similarly, certain oligopolistic industries remained highly concentrated, such as banking (the top 4 banks), insurance (the top 4 life insurers) and certain agricultural sectors (storage, bread and sugar). There are some newly concentrated industries that did not exist previously such as mobile communications, a range of healthcare markets and gambling.

25. These findings confirm the findings from the previous work of the Commission and the need for the recent amendments to the Act in order to address persistent concentration in the economy. The analysis also provides clear guidance as to where the Commission and government may prioritise efforts to reduce concentration.

2.2 HIGHLY CONCENTRATED MARKETS ARE MORE LIKELY TO SEE INCREASES IN CONCENTRATION

26. The benefit of using data sources that are consistently collected over time by an organisation is that it is possible to track concentration levels over time for each sector. In examining trends in concentration, the study determined whether concentration levels were decreasing, relatively stable or increasing. Concentration levels were considered stable if the concentration ratio moved by no more than two percentage points, up or down. The assessment period differs by sector and is based on the first and last observations in the data within the past 10 years.

27. The summary table below shows that of the 115 industries with information on the changes in concentration, 42.6% experienced increasing concentration, 25.2% of industries experienced a relatively stable level of concentration and 32.2% of industries experienced reductions in concentration. This means that concentration was not worsening in the majority (57.4%) of sectors but more sectors were experiencing an increase than a decrease in concentration levels.

28. A closer examination of the trends shows that highly concentrated industries are more likely to see increasing rather than decreasing levels of concentration, and whether the sector had a presumptively dominant firm made a substantial difference to the trend.

28.1. In particular, the study found that in highly concentrated sectors with a presumptively dominant firm, there is overall a greater likelihood of increasing concentration over time (60% of sectors) than not. The probability of these sectors seeing increasing concentration is also three times more than the likelihood of facing decreasing concentration (19% of sectors), with 21% relatively unchanged over time.

28.2. Highly concentrated sectors without a presumptively dominant firm were equally likely to experience an increasing or decreasing change in concentration levels (36% each) with 28% relatively unchanged over time. However, what remains of concern is that in 64% of cases these oligopolistic markets are not becoming less concentrated.

28.3. In contrast, only 32% of moderately concentrated sectors and 25% of unconcentrated sectors saw increases in concentration levels, and these sectors are more likely to experience decreasing levels of concentration (46% for moderately concentrated and 42% for unconcentrated).

Table 2: Changes in concentration over time

	Industries with increasing concentration	Industries with declining concentration	Relatively consistent (≤2 percentage points)	Total
Highly concentrated with a presumptively dominant market participant	59.5%	19.0%	21.4%	42
Highly concentrated without a presumptively dominant market participant	35.9%	35.9%	28.2%	39
Moderately concentrated	31.8%	45.5%	22.7%	22
Less concentrated	25.0%	41.7%	33.3%	12
Total	42.6%	32.2%	25.2%	115

Source: Various

Notes: Own calculations

29. The sectors identified above that are over-represented in the highly concentrated category and that are also experiencing increases in concentration include:

29.1. Farming inputs (seed, storage, fungicides and insecticides, fertiliser)

29.2. Agro-processing (grain processing for human and animal consumption, fisheries, ostrich meat and leather)

29.3. The so-called sin industries (alcohol, gambling)

29.4. Healthcare (medical schemes and administration, pharmacy)

29.5. Communications (fibre to the home)

29.6. Upstream steel value chain (iron and ferrochrome mining)

29.7. Financial services (specialist insurance)

30. This finding is consistent with the notion that dominant firms are more capable of raising entry barriers and excluding rivals, which may reinforce their dominance over time. The finding confirms that enforcement needs to focus primarily on markets with dominant firms. However, even for markets characterised by an oligopoly structure, enforcement is still required to bring about reductions in concentration and promote participation in those sectors - unless the economies of scale are such that an oligopoly structure is inevitable. The finding also suggests that proactive measures are needed to ensure that markets do not become concentrated in the first place. This might require greater vigilance in merger control.

2.3 MERGER ACTIVITY HAS GENERALLY NOT CONTRIBUTED TO HIGHLY CONCENTRATED MARKETS BUT IS AFFECTING GOVERNMENT LICENSED INDUSTRIES

31. Increases in concentration may take place for both procompetitive and anticompetitive reasons. Procompetitive instances may occur where more innovative or efficient firms grow their share over time but where competition in the market increases. Anticompetitive instances occur where the market is already concentrated and it increases due to an abuse of dominance that excludes competitors, or where mergers are undertaken to increase market power.

32. The study has sought to understand if any increases in concentration among already highly concentrated industries can be attributed to merger activity. Specifically, the study considered whether the top 3 to 5 firms made material acquisitions over the period in which these firms increased their share which contributed to increases in industry concentration. Importantly, whilst merger control will assess whether there is a lessening of competition, merger activity by the larger firms may not necessarily raise competition concerns in all cases. For instance, where markets are localised or where import competition provides a constraint on domestic firms. Furthermore, conditions may be placed on mergers which do raise specific competition issues. What is measured by this study is not the effect on competition but rather whether it contributes to concentration.

33. Based on this criterion, of the 39 highly concentrated industries in which there has been worsening concentration, notifiable merger activity by the top 3 to 5 firms were only present in the case of 14 (35.9%) of them in the last 5 to 8 year period. The 14 industries where mergers by the top firms have taken place include:

33.1. Agricultural inputs including fungicides and insecticides (global mergers with some divestiture conditions), NPK fertiliser, and grain storage (with divestiture conditions).

33.2. Agricultural processing, including deep sea hake, ostrich meat (with regulation) and apple concentrate.

33.3. Gambling, including limited pay-out machines (LPMs) and bingo.

33.4. Upstream from stainless steel (chrome ore mining and ferrochrome).

33.5. Healthcare, including open medical schemes and pharmacy.

34. The small number of highly concentrated industries where mergers have contributed to an increasing share of the top firms suggests that merger activity has not been a major contributing factor to increasing concentration in these industries. Where it has contributed, in a number of them no competition concerns arise (mining tends to be global markets and gambling local

markets, in some cases it is the number 2 or 3 firm acquiring a growing share). Divestitures or other conditions applied, and those that did create concerns then divestitures or other conditions were applied (e.g. price regulation in ostrich meat). However, two broad areas maybe stand out for closer examination in future.

34.1. Agricultural inputs and processing are over-represented in this group and at the same time the evolution of the agricultural value chain is the subject of some concern by the study as discussed below. This may suggest more vigilance in future in these markets.

34.2. Another market is pharmacy where the study has found a rapid increase in the shares of the top three firms from 38% to 49% over a three-year period.

35. While merger activity has not necessarily contributed to growing concentration by highly concentrated industries, what the study has observed is that there is considerable merger activity in sectors where government licenses are issued for market participants. The study has flagged this because the licensing process may itself seek to achieve a greater spread of ownership which may then be altered by merger activity that consolidates ownership.

36. In this respect, it is important to note that typically the regulator granting the licenses also has jurisdiction to assess the merger in terms of their own legislation, and the Commission will have concurrent jurisdiction to consider the competition and public interest effects. However, competition issues may not arise if there are low levels of concentration or where the acquisitions are in adjacent markets. In other cases, the acquiring firms may themselves be transformed and not pose a barrier to consolidation in terms of the overseeing regulator.

37. The study seeks to raise awareness of this trend as there may be more scope to address the changes in concentration given the oversight by a regulator and a licensing process. Licensed industries where the study has identified considerable merger activity which has increased concentration, regardless of whether the industry is unconcentrated or concentrated, are:

37.1. Gambling: the gambling industry has effectively seen three companies (HCI/Tsogo Sun, Sun International and Goldrush) now control vast parts of the industry due in large part to licensing and past merger activity. Tsogo Sun and Sun International control over 80% of casino gambling and have through mergers and new licenses control of 77.5% of Limited Payout Machines ("LPMs"). Gold Rush's purchase of Crazy Slots in 2016 helped to strengthen its position in the LPM segment. Transactions among these firms have not raised competition concerns largely given their limited interaction with other forms of gambling.

37.2. Fishing Rights: the study identifies that the licensing process typically reduces concentration and expands the spread of ownership, but consolidation between rights owners typically reduce that spread of ownership. For instance, the recent hake in-shore trawl allocation reduced the top 3 concentration ratio ("CR3") from 66% to 48%. For rights that have not been re-allocated since 2005, there has been an increase in the CR3 from 66% to 74% for deep-sea hake, from 28-29% to 44-45% for anchovies and pilchards, and 10% to 16% for long-line hake.

37.3. Independent Power Producers (IPPs) are not technically licensed but granted 20-year contracts to supply Eskom based on a

competitive tender basis. The IPP process has resulted in many new market participants but there has been considerable merger activity, especially by institutional investors. The result is that the top 3 firm share for solar has increased from 41% to 51% between 2015 and 2019 and 45% to 50% for wind power in the same period. However, this may underestimate the impact as there is also a growth of partial shareholdings.

37.4. Retail Pharmacy: the study has identified that the two largest pharmacy chains, Clicks and Dischem, have rapidly grown their market share over the past five years through the acquisition of licensed independent pharmacies and the granting of new pharmacy licenses, often in shopping malls or convenience centres. Acquisitions of individual pharmacies typically escape scrutiny as the transaction size falls below the merger thresholds, and may pose challenges in determining a substantial lessening of competition on their own. Licensing regulations would appear to be a better means to shape the market structure in retail pharmacy and ensure it does not tip towards a duopoly.

2.4 THE NUMBER OF SMES IS GROWING BUT THEY FACE INCREASING EXIT RATES AND HAVE A COMPARATIVELY LOW SHARE OF VALUE ADD

38. The study made use of the Administrative Tax Data based on the South African Revenue Services ("SARS") database to provide insights into the distribution of firm participation by firm size for broad sectors of the economy. The analysis of SARS data showed that while 95% of firms in 2016 were SMEs, the majority of which were micro firms, together they only accounted for 24% of turnover. In contrast, large firms made up just 5% of all firms in 2016 yet comprised 76% of total turnover. This is in stark contrast to the OECD countries where SMEs make up 99% of businesses and generate between 50% and 60% of value-add in the OECD area.[13] The vast difference to the OECD comparative study shows just how concentrated and inequitable the South African economy is.

39. Overall, firm growth was 22.8% over the 5-year period, with the highest growth rate for large firms (53.8%). This likely indicates a mix of successful transitions of small and medium firms to large but also the lower exit rates of large firms (at 4% per annum). The lowest growth rate is for micro enterprises (17.9%) among which exit rates are the highest (not shown) as is expected.

Table 3: Overall composition of firms, 2011 and 2016

	2011		2016	
	Turnover	No. of firms	Turnover	No. of firms
Large	75%	5 527 (4%)	76%	8 501 (5%)
Medium	5%	3 131 (2%)	4%	4 238 (2%)
Small	12%	22 778 (16%)	12%	31 296 (18%)
Micro	9%	109 817 (78%)	8%	129 484 (75%)
Total number of firms		**141 253**		**173 519**

Source: CIT-IRP5 Panel data (own calculations)

13 OECD (2019). OECD SME and Entrepreneurship Outlook 2019, pg.3

40. The analysis showed that SMEs have greater entry and exit rates than larger firms with average entry and exit rates between 2012 and 2015 of 11% and 8% respectively, while large firms' entry and exit rates were on average 4% and 3% respectively. While entry rates were relatively stable over the four-year period (mostly 3-4% p.a. for large firms and mostly 9-11% p.a. for SMEs), exit rates have gradually increased over the period (from 1 to 4% for large firms and 4 to 11% for SMEs). The exit rate for SMEs exceeded the entry rate in 2015 which suggests a net decline in the number of SMEs. This may be partly attributable to the lack of economic growth in the economy over the past five years, which presents a more challenging environment than where the economy is expanding.

41. Furthermore, of the sample of firms that were in the data in 2012 (excluding entry in subsequent years), the number of large firms has grown by an average of 3%, while the number of SMEs declined by an average of 9% a year.[14] Overall, this suggests that retention of SMEs is much less likely than large firms that show more resilience in the formal sector.

Table 4: Overall entry and exit of firms by size, 2012-2015

	All firms		SMEs		Large firms	
Year	**Entry rate**	**Exit rate**	**Entry rate**	**Exit rate**	**Entry rate**	**Exit rate**
2012	10%	4%	11%	4%	4%	1%
2013	9%	8%	9%	8%	3%	3%
2014	15%	9%	15%	9%	5%	3%
2015	10%	11%	10%	11%	4%	4%
Average	**11%**	**8%**	**11%**	**8%**	**4%**	**3%**

Source: CIT-IRP5 Panel data (own calculations)

42. It is expected that SMEs may have higher rates of entry and exit than larger firms, but South Africa's levels are high by comparative standards. The lack of firm growth and entry is consistent with relatively limited market contestability, providing some evidence that barriers to entry may be more significant in South Africa than in cother countries.[15]

43. One of the reasons for higher exit rates of SMEs may be that they transition to being larger firms rather than simply exit from the market as a whole. For this reason, the study also put together a transition matrix for a single year using the SARS dataset (See Table 5). The rows on the left present the size category of firms in 2015 and the columns on the right their size category in 2016 as well as whether they exited or not. The table essentially shows that most firms remained within their same size category over the last year, especially large firms (86%). More medium, small and micro firms exited or contracted rather than growing. However, a large portion of medium firms (12%) grew into large firms between 2015 and 2016, even though 18% contracted or exited. Tsebe et al. (2018) examine transition rates among JSE-listed firms and find that many young firms are acquired relatively quickly and may innovate from within older firms.[16]

14 The survival of firms that were in the data from 2012 – which includes firms that entered the data in 2012 and before. Of the 145 329 SME firms that were in the data in 2012, 104 803 firms remained active in 2016. However, in the case of large firms, the number of firms increased from 6 265 in 2012 to 7 105 firms in 2016.

15 Bushe, B. (2019). "The causes and impact of business failure among small to micro and medium enterprises in South Africa". *Africa's Public Service Delivery and Performance Review*, 7(1), pg. 1-26

16 Tsebe, TM., Vukeya, V., Lewis, C., Calvino., and Criscuolo. C. (2018), "Firm Dynamics in South Africa". OECD Working Paper ECO/WKP(2018)76

44. These results are consistent with estimates that 40% of all *new*[17] businesses in the country fail in their first year of existence, while 60% fail in the second year and 90% in the first 10 years from inception (Bushe, 2019). This poor survival rate is corroborated by the 2012 global entrepreneurship monitor (GEM) report, which highlighted that the survival rate for local start-up businesses in South Africa is low by global standards (Bushe, 2019).[18]

Table 5: Transition matrix, 2015-2016

		2016 Firm Category				
		Micro	Small	Medium	Large	Exit
2015 Firm Category	Micro	83%	4%	0%	0%	13%
	Small	10%	80%	3%	2%	5%
	Medium	2%	12%	71%	12%	4%
	Large	3%	4%	3%	86%	4%

Source: CIT-IRP5 Panel data (own calculations)

45. The transition analysis shows that there will be those firms that can transition to larger firms and more meaningfully challenge incumbents over time. This potential is evidently largest amongst medium firms, which might suggest that a specific focus on medium firms within the SME category, and 'smaller' large firms, may yield better results in providing the impetus for firm growth and de-concentrating markets over time.

2.5 THERE IS A HIGH DEGREE OF INEQUITY IN THE DISTRIBUTION OF FIRM INCOME

46. The study used the SARS dataset to also examine the level of inequality in the distribution of value in the economy, as measured by the share of turnover across all firms registered for and paying tax. The first measure used was to compare the turnover of the top 10% of firms in each sector to the bottom 50% of firms. The table below shows that the share of turnover of the largest 10% of firms was on average 85.8% of firm turnover in South Africa, with the bottom 50% of firms, which are all SMEs, receiving a share of only 1.6% of total economic turnover. Together, these measures suggest high levels of inequity in firm turnover across the South African economy with little change over the 2011-2016 period except for Catering, Accommodation and other Trade where there was a material reduction in the share of the top 10% of firms. In comparison to household measures of inequality, the top 10% of households had 52.6% of expenditure (used as a proxy for income) and the bottom 40% of households accounted for 6.6% of expenditure.[19]

Table 6: Turnover shares of top 10% and bottom 50% of firms, 2011 and 2016

	Turnover share of top 10%		Turnover share of bottom 50%	
Industry Classification	2011	2016	2011	2016
Agriculture	78.7%	80.7%	1.9%	1.3%

17 The SARS analysis refers to exit of all firms within one year and not just new firms.
18 Bushe, B. (2019). "The causes and impact of business failure among small to micro and medium enterprises in South Africa". Africa's Public Service Delivery and Performance Review, 7(1), pg. 1-26
19 Statistics South Africa (2019) Inequality trends in South Africa, pg. 33

	Turnover share of top 10%		Turnover share of bottom 50%	
Industry Classification	2011	2016	2011	2016
Catering, Accommodation and other Trade	64.1%	55.7%	5.4%	5.7%
Community, Social and Personal Services	65.5%	62.2%	6.4%	7.1%
Construction	72.4%	72.1%	3.4%	3.0%
Electricity, Gas and Water	93.0%	93.3%	0.8%	0.6%
Finance	75.5%	77.2%	4.9%	4.4%
Manufacturing	92.1%	92.6%	0.6%	0.5%
Mining and Quarrying	97.9%	97.0%	0.1%	0.2%
Retail, Motor Trade and Repair Services	85.0%	84.1%	1.3%	1.2%
Transport, Storage and Communication	92.1%	90.1%	0.9%	1.1%
Wholesale	86.1%	88.1%	1.0%	0.8%
All Firms	86.4%	85.8%	1.6%	1.6%

Source: CIT-IRP5 Panel data (own calculations)

47. The study also calculated Gini coefficients for the distribution of turnover as a measure of inequality in firm turnover distribution. The Gini coefficient is typically used to assess household wealth inequality but can be applied to the industrial structure. The Gini is essentially a comparison of cumulative proportions of firms against cumulative proportions of income they receive, and it ranges between 0 in the case of perfect equality and 1 in the case of perfect inequality.[20] In an industry with perfect equality, the smallest 10% of firms would account for 10% of an industry's income. The Gini coefficient is typically used alongside other measures because it is sensitive to changes in the middle of the income spectrum but relatively blind to shifts at the extreme.

48. The Gini Coefficient for the entire economy is 0.837 which is far higher than the Coefficient measuring the inequality in household expenditure at 0.63 to 0.65.[21] Consistent with the table above, almost all sectors in the economy have a coefficient above 0.8 with the exception of sectors where SMEs typically thrive such as Catering, Accommodation and other Trade; Community, Social and Personal services and Finance. Catering and Community services have also seen material declines in their Gini Coefficients, consistent with a growing share of the bottom 50% of firms above, whereas 6 of the 11 sectors saw increases between 2011 and 2016.

Table 7: Gini coefficient, 2011 and 2016

Industry Classification	2011	2016	Gini growth
Agriculture	0.809	0.824	0.60%
Catering, Accommodation and other Trade	0.707	0.675	-1.99%
Community, Social and Personal Services	0.712	0.692	-1.09%

20 OECD website, available at: https://data.oecd.org/inequality/income-inequality.htm [Accessed 7 March 2021]
21 The World Bank Development Research Group estimate the South African Gini at 0.63 (https://data.worldbank.org/indicator/SI.POV.GINI?locations=ZA) while StatsSA estimate it at 0.65 (StatsSA 2019 Inequality trends in South Africa pg. 33).

Industry Classification	2011	2016	Gini growth
Construction	0.770	0.774	0.24%
Electricity, Gas and Water	0.869	0.871	0.67%
Finance	0.762	0.773	0.31%
Manufacturing	0.867	0.871	0.17%
Mining and Quarrying	0.891	0.888	-0.11%
Retail, Motor Trade and Repair Services	0.837	0.835	-0.02%
Transport, Storage and Communication	0.864	0.856	-0.39%
Wholesale	0.846	0.854	0.33%
All Firms	0.837	0.836	-0.01%

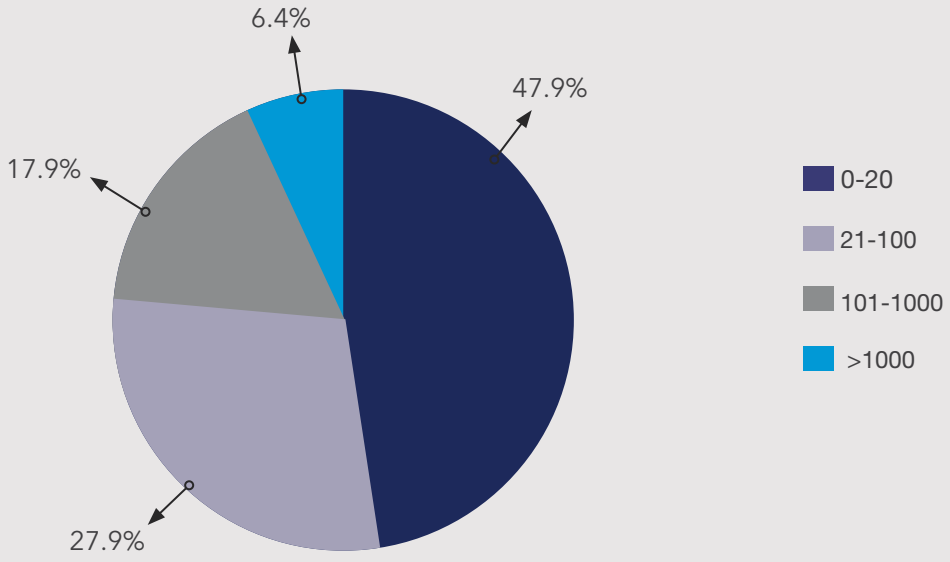
Source: CIT-IRP5 Panel data (own calculations)

49. The high levels of firm income inequality is consistent with a weaker SME sector in South Africa relative to comparator countries such as the OECD set of countries. It also highlights the lack of meaningful participation and spread of ownership in the economy for the vast majority of South Africans, and the need to make this a focus of both competition law enforcement but also general economic policy. The lack of participation and transformation of the economy also directly impacts on employment and household inequality as SMEs do contribute disproportionately to employment, which is one of the major factors driving household inequality (contributing 74% to the Gini Coefficient).[22] For instance, the SARS-NT database shows that SMEs accounted for 25% of income but 38% of employment among tax-paying firms.[23]

2.6 PARTICIPATION REMAINS A CHALLENGE IN HIGHLY CONCENTRATED SECTORS

50. The study has also sought to identify the number of participants in a sector using information from industry associations

Figure 2: Participation across industries



Source: Own calculations.

22 StatsSA. Inequality Trends in South Africa, 2019 pg. 45
23 The contribution is higher if one includes the informal and self-employed sectors, which then see SMEs accounting for 66% of employment (SEDA 2019 SME Quarterly 2019 Q1 available at SMME Quarterly 2019-Q1_final draft (seda.org.za)

or regulators. The accuracy of the participation levels will depend on the completeness of these data sources. The study found that 47.9% of 140 industries with participation data examined had fewer than 20 participants and 75.7% had fewer than 100 market participants.

51. As expected, higher concentration is correlated with lower levels of participation, with 73.3% of highly concentrated industries (or 52.9% of all industries) having fewer than 20 market participants. Sectors with more than 100 participants are more likely to be moderately concentrated or unconcentrated. Increasing participation therefore does seem to make a difference to concentration.

Table 8: Concentration and participation across industries

	0-20 participants	21-100 participants	101-1000 participants	>1000 participants
Highly concentrated with a presumptively dominant market participant	32.7%	8.7%	1.0%	0.0%
Highly concentrated without a presumptively dominant market participant	20.2%	7.7%	1.9%	0.0%
Moderately concentrated	1.9%	11.5%	2.9%	1.0%
Unconcentrated	0.0%	5.8%	3.8%	1.0%

Source: Various

Notes: Own calculations

52. The study examined trends in the levels of participation over time. The level of participation was considered relatively consistent if they moved by 10% or less either upwards or downwards. Of the 115 industries with information about changing participation, the majority (62%) experienced relatively constant (37.4%) or increasing (24.3%) levels of participation. However, 38.3% of them experienced a decline in participation levels during the review period. There were relatively high levels of declining participation among industries with more than 1 000 market participants (87.5%) reflecting many farming sectors where there is a consistent decline in the number of farms.

Table 9: Changes in participation over time

	Industries with declining participation	Industries with increasing participation	Relatively consistent (≤10% change)	Total
≤20 participants	32.0%	30.0%	38.0%	50
21- 100 participants	38.9%	25%	36.1%	36
101-1000 participants	33.3%	19%	47.6%	21
>1000 participants	87.5%	0.0%	12.5%	8
Total	38.3%	24.3%	37.4%	115

Source: Various (Own calculations)

53. The proportion of sectors with declining participation is cause for concern, as economic growth should result in increasing participation over time. This finding is, however, consistent with the high exit and poor survival rates for SMEs in South Africa, as well as barriers to participation in the economy. It confirms the need for participation and the removal of barriers to expansion to remain a strong focus for competition law enforcement, including market inquiries, and broader economic policy.

2.7 THE COMMERCIAL AGRICULTURAL VALUE CHAIN SHOWS CONCERNING TRENDS OF DECLINING PARTICIPATION BY GROWERS AND INCREASING CONCENTRATION FOR INPUTS AND OUTPUTS

54. The agricultural value chain should offer substantial opportunities for participation, especially at the farming level of the supply chain but also within agro-processing where scale economies are small relative to the size of the agricultural sector. However, there are disturbing levels of reductions in participation and increasing levels of concentration.

55. The agricultural value chain is often characterised as having concentrated inputs and processing, which is at risk of placing the farming component in a squeeze. That may occur as input suppliers exercise market power, and may discriminate against small farmers, raising input costs while processors may exercise buyer power to reduce the price of output. It is for this reason that the agricultural sector was selected as one of the sectors for the new amendments on buyer power.

56. The study confirms this characterisation as inputs tend to be highly concentrated as identified above and typically controlled by global firms. For instance:

    56.1. Over 90% of seed markets are dominated by the top 3 firms

    56.2. There are only three international genes used in poultry and pig farming

    56.3. The top 3 fertiliser companies in each category control 60-80% of sales;

    56.4. The top 3 forestry plantation owners control around 60% of all plantation land

57. On the processing side, there is substantially more participation in certain sectors, but overall, many of these remain concentrated and participation has not been growing. This suggests that barriers to entry may not necessarily be large, at least historically, but that there are substantial barriers to entrants expanding in the market and challenging the larger incumbents. For instance:

    57.1. While there are over 130 milk purchasers, the top 3 dairy processors account for at least 50% of the four main dairy product lines.

    57.2. The top four sugar processors process over 80% of sugar cane.

    57.3. Whilst there are hundreds of grain processors for human and animal consumption, for six of the eight grains the top 3 control more than 50% of production for human consumption and this is the case for seven of the eight grains for animal consumption.

58. The study found that in the farming layer in between inputs and processing there has been a sharp decline in the number of commercial farms. The table below shows that there has been a substantial decline of 24% in the number of grain farmers between 2015 and 2019, with particularly large percentage changes in maize, sorghum

and dry beans. In addition, there has been a decline of 30.8% in dairy farmers, 56% in commercial cattle farmers and a 23.8% in commercial pig farmers over the same period. The one exception to this trend is poultry where contract farming has been adopted by major producers. While total farming units did not decline during this period, this is only because micro mixed farming units grew.[24] However, these are typically not of a commercial scale (i.e., mostly micro firms) and there is limited evidence of successful transitioning to larger farming units.

Table 10: Number of grain farmers, 2015 and 2019

	2015	2019	% change
Maize	5 504	3 854	-30.0%
Sunflowers	1 604	1 389	-13.4%
Soybeans	1 974	1 545	-21.7%
Groundnuts	310	229	-26.3%
Sorghum	125	75	-40.2%
Dry Beans	294	117	-60.2%
Wheat	1 486	1 331	-10.4%
Malting Barley	381	320	-16.1%
Canola	485	368	-24.0%
Total	12 164	9 227	-24.1%

Source: DALRRD

59. The decline in commercial farming numbers may be a result of the increasing scale required in commercial farming, but that scale requirement may be in large part due to the adverse market structure facing small market participants for inputs and outputs. These forces will also be averse to transformation of the sector as potential new entrants, including black farmers, will find it difficult to get established and be sustainable without entering at scale. Recent research by the Commission identified access to finance[25], infrastructure and inputs[26] as presenting barriers to entry for small emerging farmers. These include access to land and water rights, exposing the urgent need for land reform in the country. A recent study by the BRICS Competition Law and Policy Centre also highlighted the growing global concentration of agricultural inputs and processing/trading that has placed farmers in a squeeze.[27]

60. Even where small black growers exist, as is the case in sugar cane, due to deliberate industry efforts, the study finds that there are clearly barriers or restrictions to scaling from small to large growers which may provide the scale to be more efficient. In sugar cane, 95% of growers are black, but only 1.4% of these are large. Moreover, the percentage of large black growers has declined as a share of growers from 2.6% to 1.4% over the past two years. The scale of the large

24 This data was drawn from the Census of Commercial Agriculture which is described in below in Footnote 46 and 47.
25 Mtombeni, S, Bove, D and Thibane, T (2019) An analysis of finance as a barrier to entry and expansion for emerging farmers, Commission Working Paper CC2019/01
26 Mtombeni, S, Bove, D and Thibane, T (2019) An analysis of infrastructure and inputs as a barrier to entry and expansion for emerging farmers, Commission Working Paper CC2019/02.
27 Lianos, I (2019) Global Food Value Chains and Competition Law (BRICS Draft Report)

black growers is also substantially lower than large white growers, with the 1.4% large black growers accounting for only

10% of output whereas the 3.7% large white growers account for 65% of output.

61. These findings are particularly concerning in the context where there is a concerted effort by government to address access to land and provide opportunities for transformation of the agricultural sector. The findings of the study indicates that market structures and practices in agricultural value chains may need to change if government efforts to transform and grow agriculture are to be successful. Furthermore, there needs to be a focus on not just establishing small-scale participants, but also ensuring that they are able to scale production over time to become more sustainable.

2.8 GLOBAL STUDIES SHOW COMMON INCREASING CONCENTRATION TRENDS AND THE IMPORTANT ROLE OF COMPETITION ENFORCEMENT TO ADDRESS THIS

62. A recent OECD report reviewed several studies of the US economy that consistently found that concentration across markets was increasing.[28] Using concentration ratios from the Census Bureau based on SIC Codes, these studies consistently showed that roughly 75% of sectors had seen increases in concentration. On a weighted basis, the CR4 ratio (i.e. the share of the top 4 firms) had increased from 26% to 32%. A similar study in Japan found that approximately 60% of sectors had seen increases in concentration as measured by the CR3. However, a similar study of the EU and the UK cited by the OECD showed no material increases in concentration.

63. This led the OECD to conclude that increasing concentration could be attributed to the increasingly digital and globalised nature of many markets, the potential inefficiencies of competition enforcement in both merger control and abuse cases, and/or excessive regulation or lack thereof of governments to implement appropriate policy. This is in the context where competition law enforcement and regulation is considered far more stringent in the EU relative to the US.

64. This study has identified a broader range of concentration studies of multiple economic sectors for multiple countries and single countries. These tend to confirm the observation of increasing concentration levels even if the starting level of concentration differs. The studies are listed in the table below with the coverage and results of the studies. In most cases the studies do identify a general trend of increases in concentration. This includes the US, the EU, Australia and several Latin American countries. Interestingly, the EU study on manufacturing and digital markets finds that 70% of sectors saw increasing concentration in contrast to the earlier EU study. There is also a South African study on CR5s for an earlier period covering 1996 to 2012 in contrast to this study which focuses on the more recent trends.

65. Some studies also assess the characteristics of the type of industries that are more associated with higher concentration.

    65.1. For example, industries in Australia have also experienced a rise in market concentration, where evidence suggests that an industry's export intensity is one factor behind these increases.[29] The study also suggests that where an industry is

28 OECD. (2018). Market Concentration. *Directorate for Financial and Enterprise Affairs, Competition Committee, unclassified, DAF/COMP/WD(2018)46*. Available at: https://one.oecd.org/document/DAF/COMP/WD(2018)46/en/pdf?_ga=2.177995814.24613705.1620807764-134697386.1536922982

29 Bakhtiari, S. (2019). Trends in Market Concentration of Australian Industries. *Australian Government: Department of Industry, Innovation and Science*. Research Paper 8/2019. Available at: https://www.industry.gov.au/sites/default/files/2019-09/trends-in-market-concentration-of-australian-industries.pdf

digitally mature or inhabited by few top performing firms, in addition to being export-focused, market concentration tends to increase at a far greater pace.[30]

65.2. On agricultural value chains, which is a particular area of concern, studies of global markets suggest that market concentration has increased across the agriculture and food value chain, a structural phenomenon prevalent in both developed and developing nations. Consolidation at the producer level, food processing level and retail level has occurred through natural growth and through mergers and acquisitions.[31]

66. Recent studies have also sought to provide some characterisation to changes in concentration and whether it reflects procompetitive outcomes or anticompetitive ones. A US study defined good concentration to be when an industry leader(s) becomes more efficient and as a result increases its (their) market share.[32] Thus, concentration is not adverse if it results in more productive firms where competition in the industry may remain stable or increase.[33] On the other hand, bad concentration occurs when incumbents in the industry have the ability to abuse their dominance or establish (further) dominance by blocking entry of competitors, collusion, or by undertaking mergers and acquisitions for the primary purpose of increasing their market share and market power.[34] Concentration is thus considered bad when it increases economic rents and decreases innovation.[35] The US studies have found that in the 1990s the increases in concentration were off a low level of concentration and generally efficient, but this changed after 2000 when there was a rise in so-called 'bad concentration'.

67. Comparative sector-specific studies of concentration levels and trends in other countries are reported in the sector-specific summary findings that follow.

30 Bakhtiari, S. (2019). Trends in Market Concentration of Australian Industries. *Australian Government: Department of Industry, Innovation and Science*. Research Paper 8/2019. Available at: https://www.industry.gov.au/sites/default/files/2019-09/trends-in-market-concentration-of-australian-industries.pdf

31 Swinnen, J. 2020. Competition, market power, surplus creation and rent distribution in agri-food value chains – Background paper for The State of Agricultural Commodity Markets (SOCO) 2020. Rome, FAO. Available at: http://www.fao.org/publications/card/en/c/CB0893EN

32 Philippon, T. (2019). The Great Reversal: How America Gave Up on Free Markets. *Harvard University Press*. ISBN: 9780674237544.

33 Covarrubias, M., Guitérrez, G. & Philippon, T. (2019) From Good to Bad Concentrations? U.S. Industries over the Past 30 Years. *NBER Working Paper Series, Working Paper 25983, September 2019*. Available at: https://www.nber.org/system/files/working_papers/w25983/w25983.pdf

34 Philippon, T. (2019). The Great Reversal: How America Gave Up on Free Markets. *Harvard University Press*. ISBN: 9780674237544.

35 Covarrubias, M., Guitérrez, G. & Philippon, T. (2019) From Good to Bad Concentrations? U.S. Industries over the Past 30 Years. *NBER Working Paper Series, Working Paper 25983, September 2019*. Available at: https://www.nber.org/system/files/working_papers/w25983/w25983.pdf

Table 11: Summary of trends concerning cross-country market concentration found in various literature

Study	Period	Countries/Region	Measure	Industry/Sector	Trend Summary
Núñez & De Furquim (2018)[36]	2008-2017	Argentina, Brazil, Chile, Colombia, Mexico and Peru	HHI	Communications, energy, materials, industrial, technology, finance, health, utilities, basic consumer products, discretionary consumption, and government	There have only been moderate increases in concentration levels over the period for all countries.
Bajgar et al. (2019)[37]	2000-2014	Europe: Belgium, Germany, Spain, France, Great Britain, Hungary, Italy, the Netherlands, Poland, Denmark, Estonia, Finland, Greece, Ireland, Latvia, Norway, Portugal, Slovenia and Sweden North America: Canada and the US	CR4, CR8 & CR20	Manufacturing and (non-financial) market services Digital intensive and less digital intensive industries	Estimation and comparison of market share levels of industries in European countries and Norther American countries. Evidence suggesting increase in concentration across various industries in both Europe and North America. 77% of 2-digit SIC industries in EU and 74% in North America showed increases in concentration
Cavalleri et al. (2019)[38]	2006-2015	Germany, France, Italy, Spain and the US	HHI, CR4 & CR20	Manufacturing, finance, services, utilities and transport, retail trade and wholesale trade	Increases in concentration ratios, however HHI of industries remain fairly flat and consistent for the four European countries assessed

36 Núñez, G. & De Furquim, J. (2018). La concentración de los mercados en la economía digital. *Comisión Económica para América Latina y el Caribe (CEPAL), Publicación de las Naciones Unidas, LC/TS.2018/45*. Available at: https://repositorio.cepal.org/bitstream/handle/11362/43631/S1800551_es.pdf?sequence=1

37 Bajgar, M., Berlingieri, G., Calligaris, S., Criscuolo, C. & Timmis, J. (2019). Industry Concentration in Europe and North America. *Centre for Economic Performance (CEP) Discussion Paper No. 1654, October 2019*. Available at: http://eprints.lse.ac.uk/103427/1/dp1654.pdf

38 Cavalleri, M.C., Eliet, A., McAdam, P., Petroulakis, F., Soares, A. & Vansteenkiste, I. (2019). Concentration, market power and dynamism in the Euro area. *European Central Bank, Working Paper Series, Discussion Papers, No. 2253, March 2019*. Available at: https://www.ecb.europa.eu/pub/pdf/scpwps/ecb.wp2253~cf7b9d7539.en.pdf

Study	Period	Countries/Region	Measure	Industry/Sector	Trend Summary
Peñaloza & Rincón (2019)[39]	2009-2017	Ecuador	HHI	Multiple industries	Persistence of concentration of various sectors. At least 76% of sectors assessed had HHI's suggestive of low concentration (<1000)
Furman & Orszag (2015)[40]	1997-2007	US			3/4 of sectors analysed see an increase in concentration over 1997-2007
Autor et al. (2017)[41]	1982-2012	US	HHI, CR4 & CR20	Multiple industries (6 large sectors) - 4-digit SIC industries	Concentration has been increasing for much of the private sector
Bakhtiari (2019)[42]	2002-2016	Australia	HHI	All industries	On average, market concentration increased from 2007 to 2016[43]
Fedderke et al. (2018)[44]	1976-2012	South Africa	CR5	Manufacturing (3-digit SIC of manufacturing sector)	Concentration levels had on average increased amongst various manufacturing subsectors although a few subsectors had sustained concentration levels over the period.
Buthelezi, Mtani & Mncube (2019)[45]	2009-2015	South Africa	HHI	ICT, Energy, Financial, Food/ agro-processing, infrastructure & construction, intermediate industries, pharmaceuticals & transport	High levels of concentration in all these priority sectors with average HHIs exceeding the US DOJ thresholds of 2500

Sources: Multiple sources, presented in footnote.

39 Peñaloza, H.A.B & Rincón, I.G. (2019). Competition, market concentration and innovation in Ecuador. *Ecos de Economía: A Latin American Journal of Applied Economics,* 23(48).

40 Furman, J. & Orszag, P. (2015). A Firm-Level Perspective on the Role of Rents in the Rise in Ine*quality. Working Paper, Harvard Uni*versity.

41 Autor, D., Dorn, D., Katz, L., Patterson, C., & van Reenen, J. (2017). Concentrating on the Fall of the Labor Share. *American Economi*c Review, 107, pg. 180-185.

42 Bakhtiari, S. (2019). Trends in Market Concentration of Australian Industries. *Australian Government: Department of Industry, Innovation and Science*. Research Paper 8/2019. Available at: https://www.industry.gov.au/sites/default/files/2019-09/trends-in-market-concentration-of-australian-industries.pdf

43 A comprehensive study was conducted in Australia looking at the trends in market concentration across various Australian industries over the period 2002 to 2016. The study uses HHI as its measure for concentration. The study also covers most of Australia's industries, using an extensive dataset of all tax-registered firms. The study shows that, on average, the level of market concentration had been declining prior to 2007 but subsequently increased across numerous sectors.

44 Fedderke, J., Obikili, N. & Viegi, N. (2018). Markups and concentration in South African manufacturing sectors: An analysis with administrative *data. South African Journal of Economics*, 86(1).

45 Buthelezi, T, Mtani, T & Mncube, L (2019) The extent of market concentration in South Africa's product markets, Journal of Antitrust Enforcement, 2019,0,1-13

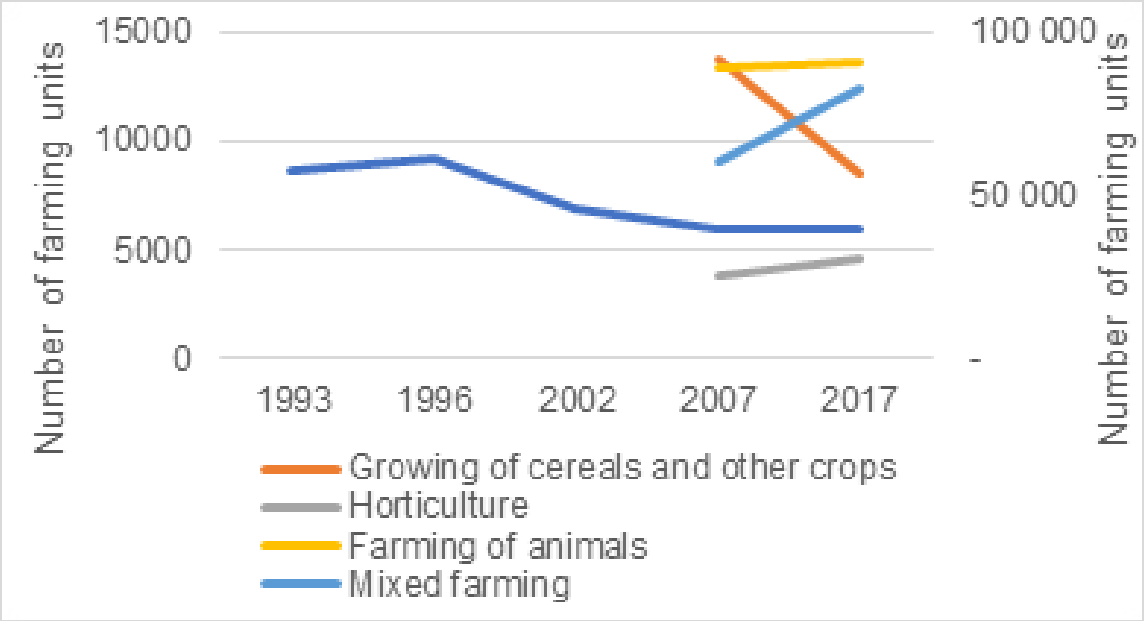
03 SUMMARY OF SECTOR SPECIFIC FINDINGS

68. The rest of the Summary Report focuses on the main findings from our analyses of the data in the various industries the Commission examined.

3.1 FARMING

69. There was a large decline in the number of farming units over the 1996-2007 period.[46] Whereas the total number of farming units[47] remained relative stable between 2007 and 2017/18, the number of farming units solely growing cereals and other crops declined significantly, and farmers engaged in mixed farming methods (animals and crops) increased sharply.

Figure 3: Total number of farming units, 1993-2017



Source: Statistics SA

46 The collection unit is a farming unit, which consists of one or more farms, holdings or pieces of land, whether adjacent or not, operated as a single unit and situated within the same local municipality.

47 The figures for farming units are derived from the Census of commercial Agriculture 2017, which covers farms registered for VAT and/or income tax and whose main activity is agriculture (informal/subsistence farmers have been excluded, as well as any enterprises involved in agriculture as a secondary or auxiliary activity)

70. Although there are high levels of participation at the farming level of the agriculture value chain with more than 40 000 farming units, large farming units accounted for the majority of income, as is shown in Table 12. Large farms, which made up just 6.5% of all farming units, accounted for 67.0% of total income in 2017/18.

Table 12: Participation and income shares of large and SMME farms, 2017/2018

	% farming units	% share of income
Large	6.5%	67.0%
Medium	4.6%	9.7%
Small	26.7%	18.5%
Micro (annual income ≥R1m)	15.5%	2.9%
Micro (annual income <R1m)	46.6%	1.9%

Source Statistics SA

3.2 GRAIN

71. A considerable part of this concentration tracker report is dedicated to grain. The grain value chain forms a large part of commercial farming activities nationally. It is important in its own right as a generator of economic activity, but it is also a key input into both the consumer food basket (maize meal, oils and bread) and animal-related farming as a primary source of feed. The Commission has considered various levels of the supply chain, starting with grain seeds, then moving onto grain farming, grain storage, grain processing (for human and animal consumption), and the production of pan-baked bread.

72. Seeds are typically bred by a handful of international firms. These firms are required to use local distributors to distribute seeds in the country. Distribution rights of grain seed are highly concentrated with just a handful of market participants. The following table shows that there were four or fewer market participants with non-negligible market shares in maize, wheat, sorghum, soya and sunflower. Pioneer/Pannar featured the most prominently across all seeds followed by newly formed joint venture LimagrainZaad and Zaad's Agricol. Based on cross-country comparisons of concentration ratios in maize, soya bean and sunflower seed, most developing countries have high concentration ratios, with South Africa fairing the worst.[48]

Table 13: Distribution of grain seed, 2021

Types of seeds	Distributors with non-negligible market shares	CR3
Maize	Bayer/Monsanto, Pioneer/Pannar, LimagrainZaad	96.7%
Wheat	Sensako, Pioneer/Pannar, Zaad's Klein Karoo Seed Marketing	n/a
Sorghum	Pioneer/Pannar, Zaad's Agricol, National Seed	n/a
Soya	Pioneer/Pannar, LimagrainZaad, Zaad's Agricol	90.0%
Sunflower	Pioneer/Pannar, Zaad's Agricol Limagrain/Zaad	n/a

Source: Grain SA

48 Source: OECD (2018), Chapter 5.: New Evidence on Market Concentration, Concentration in Seed Markets: Potential Effects and Policy Responses, OECD Publishing, Paris. Available at: https://www.oecd-ilibrary.org/sites/9789264308367-8-en/index.html?itemId=/content/component/9789264308367-8-en

73. There were just 30 storers of grain in the country in 2019, with just four of them storing more than two thirds of the country's grain. There was a moderate consolidation in grain storage over the 2015-2019 period with the largest four increasing their share of stored grain by 4 percentage points. Of all grain storers, 63.3% were small with storage shares of 2% at most. The Senwes acquisition of a failing Suidwes in 2020 has resulted in further consolidation.

Table 14: Grain storage, 2015 and 2019

	2015	2019
Number of commercial grain silo owners	32	30
Total stored by commercial grain silo owners (mt)	10.0	11.2
CR4	64.7%	68.7%
CR11	94.5%	94.6%
Number of commercial grain silo owners with a 1-2% share	2	2
Number of commercial grain silo owners with a 0-1% share	20	17

Source: SAGIS

74. The next table presents concentration and participation information about processors of grain for human consumption. The processing of six of nine grains for human consumption - sorghum, oats, sunflower, soya bean, barley and canola - were very highly concentrated and the processing of three grains – maize, wheat and groundnuts – are moderately concentrated. Of the processors of grains that are highly concentrated, there were just four barley, two canola and two oats' processors.

75. There was little change in concentration among grain processors for human consumption across most types of grain. There were modest declines (2-5 percentage points) in the concentration ratios in maize and groundnut processing and modest increases in the concentration ratios of sunflower and soya bean.

76. There is a long tail of processors with processing share of at most 2% in maize, wheat, sorghum and groundnuts. In contrast, the majority of the processors of sunflower and soya had shares of more than 2%. Exit was primarily among these small processors.

Table 15: Grain processing for human consumption

	No. of processors		CR3		Number of processors with ≤2% share	
	2014/5	2018/19	2014/5	2018/19	2014/5	2018/19
Maize	175	162	34.4%	29.3%	168	151
Wheat	57	50	31.2%	30.9%	40	34
Sorghum	35	33	67.3%	65.5%	26	23
Oats	2	2	n/a	n/a	n/a	n/a
Sunflower	13	10	53.9%	58.4%	4	2
Soya bean	15	13	47.9%	50.9%	6	4

	No. of processors		CR3		Number of processors with ≤2% share	
	2014/5	2018/19	2014/5	2018/19	2014/5	2018/19
Groundnuts	48	53	46.2%	43.1%	36	41
Barley	3	4	n/a	99.7%	2	3
Canola	4	2	99.6%	n/a	2	1

Source: SAGIS

77. Table 16 presents information on concentration and participation among processors of grain for animal feed. The table shows that although there are typically more grain processors for animal consumption than human consumption (except wheat), these industries are also highly concentrated sectors in that three market participants controlled more than 50% of the segment. Maize is the only exception with relatively low concentration levels.

78. Changes in concentration are more appreciable here compared to the processing of grain for human consumption. The concentration ratios of the three largest processors of wheat, sorghum, and canola increased by more 10 percentage points over a five-year period and the top three processors of sunflower declined by more than 10 percentage points. Concentration in oats and soya bean processing for animals increased modestly (2-5 percentage points).

79. There is a long tail of small processors in maize, soya, sorghum, canola and sunflower where processors with processing shares of at most 2% made up at least 70% of all processors in those industry segments. There are smaller tails in the processing of wheat (50%), oats (50%) and barley (20%). Entry exceeded exit among these small processors over the five-year period with the exception of wheat.

80. Unlike in the processing of grain for humans, there was more entry and exit among larger processors of grain for animal consumption. For example, a large processor of sunflower exited the segment and an entrant into canola processing in 2016/17 grew quickly.

Table 16: Grain processing for animal consumption

	No. of processors		CR3		Number of processors with <2% share	
	2014/5	2018/19	2014/5	2018/19	2014/5	2018/19
Maize	257	258	14.0	12.0%	244	246
Wheat	18	10	72.5%	87.4%	10	5
Sorghum	43	40	30.9%	52.4%	26	30
Oats	14	22	64.8%	69.5%	3	11
Sunflower	40	44	74.2%	52.2%	32	35
Soya bean	28	31	51.9%	54.0%	19	22
Barley	11	9	73.7%	78.7%	4	3
Canola	7	8	89.6%	99.1%	2	6

Source: SAGIS

81. The final table in this section of the report presents information on concentration and participation in the production of pan-baked bread. It shows that this segment is also highly concentrated. Although there were 802 producers of pan-baked bread in 2018/19, five bakery groups produced 76% of all manufactured units and six supermarket groups produced 12%. This was a modest improvement from 2017/18 (4 percentage points decline), when bakery groups accounted for 80% of pan-baked bread and large supermarket groups 11%. There was also a small increase (5%) in participation over the three-year period.

Table 17: Pan-baked bread, 2017/18 and 2018/18

	Number of participants		Manufactured units share	
	2017/18	2018/19	2017/18	2018/19
Supermarket groups	6 (1%)	6 (1%)	11%	12%
Bakery Groups	5 (1%)	5 (1%)	80%	76%
Independent bakeries	36 (5%)	45 (6%)	4%	7%
Independent supermarkets	717 (94%)	746 (93%)	5%	5%
Total	764	802		

Source: SAGIS

3.3 FISHING

82. Fishing is an interesting sector as it is subject to a regular rights allocation process. The Commission has considered three hake fisheries and the two small pelagic fisheries. Below we present a summary of the number of rights owners, the share of Total Allowable Catch ("TAC") of the three largest rights owners and the number of rights owners with a TAC share of 2% or less for each of the five fisheries we examined in the report.

Table 18: Hake and small pelagic fisheries, 2020

	2006	2014	2020
Deep sea hake (allocation in 2005/6)			
Total number of rights holders	52	45	31
% TAC share of top 3	66.1%	66.0%	73.5%
Firms with a share of ≤2%	46	38	24
Hake in-shore trawl (allocation in 2016/17)			
Total number of rights holders		17	26
% TAC share of top 3		66.2%	47.6%
Firms with a share of ≤2%		8	13
Hake long-line (allocation in 2005/6)			
Total number of rights holders	132	129	116
% TAC share of top 3	9.5%	14.3%	16.2%
Firms with a share of ≤2%	131	125	110

	2006	2014	2020
Pilchards (allocation in 2005/6)			
Total number of rights holders	112	103	82
% TAC share of top 3	27.5%	28.8	42.3%
Firms with a share of ≤2%	107	97	75
Anchovies (allocation in 2005/6)			
Total number of rights holders	72	69	58
% TAC share of top 3	29.1%	29.9%	44.9%
Firms with a share of ≤2%	61	57	49

Sources: DEFF, SADSTIA, SAPFIA, SAHLLA

83. Deep sea fisheries exhibit the lowest participation and highest level of concentration, followed by hake in-shore fishing. In contrast, hake long-line fishing has the greatest number of rights owners and lowest concentration ratio of the five fisheries on the table.

84. Fishing rights allocations serve to reduce concentration and enable participation of small fisheries. This is clear from in- shore trawl, the only fishery to have had rights allocated within the last 15 years. There was both an increase in the number of rights holders and decline in the concentration ratio of the largest three rights holders after hake in-shore fishing rights were allocated in 2016/17. Many of those benefiting from the increased number of rights holders were those with TAC shares of up to 2% and so were relatively small. In the case of the other fisheries where rights were allocated in 2005/6, there has been a decline in participation and an increase in concentration between 2016 and 2020. This was primarily from merger transactions, most of which occurred within the last 6 years.

85. Firms allocated the largest share of TAC upstream also tend to be prominent at the fish processing level. For example, Sea Harvest and I&J, which account for the largest shares of TAC in the largest hake fishery (deep-sea hake), collectively accounted for 44.9% of hake processing capacity in the country and 71% of the value of hake retail sales.[49] As of 2020, Oceana, which is by far the largest rights holder in both pilchards and anchovies, owns two of the six pilchard canneries and three of six fishmeal plants in the country. Other processors own just one plant each.

86. There are fewer fishmeal plants (and canneries) today compared to the early 2000s, which the industry has ascribed to closures from regulated costly plant upgrades. There is however potential entry of two new fishmeal plants, both by holders of small pelagic fishing rights.

3.4 FORESTRY

87. The Commission recently conducted an impact assessment on the impact of vertical integration on the forestry sector. Much of the analysis of forestry was drawn from the impact assessment. The Commission considered three levels of this value chain beginning with (1) plantations which produce roundwood or primary timber products, (2) primary processing of timber products by pulp mills, sawmills, pole treatment facilities, mining timber mills and/or other processing

49 SADSTIA submission, 2020

plants, and (3) the secondary processing of primary processed wood products into end-products (e.g. sawn timber is processed to manufacture furniture, doors and windows and pulp is processed to produce paper, packaging and cardboard products).

88. The primary level of the value chain (production and supply of timber) is highly concentrated with the largest three firms comprising 51%-62% of total productive forestry land in each of the three main timber producing regions.

Table 19: Timber plantations, 2017/18

Area	Total productive land (ha)	CR3 (ownership)
Cape Region	179 282	51%
KwaZulu-Natal	472 425	61%
Northern Region	539 931	62%
Total	**1 191 638**	**51%**

Sources: Forestry Stewardship Council, company websites, company annual reports

89. With the exception of softwood sawmills, there were fewer than 30 processors involved in primary processing (turning raw timber into intermediate wood products). Pulpwood and mining timber were highly concentrated segments and pole treatment was moderately concentrated (see Table 20). Softwood sawmills appeared to be the least concentrated primary processing timber segment, but this may be explained by the different source from which this information originated. While there was worsening concentration in mining timber and no change in pulpwood, there was a decline in concentration in both softwood sawmills and pole treatment.

Table 20: Primary processing of timber

Primary processing	Number of primary processors		Largest firms		CR (log intake)	
	2015	2020	2015	2020	2015	2020
Softwood Sawmills [i]	~99	~89	5	5	46.6%	42.4%
	2013/14	2017/18	2013/14	2017/18	2013/14	2017/18
Pole Treatment [ii]	33	29	3	6	51.7%	64.0%
Pulpwood [ii]	18	16	5	5	91.4%	91.3%
Mining Timber [ii]	14	15	4	3	52.2%	49.0%

Sources: (i) Crickmay (ii) DAFF Timber Statistics

90. Concentration at the next level of the value chain (manufacture of end-products from processed wood products) also differs by broad industry segment, as is clear from the table below. Whereas the top five processors in the last two categories accounted for between 56% and 62% of turnover, they earned just 29-35% of turnover in the first two categories. As these segments are relatively broad, concentration ratios on a narrower level may reveal sub-segments that are more concentrated.

Table 21: Secondary processing of timber

Sub-sectors	CR5
Manufacture of wooden containers	29.7%
Manufacture of builders' carpentry and joinery	35.0%
Manufacture of veneer sheets, plywood, other boards, carpentry, joinery, other products of wood, articles of cork, straw, plaiting materials	56.1%
Manufacture of corrugated paper and paperboard and of containers of paper and paperboard	61.8%

Sources: Statistics SA

3.5 LIVESTOCK

91. **Genetics.** Broilers, layers and pigs all rely on genetic material sold by a small handful of firms in Europe and the United States. Historically, there were many types of genetic material that would have been bred by many local farmers. In the case of all three livestock types, just three types of genetic material are sold by three local distributors today. This is however an improvement from the recent past; just two breeds were available more than a decade ago in the case of broilers and layers and about 3-4 years ago in the case of pigs. In the case of all three segments, the newest entrant remains the smallest. In the case of broilers, the entry of a new breed was facilitated by a competition complaint against Astral which had previously required that Country Bird Holdings use the Ross broiler breed, after which it started distributing the new Arbor Acre breed.

92. **Farming.** There was a 56.0% and 23.8% reduction in the number of commercial cattle and pig farmers[50] respectively over the last five to ten years. In contrast, participation in the broiler industry has been enhanced via the use of contract broiler growers. There were more than double the number of contract growers in 2020 compared with 2010 and contract farmers accounted for 60-80% of broiler production since 2015, up from 51% in 2010. While there was worsening participation among all commercial cattle farmers, it appears that this did not extend to cattle feedlots. There was however an increase in the concentration ratio of the three largest feedlots from 30.0% of total standing capacity in 2015 to 39.0% in 2020.

93. **Abattoirs**. The largest three broiler producers are all vertically integrated and accounted for 55% of broiler production by March 2020. There was not much change in the concentration ratio over the 2012-2020 period with a few exceptions, namely that (1) Astral overtook RCL as market leader, (2) Quantum exited broiler production and (3) Grainfield, a relatively new market participant, joined the top 7 broiler producers in 2020.

Table 22: Broiler production, 2012, 2015 and 2020

	2012	2015	2020
RCL Foods (Rainbow Chicken)	25%	23%	20%
Astral Foods (Goldi, Festive, Mountain Valley, County Fair)	22%	25%	26%
Country Bird (Supreme)	8%	8%	9%

50 The top 5 pig farmers (of 183) accounted for 22.6% of total sows in 2019/20, the same as in 2017/18.

	2012	2015	2020
Quantam Foods (Tydstroom) – previously Pioneer	6%		
Daybreak (Afgri prior to June 2015)	6%	6%	7%
Sovereign Foods (Rocklands)	5%	5%	8%
Fouries Poultry Farms (Chubby Chick) part of Kuipers Group	6%	(in 'other')	4%
Grain Field Chickens	(in 'other')	(in 'other')	5%
Argyle	(in 'other')		
Others	25%	33%	21%

Sources: Davids, 2013, "Playing chicken: The players, rules and future of South African broiler production", University of Pretoria; Astral Annual Results presentations

94. Based on data provided by the South African Meat Industry Council ("SAMIC"), which shows both the participation and concentration ratios of the largest ten abattoirs in each red meat segment, concentration appears to be relatively low. However, these ratios are at an abattoir rather than firm level. Given that many firms own more than one abattoir, these statistics are likely to underestimate concentration. There are still some interesting observations one can glean from the data on a relative basis. Firstly, pig abattoirs have the lowest level of participation and highest level of concentration. Secondly, abattoirs that slaughter small stock (sheep and goats) were the only abattoirs to have experienced an appreciable change in concentration levels (5 percentage point increase) over the 2015-2020 period. Thirdly, while beef abattoirs have the highest level of participation, the concentration ratio of the largest ten abattoirs was not the lowest. We understand that the cattle segment is led by three vertically integrated market players (Karan Beef, Sparta Beef and the Sernick Group) in the broiler industry.

95. **Dairy**. There was a 30.8% decline in the number of dairy farmers from 1 683 in 2016 to 1 164 in January 2020, despite an increase (8.7%) in milk production. There was also a 11.3% decline in the number of milk purchasers from 150 in 2015 to 133 in 2019. The largest three and seven milk purchasers accounted for approximately 37.5% and 63.0% respectively of all milk procured in the country in 2019 (see Table 23). The average share of the remaining 118 milk purchasers was around 0.2% of all milk purchases. The next level of the value chain, the processing of milk, looks more concentrated with the top 3 manufacturers accounting for at least 50% of the four major dairy product lines in 2016 (see Table 24).

Table 23: Milk purchasing, 2019

	2019
Number of milk purchasers	133
CR3	37.5%
CR7	63.0%
Average share of others	0.2%

Source: MPO estimates

Table 24: Further milk processing, 2016

	2016
Drinking milk products	59%
Cheese products	54%
Yoghurt and sour milk products	53%
Other dairy products	63%

Source: Euromonitor estimates

3.6 SUGAR

96. As with other agricultural industries, there is greater participation at the sugar cane growing level compared with industries downstream where processing occurs. Whereas there were 1 157 sugar cane growers in the country in 2019/20, there were just six sugar cane millers.

97. Although participation in the sugar cane growing sector is high, with most participants being black small-scale farmers, most sugar cane is delivered by just a small percentage of farmers, the majority of whom are white. The table shows that large-scale farmers, miller cane estates and joint ventures (also large-scale) produced 88.8% of delivered cane in 2019/20 even though they made up just 5.3% of all sugar cane farmers in the country in 2019/20. Furthermore, this situation has worsened slightly over the last two years. Fewer large-scale farms delivered a slightly larger share of total sugar cane in 2019/20 than they did in 2018/19.

Table 26: Number of sugar cane growers, 2018/19-2019/20

	Number of farmers		Delivered cane (%t)	
	2018/19	2019/20	2018/19	2019/20
Large-scale farmers	6.0%	5.0%	73.7%	74.8%
- Black-owned	2.6%	1.4%	9.2%	10.0%
- White-owned	3.4%	3.7%	64.5%	64.9%
Small-scale farmers	93.1%	94.2%	8.7%	9.0%
- Black-owned	92.3%	93.5%	7.9%	8.5%
- White-owned	0.8%	0.7%	0.8%	0.5%
Projects and co-ops (black-owned)	0.6%	0.5%	2.6%	2.2%
Joint ventures (50% white, 50% black-owned)	0.0%	0.0%	7.7%	7.8%
Miller sugar cane estates	0.3%	0.2%	7.3%	6.2%

Sources: MPO estimates

98. The three largest sugar millers crushed 82.4% of all sugar cane in the country during the 2018/19 sugar harvest season, not much of a change from 2014/15 but an improvement from a decade earlier. In fact, each of the three had a higher cane crushing share in 2018/19 than they did ten years prior. Research into sugar processing in the Czech Republic and Poland in 2016/17 has shown they also exhibited high concentration (with HHIs of 3 894 and 2 944 respectively) and low participation (with just seven and four firms respectively).[51]

Table 27: Cane crushed by sugar cane processors

	2008/09	2014/15	2018/19
RCL, Illovo, Tongaat Hulett	86.1%	82.7%	82.3%
USM, Gledhow, UCL	13.8%	17.3%	17.7%

Source: SAMIC

3.7 POTATO

99. Pre-2020, WesGrow distributed four of the most popular potato seed varieties in the country, which together accounted for 65.7% of the country's total potato yield in 2019/20 (see Table 28). WesGrow's share of the country's potato yield had increased since 2010/11 because two of its potato seeds grew in popularity (Sifra and Innovator) and a new seed variety called Panamera was introduced which quickly became popular. Following WesGrow's refusal to open its most popular seed variety (after its property rights expired in the country), an investigation by the Commission resulted in the company signing a consent order at the beginning of 2020 which essentially reduced its control over the popular potato variety. Following this, WesGrow only had distribution rights over as little as 36.2% of total potato yield. Although still high, this represented a large dent in WesGrow's dominance in the potato seed segment. In 2015/16, South Africa's potato seed sector was more concentrated than in two other countries, namely the Netherlands and Germany but the difference was not large. The Wesgrow consent agreement may have changed this scenario, depending on the

51 Smutka, L., Kotyza, P., Pawlak, K. & Pulkrabek, J. (2020). Czech and Polish Sugar Market Concentration: Development and Perspective. Listy Cukrovarnické a Řepařské 136(7/8), 278-285.

trajectory of the seed industries in these two comparator countries.[52]

100. The potato seed data also showed that older open potato varieties have become less popular with time. Seven of the eight open popular potato seed varieties in 2010/11 were not popular in 2019/20.

Table 28: Certified yield (25kg bags) of potato varieties, 2010/11, 2015/16 and 2019/20

Seed name	International brand owner	Local distributor	2010/11	2015/16	2019/20
Mondial	HZPC	Wesgrow	33.6%	27.8%	29.5%
Sifra	HZPC	Wesgrow	8.6%	13.7%	23.8%
Valor (rights expired in 2018)	Caithness	RSA Potato Seed exchange	3.2%	2.3%	8.0%
Panamera	HZPC	Wesgrow		8.8%	7.7%
Innovator	HZPC	Wesgrow		2.3%	4.7%
Lanorma	Solana/Den Hartigh	GWK Beperk		8.2%	4.1%
BP1		(open)	6.9%	4.4%	
FL 2108	Fritolay	Simba		3.5%	3.3%
Markies	Agrico	First Potato Dynamics		3.2%	2.1%
Electra	Irish Potato Marketing	Rascal Seed Research Laboratories		3.1%	
Fianna (rights expired in 2016)	Agrico	First Potato Dynamics	10.7%		
Up-to-date		(open)	8.6%		
Avalanche (rights expired in 2019)	Jonquil t/a Irish Potato Breeders	Tubertek	6.5%		
Buffelspoort		(open)	2.7%		
Pentland Dell		(open)	2.4%		
Vanderplank		(open)	2.3%		
Others			14.3%	22.5%	16.5%

Sources: Potato certification website, available at: https://potatocertification.co.za/production/

101. The Commission also considered participation among potato farmers. Based on information collected, there was a 65% drop in the number of potato farmers between 1993 and 2008 and a gradual decline since then to 532 farmers in 2017, a trend that is consistent with the total decline in the number of farmers in the country. Still, there were more than 25 times the number of potato farmers than there were registered seed distributors (in 2015/16).

52 OECD (2018), Chapter 5.: New Evidence on Market Concentration, Concentration in Seed Markets: Potential Effects and Policy Responses, OECD Publishing, Paris. Available at: https://www.oecd-ilibrary.org/sites/9789264308367-8-en/index.html?itemId=/content/component/9789264308367-8-en

3.8 LIQUOR AND CIGARETTES

102. Both the liquor and the cigarette industry are highly concentrated at both the production part of the value chain (with the likes of SAB, Distell, Diageo and BAT) but also in upstream processing industries (barley processing, tobacco leaf processing, apple concentrate production, ethanol production and grape crushing) as well as upstream packaging industries (wet glue labels and cigarette cartons).

103. **Farmers**. A 71.8% reduction in the number of commercial tobacco farmers over the 1996-2014 period (from 620 to 175) accompanied a 68.0% decline in the hectares of land cultivated for tobacco. There has however been little change in the number of tobacco farmers more recently (2014-2017/18). In contrast, there was a 16.1% decline in the number of barley farmers between 2015 and 2019 and a 41.3% decline in the number of wine farmers (primarily caused by the exit of small farmers).

104. **Upstream processing.** There is evidence suggesting that the upstream liquor and tobacco processing/manufacturing industries have low levels of participation and/or high concentration. There were just four processors of barley (the largest SAB Maltings accounted for over 90% of barley processed), one processor of tobacco leaf (Limpopo Tobacco Processors), four major producers of apple concentrate for apple cider (two of which controlled 80-90% of domestic production), and essentially a duopoly in ethanol production (with one other small market participant). Furthermore, the largest five grape cellars (of a total of 533) accounted for 82.8% of total grapes crushed.

105. **Upstream packaging**. Many associated packaging industries also have high concentration and low participation levels. SAB's Coleus was the only producer of bottle closures in South Africa in 2018 and there were just two producers of wet glue beer labels in 2016, one of which had a share of more than 70% of the market. Furthermore, there were just 3 manufacturers of cigarette cartons in South Africa in 2013, one of which accounted for more than three quarters of the market.

106. **Brand owners.** The largest three firms account for more than 50% across all the liquor and cigarette segments shown in Table 29. AB-InBev, Heineken, and Distell are among the three largest participants in more than one liquor segment. There is just one firm in each of the beer, ready-to-drink ("RTD") and cigarette industries which controls more than 45% of the segment and so is presumptively dominant. The spirits and wine segments also contain one firm that accounts for a huge chunk of these industries (30-40%). Concentration appears to have changed very little between 2016 and 2019 in the beer and tobacco industries. Distell lost shares in all three liquor industries (spirits, RTDs and wine) and, in the case of spirits was overtaken by Diageo.

Table 29: Concentration ratios among liquor and cigarette brand owners

Industry	Market leaders	Year	Market share of leader (CR1)	CR2/CR3
Malt Beer [(i)]	AB-InBev, Heineken	2019	88%	~99%
Sorghum Beer[(ii)]	United National Breweries	2020	Unknown	Unknown
Spirits[(ii)]	Diageo, Distell, Edward Snell	2015	40%	74%
RTD[(ii)]	Distell, AB-InBev, Heineken	2018	~50%	85-95%
Wine[(ii)]	Distell, Namaqua, Orange River	2019	30-40%	45-55%

Cigarettes [iii]	BAT, Japan Tobacco International, Phillip Morris International	2019	71%	92%

Sources: (i) Movendi International, (ii) Commission merger reports, (iii) Tobacco tactics

107. In 2013, there were just 30 craft breweries in the country. This increased to 135 in 2015 and 200 in 2018. Despite an increase in the number of craft breweries, they continued to collectively account for under 1% of malt beer sales.

3.9 GAMBLING

108. Our analysis of the gambling sector has shown that large casinos have gained prominence in other gambling segments including Limited Payout Machines ("LPMs") and bingo, largely via merger transactions. Tsogo Sun is among the top three market participants across all three gambling segments and Sun International across two segments. Goldrush is prominent in both the LPM and bingo sub-segments.

109. The three largest casino groups accounted for 95% of total revenue in 2019, slightly down from 97.9% in 2014. The largest two casino groups (Sun International and Tsogo Sun) made up the vast majority of this with Peermont holding a much smaller share. Concentration is also high on a provincial basis. Tsogo Sun controls more than 50% of the KZN and Mpumalanga casino positions and Sun International controls more than half the casino positions in the Western Cape, Free State, Limpopo, North West and the Eastern Cape.

Table 32: Casinos – share of revenue

	2014	2019
Number of market participants	6	7
Tsogo Sun (HCI), Sun International, Peermont (CR3)	97.9%	95%

Source: Who Owns Whom reports

110. The largest two casino operators in the country are also the two largest LPM operators with Tsogo Sun and Sun International together accounting for 77% of South Africa's LPM positions in 2019. Sun International gained prominence in this segment by purchasing LPM operations at the end of 2015. Furthermore, Goldrush, that was traditionally strong in the bingo segment and was ranked third among LPMs in 2019, purchased LPM operator Crazy Slots in 2016, helping to raise its market share somewhat between 2015 and 2019.

Table 33: LPMs – share of positions

	Year end March 2015	Year end March 2019
No. LPMs	10 279	13 034
No. LPM sites	2 071	2 347
Tsogo Sun (HCI)	49.1%	46.5%
Sun International (Previously GPI)	Unknown	31.0%

Goldrush	10.1%	14.4%

Sources: Who Owns Whom, NGB, annual reports

111. Two of the three largest LPM operators are also the largest bingo operators, namely Goldrush and HCI/Tsogo Sun. Goldrush accounted for 55.4% of all bingo outlets by March 2020, an increase from 42.3% in 2015, following an acquisition of Boss Bingo. HCI's Galaxy Bingo held a share of about 37.5% of reported bingo outlets in March 2020, although this represented a decline from 46.2% in the year ended March 2015.

Table 34: Bingo – share of outlets

	Year end March 2015	Year end March 2020
No. bingo outlets	26	56
No. bingo positions	9 427	5 369
Galaxy Bingo (HCI)	46.2%	37.5%
Goldrush	42.3%	55.4%

Sources: Who Owns Whom, NGB, annual reports

112. Phumelela Gaming (recently acquired by other shareholders following business rescue) is the dominant totalisator in seven of the country's nine provinces with the exception of the Western Cape (where Kenilworth Racing is licensed as the totalisator and Phumelela the manager of racing operations) and Kwa-Zulu Natal (where Gold Circle is the dominant totalisator and Ithotho has been licensed as a totalisator since December 2013). Powerbet is also operational as a totalisator in Mpumalanga along with Phumelela Gaming.

3.10 RETAIL

113. The Commission considered the concentration ratios of five different retail segments, which are summarised in the table below.

Table 33: Concentration ratios of large incumbent retailers per retail segment, 2015 and 2018

Retail segment	Incumbents	2015	2018
Supermarkets[(i)]	Shoprite, Spar, PnP, Woolworths (CR4)	57.1%	58.3%
Apparel[(i)]	Edcon, Woolworths, Foschini, Truworths, Woolworths (missing Pepkor) (CR5)	64.2%	57.9%
Building/Home Improvement[(i)]	Massbuild, Spar's Build It, Cashbuild, Pepkor's The Building Company (CR4)	48.8%	50.7%
Pharmacy [(i)]	Clicks and Dischem (CR2)	38.3%	49.0%
Online[(ii)]	Takealot, BidorBuy, Superbalist, Onedayonly (CR4)		77.3% (Oct-2020)

Sources: (i) Statistics SA and annual reports, annual reports, (ii) https://www.similarweb.com/

114. Many of the same retail groups are present (and even prominent) across a number of the retail segments.

Table 34: Retailer presence across retail segments

	Supermarkets	Apparel	Building	Pharmacy
Shoprite	x			x
Spar	x		x	x
PnP	x	x	x (small)	x (small)
Woolworths	x	x		
Massmart	x	x	x	
Pepkor		x	x	

115. **Supermarkets.** Seven national supermarket chains tend to dominate the grocery retail sector in South Africa. Four of these are *incumbents* Pick 'n Pay, Shoprite-Checkers, Spar and Woolworths, which together accounted for around 58.3% of formal sector turnover in 2018. The remaining three supermarket chains are emerging retailers namely Massmart's grocery business, Food Lover's Market, and Choppies, which has since exited. Massmart and Food Lover's Market expanded their store networks by 23.3% and 17.1% respectively between 2015 and 2020. Massmart is among the largest four grocery retailers despite being a challenger retailer. Choppies, which managed to more than double its estimated market share (up to 1%) between 2015 and 2018, suffered two years of financial losses, after which it sold off its South African operations. The largest four retailers (includes Massmart rather than Woolworths) comprised at most 61.5% in 2018, similar to 61.2% in 2015. Based on cross-country research, South Africa's concentration ratio in 2015 (61.2%) was lower than in four of six European countries' grocery retail sectors.[53] Of the 50 notified merger transactions among supermarkets between 2011 and 2020, 68.2% involved the four incumbent supermarket retailers, suggesting incumbents are further strengthening their positions via merger transactions.

116. **Apparel**. Although there are numerous apparel retail chains and independent stores in South Africa, large apparel retail chains still tend to account for most of this retail segment. Large incumbent apparel retail chains (The Foschini Group, Truworths Group, Mr Price Group, Woolworths and Edgars) were estimated to hold at most 58% of total turnover in the segment in 2018. This represented a decline from 64% in 2015, which is likely due to the sector seeing entry from new online apparel retailers such as Superbalist and Zando as well as international branded stores like Cotton On, Zara and H&M. In addition, supermarket retailer Pick 'n Pay has started to play a greater role in the retailing of apparel, growing its store footprint by 69.5% from 118 in 2015 to 200 in 2018. These factors are likely to have also contributed to Stuttafords' and Edcon's demise and eventual exit in 2017 and 2020 respectively. Given that both Pick 'n Pay and international retailers have since 2018 further expanded their store and online presence, the combined share of incumbent apparel retailers is likely to have declined further. The Foschini Group's position (and Retailability) will however have benefitted

53 Špička, J. (2016). Market Concentration and Profitability of the Grocery Retailers in Central Europe. Central European Business review, 5, 5-24; own calculations for South Africa. The countries with higher concentration levels included Germany, Austria, Slovakia and the Czech Republic.

from the purchase of Edcon's retail assets in September 2020.

117. **Building retail.** There are 4 prominent building retailers in the country, namely Builders Warehouse, Build It, Cashbuild, and Pepkor's The Building Company ("TBC"). Together, they accounted for 50.7% of turnover in the building retail segment market in 2018, slightly higher than 48.8% in 2015. Pepkor's TBC strengthened its position in this market segment via acquisitions over 2011-2020. Its sale of TBC to Cashbuild has been prohibited by the Commission and will be assessed by the Tribunal. There has been recent entry by French company, Leroy Merlin in 2018 with a similar large store format to Massmart's Builders' Warehouse, however its store presence remains limited to Gauteng.

118. **Pharmacy.** Clicks and Dischem are the largest community pharmacy companies and have been gaining market share over time. Together, their combined share of the dispensary segment was 38.3% in 2015 and 49.0% in 2019. Their combined share of many front-of-shop segments was higher. For example, their combined share of health and nutrition products sold in-store was 67.4% in 2015 and 78.5% in 2019. Dischem also indicated in its 2019 results that it alone controls more than half of the vitamins and supplements market in South Africa. Both firms filed mergers over 2011-2020 and there is evidence suggesting this may be Dischem's expansion strategy in future. Its proposed acquisition of Pure Pharmacy Holdings is currently being reviewed by the Commission.

119. **Online platforms.** Takealot, Superbalist, Bidorbuy and OneDayOnly are considered to be market leaders among e-commerce platforms although Loot.co.za, Zando and Yuppiechef are also notable operators. Based on web-traffic information of 14 online retailers, Takealot accounted for 53.4% of this traffic and Naspers (Takealot and Superbalist) 61.6%. Takealot has been involved in two major transactions since 2015, namely its merger with Kalahari in 2015, and then the acquisition by Naspers of Takelaot, Superbalist, Mr Dellivery and Kalahari.com in 2017.

3.11 INDUSTRIES INVOLVING KEY INTERMEDIATE MANUFACTURED PRODUCTS

120. The manufacturing sector is vast, covering many sub-sectors. We have focused on just three manufacturing sub-sectors, namely steel, chemicals, and plastics. All three are considered to be important inputs into a wide range of other industries, some of which are also covered in the study. We also consider the inputs used in a number of these industries.

121. **Steel.** There are broadly two types of steel - carbon steel which relies on iron, and stainless steel, which relies on chrome ore (from which ferrochrome is produced). The next table presents a summary of the concentration ratios of the largest 2/3 firms at various levels of the carbon and stainless-steel value chains.

Table 35: Concentration ratios in the steel industry value chain, 2014/5 and 2018/19

Steel segment	Top 2/3 firms in 2018/19	2014/15	2018/19
Iron Ore [(i)]	Kumba, Assmang, Palabora Copper (CR3)	90.6%	97.1%
Chrome Ore[(i)]	Glencore-Merafe, Samancor, Sibanye Stillwater (CR3)	45-55%	55-65%
Ferrochrome[(ii)]	Glencore-Merafe, Samancor (CR2)	75-85%	85-95%
Steel	AMSA, Columbus Steel, SCAW Metals (CR3)	85.8%	84.8%

Sources: (i) Mineral Council of SA, annual reports and newspaper articles (ii) Commission merger reports, (iii) SAISI

122. **Iron ore mining.** The mining of iron ore is highly concentrated with the three largest market participants accounting for 97.1% of total ore mined in the country in 2018. In fact, Anglo American's Kumba Iron Ore is dominant holding an estimated market share of 58.3% in 2019. The concentration ratio of the largest three firms increased by 6.5 percentage points between 2014 and 2019, primarily because firms ranked second (the Assmang joint venture) and third (African Rainbow Minerals - "ARM") grew their shares over the period. There have been two entrants in this segment over the last decade. Sedibeng, which entered the segment in October 2011, managed to grow its share from 0.9% in 2014 to 2.6% in 2019. Black-owned Manngwe Mining, which entered as recently as 2017, held a share of around 0.9% in 2018.

123. **Chrome ore mining**. The mining of chrome ore mining is also highly concentrated with the three largest mining companies accounting for 55-65% of total chrome ore mined in the country in 2019, an increase from 45-55% in 2015. The increase was mostly caused by market leader Glencore-Merafe raising its share significantly (by >10 percentage points) over the 2014-2019 period. Although there were two transactions among the second (Samancor Chrome including Hernic) and third (Sibanye Stillwater including Lonmin) largest chrome ore miners in the country between 2015 and 2019, it did not appear to significantly raise their market shares in this segment. Two other developments are worth mentioning. Firstly, Bauba Resources, which entered in 2015, grew its share from 0.5% to 1.9% between 2015 to 2019. Secondly, Platinum Group Metals ("PGM") miners have collectively raised their share of the segment from 20% in 2010 to 30% in 2017.

124. **Ferrochrome manufacturing.** This segment is dominated by Glencore-Merafe and Samancor Chrome, the two largest chrome ore miners in the country. Glencore-Merafe is dominant, accounting for 50-65% of ferrochrome production in 2019. Samancor managed to grow its share from 25-35% in 2017 to 35-45% in 2019 after acquiring the third largest market participant, vertically integrated Hernic. It had also been involved in three prior transactions, although these involved smaller market share accretions (≤5%).

125. **Steel.** There were 10 crude steel and iron producers in 2019, the same as in 2015. The largest 3 steel producers comprised 84.8% of total production, slightly lower than in 2015. AMSA controlled more than half of steel production, with a production share almost four times as large as the next largest steel producer, Columbus Steel, the only producer of stainless steel in the country. South Africa's CR3 was not too different to that of Japan and South Korea but higher than that of the United States (although its CR3 ratio also put it in the 'highly concentrated' category).[54]

126. The method and type of furnace determines the breadth of end-uses steel is appropriate for. The table below shows that there were fewer than four steel producers for roofing and cold forming, cable and wire, fasteners, and pipe and tubes. AMSA is the monopoly supplier to the fastener industry and accounts for more than 50% capacity of the remaining three steel end-uses. The mining and construction sectors' steel needs can be supplied by far more steel producers (13 and 10 steel suppliers respectively) although the top 3 steel producers account for 78.5% and 71.6% of total capacity respectively with AMSA again estimated to account for more than half of each segment.

Table 36: Capacity shares of steel producers per use, 2019

54 Feng, P., Xue, Y. & Shihua, P. (2021). Comparative study on industrial concentration degree of China, Japan, USA, Korea steel industry. E3S Web of Conferences, 235(1). Available at: https://www.researchgate.net/publication/349001036_Comparative_Study_on_Industrial_Concentration_Degree_of_China_Japan_USA_Korea_Steel_Industry

	No. producers	Total capacity	CR3
Mining	13	8 430	78.5%
Construction	10	2 920	71.6%
Roofing and Cold Forming	4	5 160	Confidential
Cable and Wire	3	1 400	n/a
Fastener	1	<250	n/a
Pipe and Tube	2	2 750-3 000	n/a

Source: SAISI

127. **Plastic.** The only producers of primary polymers in the country are Sasol Polymers and Safripol (KAP Industrial). Sasol Polymers is a monopoly manufacturer of low-density polyethylene ("LDPE"), linear low-density polyethylene ("LLDPE") and polyvinyl chloride ("PVC"), whereas Safripol is a monopoly supplier of high-density polyethylene ("HDPE") and polyethylene terephthalate ("PET"). Only polypropylene ("PP") is produced by both Safripol and Sasol Polymers although Sasol accounted for 83.9% of PP production in 2019.

128. **Recyclers.** While recycled plastic can also be used by converters, it cannot be used for all the same purposes as virgin material. There were estimated to be 288 recycling operations in 2019, an increase from 221 plastics recyclers in 2014. The largest 4% of plastic recyclers accounted for 37% of total tonnages of recycled plastic in 2019. There is a large tail of small plastic recyclers; 52% of recyclers in 2019 accounted for just 8% of recycled plastic. Concentration does appear to be higher among recyclers of LDPE, LLDPE, and PVC, where the largest 10% of recyclers account for more than 50% of recyclate production compared with the recycling of PP, Acrylonitrile Butadiene Styrene ("ABS") and HDPE. According to Plastics SA, eight long-standing and fairly large recyclers exited the industry over the last three years.

Table 37: Participation and concentration among plastic recyclers, 2019

	No. recyclers	Total tons re-processed	Top 10% - number	Top 10% - % of total tonnages
PP	133	60 653	13	37%
LDPE & LLDPE	139	121 920	14	53%
HDPE	123	65 308	12	42%
PET	11	69166	1	n/a
PVC	41	19 573	4	50%
Polystyrene	39	6 653	4	46%
Other materials		9 246		
-Acrylonitrile Butadiene Styrene	32	2 507	3	41%
-Polyamide	10	738	1	n/a
-PMMA	2	420	n/a	n/a
-Other	28	5 581	3	61%
Total		352 519		

Source: Plastics SA

129. **Semi-finished and finished plastic products.** There are between 1 600 and 1800 plastics converters in the country. In 2015, it was estimated that 80-85% of converters were SMEs.

130. The largest plastic product segment is packaging. In 2018, the largest 3 manufacturers together accounted for 31% and 44% of total production of the broad flexible packaging and rigid packaging segments respectively. However, if one looks at narrower product segments, the shares of the largest three manufacturers exceeds 50% of the market and in the case of two segments exceeds 90%. There were just two manufacturers with the capability of manufacturing food grade chips from PET bottles and one large manufacturer that produces "just about all" locally required volumes of bi-axially-orientated PP ("BOPP") films (e.g. for chocolate packaging).

Table 38: Concentration ratios in plastic packaging sub-segments

Packing sub-segments	Top 3 packaging	CR3
Flexible packaging (2018) [a]	Amcor, Constantia Flexible, Huhtamaki's Everest	25-35%
Rigid packaging (2018) [b]	Nampak, Mpact, RPC's Astropak	40-50%
Manufacture of PET pre-forms and plastic bottles (2012) [c]	MPact, Boxmore and Nampak	60-70%
Manufacture of PET containers – different types (2013) [d]	MPact, Boxmore and Nampak	50-60%
Manufacture and supply of PET and HDPE bottles for homecare and personal care (2016) [e]	RPC's Astrapak, Alpla, Serioplast	75-85%

Packing sub-segments	Top 3 packaging	CR3
Manufacture and supply of PET and HDPE bottles for beverages (2016)[e]	RPC's Astrapak, Nampak and Alpla	85-95%
Manufacture of food grade chips using recyclable clear and blue PET bottles (2015)[f]	Mpact and Extrupet	Only 2 firms had this capability in 2015
Plastic refuse bags (2015)[g]	Transpaco Plastics, Tuffy Verigreen (Super Mama)	85-95%

Sources: Merger reports

131. Other plastic product manufacturing sectors are significantly smaller than plastic packaging in terms of the percentage of total tonnages converted locally (2-13%). There is information to suggest that a number of these other plastics sub-sectors have low levels of participation and/or are highly concentrated. There were around three manufacturers of PP, Nylon and PET carpets in 2016, one of which accounted for 65-70% of the segment. There were also around three manufacturers of plastic safety footwear in 2014. Finally, in the case of PVC and HDPE pipes, the combined share of the three largest producers exceeded 60% of the market in 2013 (both) and 2017 (PVC only).

Table 39: Concentration ratios in PVC and HDPE pipe manufacturing segments

Plastic product	Top 3 plastic products manufacturers	CR3
PVC Pipes & Fittings (2017)[a]	Swan Plastics/DPI, McNeil Plastics, Flo-tek Pipes	60-70%
PVC Pipes (2013)[b]	Swan Plastics/DPI, Marley, Flo-tek Pipes	80-90%
HDPE Pipes (2013)[c]	Swan Plastics/DPI, Marley, Flo-tek Pipes	80-90%

Sources: Merger reports

132. **Chemicals.** South Africa's chemicals production landscape is highly skewed towards its largest firm, Sasol. Its second largest chemicals manufacturer AECI, earned less than half of Sasol's total chemicals revenue in 2019. The Commission examined three main chemical sub-segments: ethanol, pesticides and fertiliser.

133. **Ethanol.** There are just four local manufacturers of ethanol in South Africa, three of which produce sugar-based ethanol (which can be used in liquor) and one of which (Sasol) produces synthetic ethanol. Sasol accounts for 70% of total ethanol capacity and 45.5% of pure ethanol capacity.

134. **Pesticides.** The top 3 firms accounted for 40-50%, 50-60%, and 60-70% of the broad herbicide, insecticide and fungicide markets respectively in 2016. Seed treatment was even more concentrated with the largest three firms accounting for 90-100% of supply in 2017. However, Bayer/Monsanto was required by the Commission to sell off its seed treatment business and Bayer's non-selective herbicide business to BASF as a condition of the Bayer/Monsanto merger, leading to a reduction in the concentration ratio in seed treatment from 90-100% in 2017 to 75-85% in 2018 and no market share accretion in non-selective herbicides.

Table 40: Concentration ratios in the pesticide market

Product	Top 3 pesticide products manufacturers	CR3
Fungicides (2014)	BASF, Bayer and Syngenta	55-65%
Fungicides (2016)	BASF, Syngenta and Bayer	60-70%
Insecticides (2014)	Bayer, Syngenta, Platform/Arysta	40-50%
Insecticides (2016)	Villa Crop, Dow and Bayer	50-60%
Herbicides (2014)	Platform/Arysta, Syngenta and Monsanto	60-70%
Herbicides (2016)	Syngenta, Villa Crop and BASF	40-50%
Seed Treatment (2017)	Divestment Business of Bayer,Syngenta, Platform/Arysta	90-100%
Seed Treatment (2018)	BASF, Syngenta, Ag-Chem-Africa	75-85%

Sources: Merger reports

135. **Fertiliser.** There has mostly been just one manufacturer of ammonium nitrate (Sasol) and phosphoric acid (Foskor) in the country, two important inputs of fertiliser. However, in the last two years, Kropz started mining phosphate rock and Omnia built a nitro phosphate plant to use rock instead of acid, thereby reducing fertiliser manufacturers' reliance on Foskor.

136. The top three manufacturers of fertilizer straights (MAP, MOP, CAN and Urea)[55] held more than 60% of supply in 2013. In fact, in the case of MAP, MOP, and CAN, the market leader held between 40% and 60% of the segment, 2-3 times the size of the second largest manufacturer.

137. The top 3 manufacturers of NPK blended fertiliser held a share of 80-90% in 2019. Omnia leads the segment with a share 3.5 times the size of the second largest manufacturer of fertiliser. It increased its share of both the liquid and granular NPK segments from 25-40% in 2012 to at least 50% in 2017/18. There is some evidence of entry by fertiliser blenders after the Commission's settlement agreement with Sasol, many of which were small.

138. Nine horizontal mergers occurred in the sector between 2011 and 2020. The first three were divestitures of Sasol from various fertiliser businesses following its settlement agreement with the Commission. Of the remaining six, ETG was the acquirer in the case of five, purchasing both upstream capabilities in fertiliser straights as well as downstream operations in the manufacturing of blended NPK fertiliser.

Table 41: Concentration ratios in the fertiliser market

Product	Top 3 fertiliser products manufacturers	CR3
NPK blended fertiliser (2012)	Omnia, Profert and Kynoch	55-80%
NPK blended fertiliser (2014)	Omnia, Profert and Sasol	60-70%
NPK granular fertiliser (2012)	Omnia, Kynoch and Sidi Parani	60-80%
NPK granular fertiliser (2019)	Omnia, Yara, ETG/Kynoch	80-90%
NPK liquid fertiliser (2012)	Omnia, Kynoch, Sasol	60-80%

Sources: Merger reports

55 MOP Muriate of Potash, MAP is mono-ammonium phosphate and CAN is Calcium Ammonium Nitrate.

3.12 ENERGY

139. As with other sections of this report, the energy chapter starts downstream in the coal mining sector, by far the largest input into electricity supply in the country. It also examines concentration among Independent Power Producers ("IPPs") and in petroleum and liquefied petroleum gas ("LPG") production.

140. **Coal mining**. This segment appears to be moderately concentrated in that the top 5 coal producers together accounted for 62% of the country's total saleable coal production in 2019. The remaining small producers accounted for the remaining 26%. The concentration ratio of the top 5 coal producers declined from 82% in 2015 to 62% in 2019. The coal mining industry witnessed a notable number of mergers over the last ten years, none of which were prohibited, with the majority occurring among junior miners. This along with Anglo's disposal of several of its coal mining assets may explain the reduction in the concentration ratio in this industry.

141. Anglo American's disposal of certain of its assets in 2017 led to the creation of Seriti. Recently, Seriti purchased the majority share of South32's South African Energy Coal ("SAEC") business.[56] Following approval by the Tribunal (23 December 2020), Seriti became one of the largest coal producers in South Africa with a share of around 18% based on 2019 estimates.

Table 42: Concentration among thermal coal producers, 2015 and 2019

	Thermal coal producers	2015	2019
CR3	Exxaro, Sasol, Anglo American	53%	40.0%
CR5	Exxaro, Sasol, Anglo American, Glencore, South 32	82%	64%

Source: DMRE and annual reports

142. **Electricity generated by IPPs**. Eskom dominates the generation of electricity with a 90% share of the energy mix (the balance is supplied by municipalities, redistributors, and private generators) and is the only customer of the energy that is being generated by IPPs, which it distributes through the national grid. There are several IPP projects that were contracted to supply energy in bid windows 1-4 and subsequently were connected to the national grid. The largest three lead developers of IPP projects accounted for around half the approved MW in the case of Wind and Solar PV, the two largest technologies. These present a worsening of concentration from 2015 (prior to the contracting of bid window 4 developers) when concentration ratios were between 41% and 45%. The concentration ratio of the top 3 developers in Concentrated Solar Power was even higher than the two largest technologies at 75% of total approved MW in 2015. Our analysis of horizontal mergers among IPPs shows that of the ten mergers from 2015 to 2020, one involved a post-merger market share of 30-40% (in solar power) and three had post-merger market shares of 20-30% (one in wind and two in solar).

56 See Commission's merger case no.: 2019Dec0020.

Table 43: Concentration ratios in IPPs, March 2020

IPP Technology	Total contracted MW		No. lead developers		CR3	
	2015	2019	2015	2019	2015	2019
Wind		3 357	15	17	41.1%	50.8%
Solar PV		2 292	18	19	44.9%	49.8%
Concentrated Solar Power	600		5		75.0%	

Sources: Various articles

143. **Petroleum products**. The capacities of South Africa's six petroleum refineries have remained fairly constant between 2015 and 2018, save for the Enref refinery increasing its capacity from 120 000 gallons per day to 135 000 gallons a day in 2018. The combined capacity of the largest 3 petroleum refineries accounted for 64.8% of South Africa's total refining capacity (barrels per day) in 2018, up from 64.0% in 2015.

Table 44: Refining capacity shares (barrels/day)

	Top 3 refineries	2015	2019
CR3	SAPREF, Sasol, Enref	54.0%	68.8%

Source: SAPIA
Notes: The remaining smaller refineries are owned by NATREF, CHEVREF and PetroSA.

144. **LPG**. The Commission drew on data from the LPG market inquiry report which was conducted by the Commission in 2014. The inquiry found that the four major LPG wholesalers (Easigas, Afrox, Totalgaz and Oryx) together accounted for more than 90% of the LPG wholesale market.

Table 45: Concentration ratios in the LPG segment. 2012 and 2014

Product segment	Top 3 firms	2012	2014
LPG Wholesalers (incl. imports)	Afrox, Easigas, Oryz	65-75%	65-75%

Source: LPG Market Inquiry

3.13 AIRLINE INDUSTRY

145. The domestic airline industry is relatively concentrated, especially on thinner domestic routes where few airlines may be sustainable. The Commission considered eight different domestic routes for its analysis of the airline industry in South Africa. Two of the three Golden Triangle routes were flown by six airline operators (CPT-JNB-CPT and JNB-DBN-JNB). The third "Golden Triangle" route CPT-DBN-CPT had just four operators in 2019/20, a decline from 2015/16. Six operators also flew on the JNB-PLZ-JNB and JNB-ELS-JNB routes, which were historically considered to be thinner routes. Both had more operators in 2019/20 compared with 2015/16.

146. Three routes were flown by fewer than four operators in 2019/20, namely the JNB-GRJ-JNB, CPT-GRJ-CPT and JNB-BFN-JNB, with the CPT-GRJ-CPT routes only being flown by one operator. These are usually low traffic routes, which may explain the lower number of operators. However, it is notable that the number of operators on these routes were lower than in 2015/16.

147. Across all the routes with more than three operators, the largest three operators accounted for more than 65% of passengers in both 2015/16 and 2019/2020. There was a decline in this ratio for the three Golden Triangle routes over the period shown as well as on the JNB–PLZ-JNB route. The remaining route - JNB-ELS-JNB, experienced worsening concentration levels over this period.

Table 46: Passenger shares, 2015/16 and 2019/20

	2015/16		2019/20	
Route	No. of Operators	CR3	No. of Operators	CR3
CPT-JNB-CPT	6	74.0%	6	67.4%
JNB-DUR-JNB	6	82.1%	6	72.6%
CPT-DUR-CPT	5	92.6%	4	90.8%
JNB-PLZ-JNB	5	84.4%	6	83.6%
JNB-ELS-JNB	4	90.9%	6	99.5%
JNB-GRJ-JNB	5	86.8%	3	n/a
CPT-GRJ-CPT	3	n/a	1	n/a
JNB-BFN-JNB	3	n/a	2	n/a

Source: ACSA

3.14 AUTOMOTIVE INDUSTRY

148. The Commission also considered participation and concentration among sellers of new automotive vehicles in the country as is summarised in Table 47. There is both lower participation and higher concentration for commercial vehicles relative to passenger vehicles although concentration among passenger vehicles is moderate-to-high. Of the 38 sellers of new passenger cars, 47.3% were sold by the three largest sellers. In fact, most of this was held by the top 2 sellers of passenger vehicles – Volkswagen ("VW") and Toyota, which had more than double the sales share of Hyundai which was ranked third in 2019. In the case of commercial vehicles, there were at most 20 sellers and the three largest participants accounted for between 58% and 77% of sales. Notably, Toyota's share of the light commercial vehicle market was 41% in 2019, more than double the share of Nissan which was ranked second. Toyota, Isuzu, Mercedes Benz, Hino and UD Trucks feature among the top three sellers across a number of the four commercial vehicle segments that were examined.

149. There was little change in concentration between 2015 and 2019 among three of the five industry segments – passenger vehicles, medium commercial vehicles and extra heavy commercial vehicles. Concentration ratios increased in the case of light commercial vehicles (mostly because of Toyota gaining share) but declined in the case of heavy commercial vehicles.

Table 47: Sales of new vehicles

	Top 3 sellers in 2019	Number of OEMs		CR3	
		2015	2019	2015	2019
New Passenger Cars	VW, Toyota, Hyundai	39	38	46.9%	47.3%
Light Commercial Vehicles	Toyota, Nissan, Ford	23	20	67.9%	77.1%
Medium Commercial Vehicles		14	15	63.9%	61.7%
Heavy Commercial Vehicles	Isuzu, Hino, UD Trucks	10	11	68.6%	61.5%
Extra Heavy Commercial Vehicles	Volvo, Mercedes-Benz, Scania	15	15	61.0%	58.4%

Sources: Marklines.com

3.15 FINANCIAL SERVICES

150. The main segments considered in the financial services industry were long-term and short-term insurance, banking, retirement fund administration and collective investment scheme ("CIS") administration.

151. **Long-term insurance**. The broad long-term insurance segment was moderately concentrated in 2017 based on the concentration ratio of the three largest firms (42.2%). There was little change in the concentration ratio from 2013 despite there being far fewer long-term insurers (a decline of 21.2%). Long-term insurance products may be offered to individuals or provided to a group of employees. While individual long-term insurance products are also moderately concentrated, group long-term insurance is highly concentrated with the top 3 insurers accounting for 64.2%. There was an improvement in the concentration ratios of both individual and group long-term insurance products, although in the case of individual products, there was a 15.4% decline in the number of insurers offering long-term products to individuals.

152. Six long-term insurance segments were examined, as is summarised in Table 48. The highest level of participation was in the life insurance sub-segment in which there were 40 insurers, although this was down from 51 in 2013. Except for assistance insurance, which was moderately concentrated, the remaining five insurance segments were highly concentrated in that the three largest market participants accounted for more than 50% of the market. Liberty, Old Mutual, Discovery, and Investec were among the top three across a number of the long-term insurance segments in 2017. There was a notable increase in concentration in disability insurance and declines in assistance and sinking funds while there was little change in concentration among the remaining life insurance policies. South Africa's concentration in the life insurance sub-segment which is the largest long-term insurance segment was higher than eight of nine European countries (Greece being the exception) for which the Commission could find publicly available concentration data in 2018/19.[57]

153. The Commission also obtained aggregated concentration ratios for the largest five firms (CR5) in 2019/20 from the South African Reserve Bank ("SARB") but this was only available for the long-term insurance sector as a whole, the life insurance sub-segment, and the fund insurance sub-segment. Based on this data (not shown), the concentration ratios of long-term insurance overall and fund insurance experienced moderate increases of 2.9 percentage points each whereas that of life insurance stayed relatively constant over the 2017-2019/20 period.

Table 48: Share of total net premiums in long-term insurance segments, 2013 and 2017

	Top 3 firms 2017	No. of insurers		CR3	
		2013	2017	2013	2017
Overall	Old Mutual, Sanlam, Liberty	57	45	42.4%	42.2%
Individual	Old Mutual, Hollard, ABSA Life	65	53	46.4%	39.5%
Group	Old Mutual, Liberty, MMI	51	53	67.7%	64.2%
Life	Old Mutual, Liberty, Sanlam	51	40	53.3%	53.0%
Fund	Old Mutual Life, Alexander Forbes, Investec	23	19	52.0%	53.8%
Disability	Liberty, Discovery, MMI	24	21	63.0%	69.8%

57 Based on data and estimations by Statista (December, 2019), available at: https://www.statista.com/statistics/1116203/market-share-life-insurance-companies-europe-by-country/. The countries with lower concentration ratios included Germany, Italy, France, UK, Spain, Sweden, Netherlands and Poland.

	Top 3 firms 2017	No. of insurers		CR3	
		2013	2017	2013	2017
Assistance	Hollard Life, Liberty, Assupol Life	30	26	50.9%.	41.6%
Health	Liberty, Discovery, Guardrisk Life	15	14	62.3%	64.6%
Sinking Fund	Investec, First Rand Life, Old Mutual Life	17	14	60.6%	53.5%

Sources: FSCA

154. **Short-term insurance.** The broad short-term insurance segment was also moderately concentrated in 2017 based on the concentration ratio of the three largest firms (although it was even less so than in the broad long-term insurance industry). There was little change in the concentration ratio or number of insurers from 2013.

155. Of the eight short-term insurance segments, Santam, Hollard, Guardrisk, and Mutual & Federal featured among the top three across several short-term insurance sub-sectors in 2017. In fact, Santam was the market leader among four of the eight short-term insurance segments. The three largest firms accounted for more than half the gross written premiums in the case of four of the eight short-term insurance segments. The two largest segments, namely motor vehicle and property insurance had lower concentration ratios and higher levels of participation than the remaining sub-segments and there was little change in both participation and concentration in both over the 2013-2017 period. Of the smaller six short-term insurance sub-segments, the three largest firms accounted for 46.5%-48.5% in the case of two segments, and more than 50% in the case of the remaining four. Two of the six had experienced a reduction in the concentration ratio and four an increase over the 2013-2017 period.

156. The Commission also obtained aggregated concentration ratios of the largest five firms in 2019/20 for motor vehicle, property and accident and health insurance (not shown). The concentration ratios of motor vehicle insurance and accident and health insurance both experienced moderate declines of around 3-4% whereas that of property insurance stayed relatively constant over the 2017-2019/20 period.

Table 49: Share of gross written premiums in short-term insurance segments, 2013 and 2017

	Top 3 firms	No. of insurers		CR3	
		2013	2017	2013	2017
Overall	Santam, Hollard, Mutual & Federal	69	66	34.7%	35.1%
Motor vehicle	Santam, Hollard, OUTsurance	45	42	41.3%	40.3%
Property	Santam, Hollard, Mutual & Federal	49	51	36.9%	38.5%
Transport	Santam, Guardrisk, Hollard	27	23	41.8%	50.5%
Accident & Health	Guardrisk, Constantia, Hollard	37	35	53.3%	46.5%
Guarantee	Credit Guarantee, Lombard, Guardrisk	24	20	68.4%	57.8%
Liability	Rand Mutual, Santam, FEM	38	34	47.0%	52.7%
Engineering	Santam, Mutual and Federal, Hollard	19	17	57.5%	62.2%
Miscellaneous	Allianz Global, Legal Expenses, Guardrisk	26	23	43.6%	48.5%

Sources: FSCA

157. **Banking.** There were 18 registered banks in 2019, an increase of two from 2016. The banking industry continues to be dominated by 'the big four', which together accounted for 87.6% of assets under management in 2019 - little change from 2016. Investec and Capitec were the next largest banks in 2019 accounting for 8.4% and 2.1% of assets under management in 2019 respectively, with Capitec experiencing a small increase in its share over the 2016-2019 period. Tyme Bank and Discovery Bank entered the segment in November 2018 and July 2019 respectively. Based on research into concentration among commercial banks in other countries, South Africa's concentration ratio exceeded that of three other developing countries (Brazil, Russia and Nigeria) between 2016 and 2019, although both Brazil and Russia would be classified as highly concentrated and Nigeria as moderately concentrated based on their concentration ratios.

Table 50: Share of assets under management in the banking sector, 2016 and 2019

Top 3 firms	No. of banks		CR3	
	2016	2019	2016	2019
Standard Bank, FNB, ABSA (4th Nedbank)	16	18	69.0% (top 4 87.9%)	68.8% (top 4 87.6%)

Sources: FSCA

158. **Private retirement funds.** The top 4 retirement fund administrators held a share of 58.1% of all the funds administered by administrators in 2018/19, which was not much different to 2016/17. There were 172 retirement fund administrators in 2018/19, also with little change from 2016/17.

Table 51: Number of funds per retirement fund administrator, 2016/17 and 2018/19

Top 3 firms	Number of administrators		CR3	
	2016/17	2018/19	2016/17	2018/19
Liberty, MMI, Alexander Forbes (4th Sanlam)	170	172	51.3% (top 4 57.7%)	51.6% (top 4 58.1%)

Sources: FSCA

159. **Collective Investment Schemes ("CIS").** The CIS sector is less concentrated than retirement fund administration even though participation levels are significantly lower (47 versus 172). The largest three CIS administrators held just 30.4% of assets under management, a small decline from 2015/16.

Table 52: Shares of assets under management of CIS, 2015/6 and 2019/20

Top 3 firms	Number of administrators		CR3	
	2015/16	2019/20	2015/16	2019/20
Allan Gray, Stanlib, Coronation (4th Ninety One)	48	47	33.9% (top 4 42.2%)	30.4% (top 4 39.7%)

Sources: FSCA

3.16 HEALTHCARE

160. The private healthcare industry is a broad industry encompassing many sub-segments. The Commission considered concentration and participation in five sub-segments of the healthcare industry.

Table 53: Share of Gross Contribution Income of medical scheme administrators, 2016 and 2019

Name of administrator	2016	2019
No. of active administrators	30	26
CR3	78.3%	83.8%
Self-administered schemes	9.8%	10.3%
Other (0-2%)	10.9%	5.7%

Source: CMS

161. **Medical scheme administration.** The largest two administrators in the country – Discovery and Medscheme accounted for 79.6% of total gross contribution income in 2019. This represented a moderate increase from 75.5% in 2016. The next largest administrator, MMI Health is approximately nine times smaller than the two largest administrators. The collective share of the remaining 13 third-party administrators collectively declined from 10.3% to 5.7% between 2016 and 2019 whereas the combined share of the 15 self-administered schemes remained at around 10%.

162. **Medical schemes.** There are two types of medical schemes, open (accepting all persons wishing to join) and restricted schemes (set up by employers for their employees).

163. *Open.* There was a 13.0% decline in the number of registered open medical schemes between 2014 and 2019. Discovery Health Medical Scheme ("DHMS") controlled 56.4% of the average number of beneficiaries belonging to open medical schemes between 2014 and 2019, an increase from 53.8% in 2014. Ranked second was Bonitas, which was 3.9 times smaller than DHMS (14.5%). The next three largest schemes had shares of 4-6% each. The remaining 15 schemes had a combined share of 15.0% (with individual shares of under 3%). The concentration ratio of the top three medical schemes increased by just over 5 percentage points over the period, which was mostly caused by DHMS improving its position. Two other countries that the Commission could find health insurance market share information on, namely the United States and the Netherlands, also have highly concentrated medical scheme markets and in fact are even more concentrated than in South Africa.[58]

164. *Restricted.* There are almost three times as many restricted schemes as open schemes (58 versus 20 in 2019). The two largest restricted medical schemes were targeted at government employees. The Government Employees Medical Scheme ("GEMS") is the largest restricted scheme and accounts for 46.6% of all beneficiaries belonging to closed medical schemes. The South African Police Services Medical Scheme ("POLMED") is the next largest restricted scheme, with a beneficiary share that is 3.7 times smaller than GEMS. There are just two other schemes with beneficiary shares that are above 2% namely Bankmed and the LA-Health Medical Scheme. There has been little change over the 2014-2019 period except that there were two fewer restricted medical schemes.

58 The Netherlands: Vektis (2020). Zorgthermometer – Verzekerden in Beeld 2020. Available at: https://www.vektis.nl/intelligence/publicaties/zorgthermometer-verzekerden-in-beeld-2020; KFF data on US individual health insurance market competition, available at: https://www.kff.org/other/state-indicator/individual-insurance-market-competition/?activeTab=graph&currentTimeframe=0&startTimeframe=8&selectedDistributions=herfindahl-hirschman-index-hhi&selectedRows=%7B%22wrapups%22:%7B%22united-states%22:%7B%7D%7D%7D&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D

Table 54: Shares of average number of beneficiaries among medical schemes, 2015/6 and 2019/20

Type of medical scheme	Top 3 firms	Number of Firms		Share of top 3	
		2014	2019	2014	2019
Open	Discovery, Bonitas, Momentum (followed by Medihelp and BestMed)	23	20	71.9% (top 5-82.4%)	77.0% (top 5- 85.1%)
Restricted	GEMS, POLMED, Bankmed (followed by LA-Health Medical Scheme)	61	58	64.8% (top 4- 67.9%)	64.8% (top 4- 69.9%)

Sources: CMS

165. There were 16 notified horizontal mergers among medical schemes over the 2011-2020 period. Of these, nine occurred over the 2011-2014 period and 12 involved four of the five largest open medical schemes (DHMS, Bonitas, Bestmed and Momentum Health).

166. **Hospitals.** The three largest hospital groups in the country are Netcare, Life and Mediclinic that accounted for 71-72% of all acute hospitals and all registered hospital beds in 2020. The rest is held by National Health Network ("NHN") hospitals. Based on a study by Fulton (2017), which looked at HHI in various healthcare segments in the country, the US hospital market was also highly concentrated in 2016.[59] There were four provinces in 2020 where just one of the three largest hospital groups owned more than half of all the province's hospitals (Life in the Eastern Cape and, Mediclinic in Limpopo, the Northern Cape and Western Cape). NHN hospitals owned more than 20% of hospitals in six provinces (with the exceptions being the Eastern Cape, Gauteng and the Western Cape). It is worth noting that 5 of the 13 notified hospital mergers between 2011 and 2020 period were prohibited by the Commission.

Table 55: Share of hospitals and beds, 2017 and 2020

	Share of registered private beds		Share of hospitals
	2017	2020	2020
Netcare, Life Mediclinic	71.6%	71.4%	71.9%
NHN	28.4%	28.6%	28.1%

Sources: CMS

167. **Emergency Medical Services ("EMS").** Netcare 911 (part of the Netcare Hospital Group) is the only emergency service provider that operates throughout South Africa, while most ambulances operate in just one province. There are fewer than 12 private ambulance services per province with the Free State and Western Cape containing the fewest (three and five ambulance services respectively).

168. **Pathology.** Historically, the pathology segment has been dominated by Pathcare, Lancet and Ampath. Based on merger reports, they comprised between 85 and 90% of the pathology market in 2016. The prevalence of each of the three pathology group's laboratories vary across provinces as there is often just one (Northern Cape and Western Cape) or two (Eastern Cape, Gauteng, KZN and Limpopo) laboratory companies which dwarf the remaining of the three groups in a province.

59 Fulton, B.D. (2017). Health Care Market Concentration Trends in the United States: Evidence and Policy Responses. *Health Affairs, 36(9), 1530-1538.* Available at: https://www.healthaffairs.org/doi/10.1377/hlthaff.2017.0556

Table 56: Share of laboratories, 2020

Province	Lancet	Pathcare	Ampath
Eastern Cape	1	17	13
Free State	15	25	11
Gauteng	137	44	151
Kwazulu-Natal	35	6	45
Limpopo	16	2	12
Mpumalanga	16	0	16
North West	10	12	18
Northern Cape	2	10	0
Western Cape	14	66	17
Total	241	182	281

Source: Pathology group websites

169. **Radiology.** The largest number of radiology practices are in the three most populous provinces of South Africa (Gauteng, KwaZulu-Natal and the Western Cape). The top 3 radiology practices by number of branches account for 40-70% of all radiology branches in these three provinces.

170. There are fewer than ten radiology practices in the remaining 6 provinces of the country. There are just two each in the Northern Cape and Mpumalanga. Half the radiology practices in these two provinces (one of two practices) as well as the North West (three of six practices) accounted for 65-77% of all radiology branches in 2020. For the remaining three provinces (Eastern Cape, Free State and Limpopo), the largest two radiology practices accounted for 40-60% of all branches in 2020.

Table 57: Shares of laboratories, 2020

Provinces	No. of practices	No. of branches	Practices with most branches	'Concentration ratio'
Gauteng	43	163	Top 5	43.6%
KwaZulu-Natal	19	43	Top 5	58.1%
Western Cape	15	78	Top 5	67.9%
Eastern Cape	9	28	Top 2	60.7%
Free State	9	21	Top 2	50.0%
Limpopo	7	10	Top 2	40.0%
Mpumalanga	2	12	Top 1	66.7%
Northern Cape	2	4	Top 1	75.0%
North West	6	17	Top 3	76.5%
Total	112	376		

Sources: Radiological Society of South Africa (RSSA)

3.17 COMMUNICATION

171. **Mobile**. The mobile market is very highly concentrated. While Telkom, and to a lesser degree Cell C, have increased their market shares, Vodacom and MTN together have consistently accounted for more than 70% of various mobile markets. Later market entrants (MVNOs and Rain) still play a peripheral role, with consistently low subscriber shares of under 3%.

Table 58: Concentration ratios of top 3 mobile operators (CR3), 2015 and 2019

	2015	2019
Service Revenue Share	97.4% (CR2 – 86.1%)	89.2% (CR2-76.9%)
Voice Revenue Share	98.9% (CR2- 90.4%)	94.9% (CR2- 84.8%)
Data Revenue Share	95.4% (CR2- 86.7%)	87.5% (CR2- 70.1%)
Subscribers	87.1% (CR2- 77.0%)	84.9% (CR2- 72.0%)
Prepaid Subscribers		87.9% (CR2- 74%)
Post-Paid Subscribers		91.5% (CR2– 81.3%)

Sources: Annual reports

172. **Fixed line**. Fixed line is divided into two layers: the infrastructure layer as well as the retail service layer. Fibre infrastructure used to provide fixed line data is segmented into four levels namely, international, national, metro and "last mile". The Commission obtained concentration and/or participation data on three of these infrastructure levels in addition to the retail service.

173. *Undersea cables*. About 20 years ago, Telkom was the only one with interests in undersea cables but now MTN, Vodacom, Telkom, and Liquid Telecom all have stakes in submarine cable systems.

174. *National infrastructure*. Previously, Telkom used to be the sole operator but now there are other providers such as Broadband Infraco, Liquid Telecom and, Fibre Co and Dark Fibre Africa. However, Telkom still accounted for 73% of national fibre infrastructure in 2017.

175. *Last mile fibre-to-the-home ("FTTH")*. There is also a high level of concentration at this level of the value chain. Telkom Openserve and Vumatel Holdings accounted for 65% of homes passed in March 2019. This was an improvement in some ways as three years prior Telkom had just under 45% share of the market and the remaining competitors all had shares of under 10%. On the other hand, while Vumatel's share has grown and Telkom's reduced, Frogfoot lost market share over the 2016-2019 period. Furthermore, the concentration ratios of the top 3 firms accounted for 74.7% in the financial year ended March 2019, an increase from 61.9% at year end March 2016.

Table 59: Last mile FTTH infrastructure level – market shares based on homes passed

	Mar-16	Mar-19
Openserve	44.5%	30.9%
Vumatel	8.7%	36.6%
Frogfoot	8.7%	7.2%
Others	38.0%	25.3%

Source: CMS

176. *ISPs*. Based on aggregated data received from the Independent Communications Authority of South Africa ("ICASA") for 2019, the largest 4 ISPs accounted for 79.4% of all FTTH subscriptions. This represented a decrease in the concentration ratio of the top four ISPs between 2018 and 2019. The concentration ratio of the top 10 on the other hand was relatively static, suggesting

that ISPs 6-10 collectively gained market share between 2018 and 2019.

Table 60: ISP share of FTTH subscriptions

	2018	2019
CR4	85%	79.4%
CR10	95.9%	96.2%

Source: ICASA

Notes: Only includes data from survey respondents. There were 45 respondents in 2018 and 33 in 2018.

3.18 MEDIA

177. Broadcasting and publishing are both two-sided markets which interface with both consumers of content and advertisers.

178. **Broadcasting.** The Commission examined four broadcasting sub-segments.

179. *Radio*. The largest 3 media houses in radio (SABC, Kagiso Media and Primedia) earned 83.5% of advertising revenue in 2019. This was 8.8 percentage points higher than in 2014 despite collectively broadcasting five fewer radio stations. Not surprisingly, advertising revenue per station more than doubled between 2014-2019. While there were more 'other' commercial radio broadcasters (7 versus 11) and channels (10 versus 15) in 2019 than 2014, the collective advertising share of these smaller competitors dropped from 20.9% to 14.5%. between 2014 and 2019. There were around 200 community radio stations in 2019 that earned just 2.0% of total advertising revenue for radio. This was lower than in 2014 despite there being around 50 more radio stations.

Table 61: Number of radio stations and advertising revenue of broadcasters

	Ad revenue share		No. stations		Ad revenue/station (Rm)	
	2014	2019	2014	2019	2014	2019
Top 3 Broadcasters	74.7%	83.5%	33	28	34.2	87.3
Others (2014-7 and 2019-11)	20.9%	14.5%	10	15	31.5	30.2
Community	4.4%	2.0%	142	193	0.5	0.3
Total	R314.9m	R423.1m	185	236	8.2	12.4

Sources: Nielson via Broadcasters Research Council ("PRC")

180. *Television*. The three largest television broadcasters (MultiChoice, SABC, e-Media) made up 90% of total estimated advertising revenue in 2019 with little change over the 2014-2019 period. SABC had far fewer channels than MultiChoice but commanded a similar advertising revenue to MultiChoice in 2019 and the highest advertising revenue in 2014. SABC's advertising revenue declined over the five-year period (mimicking its share of audience) whereas that of MultiChoice increased. eMedia in third place, also experienced an increase in advertising revenue between 2014 and 2019. While eMedia's annual report puts e.tv's audience share during prime time at 19.2% in 2019, its share of the available news audience was both high (50.6%) and increasing (from 46% in 2015).

Table 62: Number of television channels and advertising revenue of broadcasters

	Ad revenue share		No. channels		Ad revenue/channel (Rm)	
	2014	2019	2014	2019	2014	2019
Top 3 Broadcasters	91.2%	90.2%	80	76	74.7	189.0
Top 5 Broadcasters	99.2%	98.2%	92	93	70.7	168.1
Independents (2 in 2014, 6 in 2019)	0.8%	1.8%	3	10	17.0	29.1
Total	R6.6b	R15.9b	95	103	69.0	154.6

Sources: Nielson via Broadcasters Research Council ("PRC")

181. *Video streaming services.* Netflix, which has experienced high growth in subscriber numbers since it entered South Africa in January 2016, has the highest estimated usage share (35%) of video streaming in South Africa in 2019. It is far ahead of Showmax and Viu with estimated usage shares of 15% each.

Table 63: Estimated usage share of video streaming usage in South

Streaming content	CR3
Netflix, Showmax, Viu	65%
Others (incl. Amazon Prime , YouTube)	35%

Source: Statista

182. *Cinema.* Primedia dominates the cinema segment via Ster Kinekor (which is currently in business rescue). It owned approximately 59.1% of all cinemas (of 10) and 62.2% of all theatre screens in the country in 2020. The next largest cinema company Nu Metro is around half the size of Ster Kinekor in terms of its share of cinemas (23.7%) and theatre screens (27.8%). There are two other cinema chains namely Movies (Tsogo Sun) & Cine Centre (Avalon) which own 4.8% and 3.7% of all screens respectively. The remaining cinemas have just one screen and are more specialist in their offering.

Table 64: Percentage share of the number of cinemas and screens, 2020

	Cinemas	Screens
CR3	89.3%	94.8%
-Ster Kinekor	59.1%	62.2%
-Nu Metro	23.7%	27.8%
-Movies (Tsogo Sun)	6.5%	4.8%
CineCentre	4.3%	3.7%
Others	6.6%	1.6%

Source: Company websites

183. **Publishing.** The Commission examined two publishing sub-segments.

Table 65: Number of publications and advertising revenue of magazine publishers

	Advertising revenue share		No. of publications		Ad revenue / publication (Rm)	
	2014	2019	2014	2019	2014	2019
CR3	63.4%	55.3%	81	78	15.7	10.3
CR7	76.9%	71.6%	94	98	18.4	12.1
Other	23.1%	28.4%	107	80	4.6	4.6
Total	1,959	1,280	201	178	5.9	5.5

184. *Magazines.* There was a decline in the number of magazine publications over 2014-2019. The three largest media owners (Media24, Caxton and Highbury Safika) accounted for 55.3% of total advertising revenue in 2019, an 8.1 percentage point improvement from 2014. The top 3 media owners earned on average R10.3 million per publication in 2019, almost double the average across all publications.

185. Based on estimated readership shares (not shown), Media24 titles accounted for 49.9% of readership, more than double the share of Caxton, with the second largest share (20.3%).

186. *Newspapers.* There were 10 publishers of newspapers in both 2014 and 2019. The largest 4 newspaper publishers (Media24, Independent, Caxton and Arena Holdings) produced 87.6% of all newspaper titles in 2019, a share that decreased slightly from 2014 (90.3%). Together, they accounted for 93.7% of total advertising revenue, a share similar to five years prior. Advertising revenue per newspaper publication of the largest four media houses was 2.5 times higher than the average of the remaining six media houses.

187. The top 4 publishing houses accounted for 77.1% of all print and digital newspaper readership in 2019 (not shown), down somewhat from 80.8% in 2017. Media24 titles accounted for 44.0% in 2019, more than double that of Independent Media and Arena Holdings in second and third place respectively. Caxton's share of newspaper readership (mostly community newspapers) was far below that of the top 3 publishing houses, with a share of just 2.2% in 2019.

Table 66: Number of newspaper publications and advertising revenue of publishers

	Advertising revenue share		Number of publications		Ad revenue / publication (Rm)	
	2014	2019	2014	2019	2014	2019
CR4	93.4%	93.7%	326	403	22.5	18.1
Other publishers	6.6%	6.3%	35	57	34.8	7.2
Excl. TNA Media (The New Age)	5.0%	6.3%	34	57	21.3	7.2
Excl. TNA Media & M&G Media	3.9%	5.6%	33	54	10.4	5.7
Total	R6.2b	R5.9b	361	460	29.9	11.6

Source: Nielsen via the Publisher Research Council

3.19 PROPERTY

188. The number of REITs and Real Estate Investment and Services increased between 2017 and 2020. The number of REITs increased from 23 to 35[60] and the number of Real Estate Investment and Services, most of which are foreign owned, increased from 10 to 15. Outside the property companies listed on the JSE, the Who Owns Whom report for May 2020 indicated that there are at least 31 private property companies and 14 private property developers that are not listed.

189. In the REITs sub-sector, Growthpoint, Redefine and Fortress were the three market leaders in both 2017 and 2019, accounting for 45.5% of total assets under management in 2019, a small decline from 47.2% in 2017. Redefine was around double the size of Fortress in 2019, which had experienced a declining share of assets under management. There were 23 small REITs in 2019, one more than in 2017. The average market share of smaller REITs was 0.9% in 2017 and 1.1% in 2019.

60 WoW Report, Real Estate Activities. May 2020. Page 5.

Table 67: REITs, 2017 and 2019

	Number of REITs		CR3		Average share of small REITs	
Top 3	2017	2019	2017	2019	2017	2019
Growthpoint, Redefine, Fortress	33	34	47.4%	45.5%	0.9%	1.1%

Source: Yahoo Finance

Notes: There were 24 listed REITs outside of the top 10 in 2019 and 22 in 2017.

190. Growthpoint and Redefine accounted for the largest shares in the office, industrial and retail sub-segments. Fortress and Investec also had a sizable presence across these three segments in 2019. The remaining top 10 REITs specialised in different segments of the property sector, with no or small shares in other sub-segments. For example, Resilient, Hyprop and Vukile specialised in retail; Rebosis and Attacq in office and retail; and SA Corporate Real Estate in industrial and retail.

191. In the Real Estate Investment and Services subsector, the three largest listed firms made up 59.5% of assets under management of 13[61] listed firms in 2019, a small increase from 57.0% in 2017. As not all Real Estate Investment and Services companies are listed companies and the estimates are based on information contained in annual reports, these concentration ratios may be overestimated. Total assets under management in Real Estate Investment and Services companies grew by 18.0% from 2017 to 2019. Apart from Acsion, and Balwin (and Echo Polska in fifth place), many beneficiaries of this growth were small, listed firms such as MAS Estate and Grit Real Estate.

Table 68: CR3 of listed Real Estate Investment and Services, 2017 and 2019

Top 3	2017	2019
Acsion, NEPI Rockcastle, Balwin (replaced Capital & Counties)	57.0%	59.5%

Source: Yahoo Finance

192. There has been a substantial number of notified mergers in the property sector. There were 166 large, 366 intermediate and 14 small property mergers between April 2011 and March 2019. Growthpoint was involved in 13 acquisitions, Redefine 20, Fortess 8, Hyprop 2, Investec 11, and Rebosis 6. Large property companies were more active in acquiring Grade A property space in up-market property nodes.

3.20 CONSTRUCTION

193. Based on Construction Industry Development Board ("CIDB") data, which unfortunately cannot provide a complete picture of the construction industry, there was an 89.4% increase in the number of construction companies registered on the CIDB database between 2016 and 2021 for all work categories and grades. Building and Civil work have far more contract awards compared to other work class categories and so they were the focus of the Commission's analysis. The CIDB uses a grading system for contracts based on the value of the contracts. In 2019, grade 7 covered contracts valued between R20 million and R60 million, grade 8 covered contracts valued between R60 million and

61 Information about two other listed firms, namely the Freedom Property Fund and Raven Property Group Limited was not available when the data was compiled in 2020.

R200 million whilst grade 9 covered all contracts over R200m. Since most contract value is located in Grades 7-9 (high value contracts), the Commission also assessed concentration ratios in each of these three grades in Building and Civil Works.

Table 69: Participation and concentration among CIDB contracts, 2019

		Number of contracts	CR3
Building	Overall	147	64.6%
	Grade 7	49	20.9%
	Grade 8	37	27.7%
	Grade 9	26	75.9%
Civil	Overall	60	55.8%
	Grade 7	7	49.9%
	Grade 8	4	Confidential
	Grade 9	6	69.5%

Source: CIDB

194. In the Building category as a whole, the top 3 companies by contract value accounted for 64.6% of total contract value in 2019. The concentration ratio of the top 3 firms in the Civil work category is also high, accounting for 55.8% of total contract value in 2019. The table shows that concentration ratios among Civil works projects are high across the three grades shown whereas only Grade 9 projects in Building are highly concentrated.

195. According to media reports, listed construction contractors have as a whole lost more than 80% of their value over the last 10-12 years.[62] Financial difficulties in the construction sector have led to several South African construction companies applying for business rescue since 2018, such as Basil Read (June 2018), the Liviero Group (July 2018), Esor Construction (January 2020), Probuild (June 2019) and Group Five (March 2019). Furthermore, Leco Construction has already been liquidated and Calgro M3 closed its construction division. Based on a recent *Construction News* article, subdued construction contracts and financial difficulties has left just 2 firms (WBHO and Raubex) in the heavy construction sector that are able to undertake major infrastructure projects.[63] Therefore, business failure has and may continue to impact on participation and concentration in the construction sector. Most mergers in this sector were vertical and/or did not significantly change market concentration.

3.21 EMERGING EVIDENCE ON THE IMPACT OF THE COVID-19 PANDEMIC

196. The data sources available to the Commission at a sectoral level or national level are historic and are not capable of measuring the impact of the Covid-19 pandemic on concentration and participation. However, it is apparent that there were some short-term impacts on many sectors hard hit by the national lockdown (e.g., restaurants, cinema, travel) and particularly among SMEs. This suggests a decline in participation and potentially growing concentration. An important question is whether those short-term impacts may be reversed over time as the economy recovers and business rescue processes conclude. This will be the subject of a future edition of this study.

62 Construction News, 26 May 2020, available at: http://constructionnews.co.za/another-construction-company-to-delist-from-jse/

63 Construction News, 26 May 2020, available at: http://constructionnews.co.za/another-construction-company-to-delist-from-jse/

04 CONCLUSIONS AND BROAD RECOMMENDATIONS

197. However, in two sectors specifically, there seems to have been more permanent shifts in the market that may endure and are therefore worthy of highlighting in this report. These are the airline industry which has seem massive restructuring and the publishing industry which has seen permanent closures.

198. **Airlines.** The ban on flights in the first few months of the pandemic led to Comair and SAA entering business rescue and being grounded until late 2020. Comair only resumed flights in the last two months of 2020 with SAA only planning to resume mid-2021. SA Express' business rescue process resulted in the airline's closure albeit that a group of former SA Express workers have sought the route rights but none of the assets.

199. The absence of SAA and Comair provided scope for other low-cost domestic airlines to increase their share of the domestic trunk route markets. FlySafair was one of first airlines to get back into the skies, followed soon after by Mango. The absence of other airlines and cheap leasing arrangements resulted in the entry of a new airline, Lift, in December 2020 seeking to compete in the low-cost airline space.

200. On the thinner domestic feeder and regional routes, the exit of SA Express left a gap for both Airlink and Cemair who began operating shortly after flights were permitted. Initially these two airlines even contested the trunk routes due to the closure of smaller airports, but this is unlikely to be sustainable long-term. Cemair in particular has expanded into a number of routes in the absence of SA Express and even SAA, making them a more sizeable competitor.

201. The disruption of airline markets and the gap left by the absence of SAA has seen changes to the interlining and franchise arrangements in the industry. Airlink terminated its franchise agreement with SAA after it went into business rescue and later signed agreements with Qatar and Emirates. Emirates also announced an interline agreement with FlySafair. Cemair has also secured interline agreements with Qatar Airways, Ethiopian Airlines and Proflight Zambia.

202. These developments are likely to reshape the airline market both domestically and regionally, making the prior market shares less relevant to future enforcement.

203. **Publishing.** The country has seen the end to a number of magazine titles following the closure of Associated Media, Caxton's exit from magazine publishing, and the closure of five of Media24's magazine titles. Based on preliminary estimates, Media24 could account for 73.0% of magazine readership in South Africa post-Covid with the next largest publisher (Ramsay Media) making up just 11.6%. There were also some setbacks in newspaper publishing. Media24, for example, announced the closure and consolidation of a number of its newspaper titles.

204. This study builds on previous research by the Commission into the persistence of high levels of concentration in the South African economy using merger investigation reports. This study provides a detailed assessment of concentration and participation across 178 sectors of the economy, making use of industry data collected by industry associations, regulators, statistical agencies and government. These sources of data are collected on an ongoing basis, enabling a consistent measurement of trends, in addition to levels, of concentration and the extent of participation, including the relative size of participants, within the sectors covered.

205. The sectoral analysis of concentration and participation provides important insights into individual sectors which can assist in shaping competition law enforcement but also broader government policy within those sectors. Aside from the sectoral assessments, the study has also made a number of important cross-sectional findings which highlight the deep-seated concentration in the economy and the challenge in promoting increased participation, including:

    205.1. The persistence of high levels of concentration in particular parts of the economy including numerous sub-sectors within the agriculture value chain, healthcare, communications, steel and chemicals, financial markets, transport and the so-called sin industries. In many cases these industries remain dominated by firms that received state support in one form or another in the apartheid era.

    205.2. Highly concentrated markets were more likely to see increases in concentration in the past 5-10 years, especially those with a presumptively dominant firm. This is in stark contrast to unconcentrated and moderately concentrated sectors where a declining concentration was more likely than an increase.

    205.3. Mergers have not been the main contributing factor to the highly concentrated sectors realising increasing levels of concentration, as mergers only increased the share of leading companies in a third of the cases. However, mergers have been behind increasing consolidation in ownership in sectors licensed by government, including fishing, gambling and IPPs.

    205.4. SME numbers have grown but these firms face increasing exit rates which are already high by comparative standards. There is evidence of successful transitioning of medium firms to large, whereas small and micro firms are less likely to transition.

    205.5. There is a high degree of inequality in firm income when considering the overall distribution of income across all tax-paying firms. The top 10% of firms earn 86% of all firm income whilst the bottom 50% earn only 1.6% of firm income. This translates to a Gini coefficient of 0.837 which far exceeds the Gini for household expenditure at 0.63. Indicative of this inequality, SMEs account for 95% of tax-paying firms but only account for 25% of turnover. This is in contrast to the OECD average for SME contribution to value add of 50-60%.

    205.6. Participation is challenging in concentrated sectors as the majority of these sectors have fewer than 20 participants. Where there are greater levels of participation, typically the market is less concentrated, suggesting that efforts to promote participation are important in reducing

concentration.

205.7. The agricultural sector demonstrates some concerning trends in concentration and participation. Agricultural inputs and processing are over-represented amongst highly concentrated sectors, with many inputs being completely dominated by just a few global firms and processing remaining concentrated despite a broader base of participation. The rapid decline in commercial farmer numbers is concerning in itself but also for government efforts to redistribute land and develop emerging farmers in a bid to transform the sector.

206. The study findings affirm the case made for amendments to the Competition Act by earlier studies, and for those amendments to strengthen the Commission's enforcement capabilities. In particular, there is a shift in emphasis from simply protecting competition and participation, to more actively promoting improvements in competition, reducing concentration in the economy and actively promoting broader participation and a spread of ownership. Important amendments include:

206.1. Strengthened provisions to address abuse of dominance, including higher penalties for contraventions;

206.2. The imperative to address dominant firm conduct that undermines the participation of SMEs and firms owned by historically disadvantaged persons ("HDP"), in addition to merger control;

206.3. The need to pre-emptively address the trend to higher levels of concentration through merger creep in sectors increasingly characterised by oligopolistic structures;

206.4. Actively promote transformation of the economy under merger provisions and exemptions to address the high levels of current ownership concentration; and

206.5. The potential for the Commission to impose structural remedies such as divestitures in market inquiries to promote rivalry and transformation of ownership in sectors where there has been persistent super-dominance by firms that were the subject of state support or sanctioned monopolisation in the past. Such action obviously needs to be carefully considered, alongside other options to promote competitive rivals, but may be the only viable option to change the market structure and promote competition in some cases.

207. The cross-sectoral and specific sectoral findings of the study will assist the Commission in its own prioritisation and enforcement activities. In particular:

207.1. Prioritisation across the merger and enforcement functions of highly concentrated industries, especially where there are increasing levels of concentration, but also where there is a persistence of high levels of concentration.

207.2. The prioritisation of enforcement action around the new abuse provisions that target conduct by dominant firms that may hinder effective participation by SMEs and historically disadvantaged person owned firms.

207.3. The identification of areas for market inquiries or conduct initiations based in part on highly concentrated sectors with increasing concentration levels, or markets that are trending in that direction. For instance, particular chains within the agricultural sector seem a good candidate for a future inquiry.

207.4. Providing some broader market structural context to merger control, including the trends in concentration and the track record of entry but also expansion by other market participants.

208. The insights provided by the study of both sectoral and a cross-cutting nature also provide the basis for a broader set of recommendations beyond competition law for government to address deep-seated structural issues in relation to persistent concentration, a lack of participation and transformation of ownership. Competition law cannot on its own achieve the required material transformation of the structure of the South African economy even with the amendments.[64] Government has a direct impact in most sectors through legislation, regulation, licensing and procurement, but also provides support in the form of funding, investment incentives, export promotion, support services and technology development. These levers impact on the structure of these sectors.

209. It is recognised that government more broadly, much like competition law, has deployed a range of instruments to actively promote greater levels of participation in the economy, especially the transformation of ownership but also support for SMEs, and to address concentration. For instance, within the Department of Trade, Industry and Competition ("DTIC") there are instruments such as the BBBEE codes and the National Empowerment Fund, there are charters in many sectors around ownership, licensing requirements in certain sectors and the Department of Small Business Development ("DSBD") was established to bring additional focus to this area. There has also been a useful shift to recognising a broader competition policy agenda within DTIC, which seeks to work with other levers alongside competition law to achieve a more competitive and inclusive economy.

210. However, again much like competition law, and in light of the persistence of structural problems in the economy, government instruments need to be strengthened to address concentration levels across sectors and to achieve widespread participation in *all* sectors. Again, there is some movement in this direction, such as the Black Industrialists Programme introduced by the DTIC and recognition of the need to promote inclusive growth within the Economic Reconstruction and Recovery Plan ("ERRP"). The following sets of recommendations are made in this context with the sole aim of strengthening measures and coordination across government as a whole to achieve these objectives and remove structural constraints on growth.

210.1. First, there is a need for a more coordinated and systematic approach to competition policy across all spheres of government and not just within the DTIC and its agencies. Such a policy should seek to not only promote competition but should also actively promote changes in the structure of the economy, including de-concentration and broader effective participation, in line with the shift in emphasis in competition law. A coordinated approach is necessary given that actions by government departments may reinforce the current levels of concentration in certain sectors, and close off opportunities for greater participation. A common competition policy focused on structural change and access to markets is required to ensure that all government actions pull in the same direction. After all, a competitive and more inclusive economy is an objective shared by government as a whole.

210.1.1. Such an initiative may start with a

64 It is for this reason that market inquiries typically advocate for a collective of recommendations that include industry and government action.

focus around sectors identified as highly concentrated, with increasing or persistent levels of concentration.

210.1.2. In order to address structure in a holistic manner, it is important to understand how government actions are impacting on the structure of a sector. One starting point is an audit of how a range of government measures impact on the structure of a sector. This may include an assessment of whether legislation or regulations place barriers to broader participation, but also whether some government support measures, from procurement to state funding support, favour incumbents over challenger businesses. Such an audit would assist in identifying what levers exist within government in respect of a specific sector and how these are currently positioned in support of structural change or not. This would provide a foundation for targeting changes in government to transform a sector and would complement any assessment of competitive dynamics between firms within a sector and potential exclusionary conduct that is the typical focus of the Commission.

210.1.3. The focus and coordination around a competition policy to promote structural change also needs to be firmly part of additional measures introduced as part of the ERRP. There is a risk that efforts to quickly kick-start the economy unduly focuses on support to larger incumbents with capacity to deliver on investment or take advantage of opportunities unlocked by government. Specific initiatives such as import localisation and export promotion should be structured in a manner to support SMEs, historically disadvantaged persons or even the 'smaller' large firms in an industry. Structural change on the scale required is more likely to be successful in periods of growth which provide space into which newer participants can grow without having to take share from a more powerful incumbent. This has not occurred naturally in the past and therefore has to be a deliberate strategy if the opportunities are not simply going to fall to incumbents.

210.2. Second, the use of consistently available datasets and the ability to update these measures in the future provides the basis for potential targets to be set in respect of de-concentrating parts of the economy and increasing participation. This is consistent with advocating for a competition policy that draws in all spheres of government. Such targets may promote concrete policy action to achieve the objective across government and its institutions, ensure all parts of government pull in the same direction around achieving the objective and enable government and its institutions to track progress made against this objective.

210.2.1. At a general economy-wide level, the development of the firm income Gini coefficient based on the SARS-NT dataset can provide the basis for a broad government objective in respect of reducing firm-level inequality much like the household expenditure Gini reduction targets contained

in the National Development Plan.

210.2.2. For individual sectors, targets may be set for those sectors which are highly concentrated and/or lack broader participation. Targets can factor in the extent to which scale economies and the size of the domestic market may limit the number of firms, or the achievement of other objectives of government, but these should not be used to prevent target setting in the first place. Target setting enables a framework for making deliberate trade-offs informed by evidence. Furthermore, even where some concentration is the inevitable outcome of scale economies, there can be support for de-concentration and growth in participation where the sector itself is expanding.

210.3. Third, there needs to be far more systematic funding and support by government for SMEs and HDP-owned firms, with a focus not just on empowering a minority share in an incumbent or entry by a small firm, but also a stronger emphasis on developing and scaling medium (and 'smaller' large) participants, especially those owned and controlled by HDPs to grow and challenge the incumbent larger firms. The need for such deliberate action is evident from the low total firm income contribution from SMEs, the high and growing exit rates amongst SMEs, the fringe of participants that exist in many concentrated markets which seem to remain on the fringe and the impact that growing participation levels evidently have on reducing market concentration.

210.3.1. This sort of initiative requires proper funding of both SMEs and HDP-owned firms. While there are some sources of funding within government, these are not sufficient for the scale of structural transformation required. In particular, far greater use of concessionary funding is required if these businesses are to get an opportunity to establish themselves and grow. This is because private sector sources of funding is typically provided on adverse terms relative to their larger or established rivals.

210.3.2. Development Finance Institutions ("DFIs") can play an important additional role in assisting established medium sized businesses (and 'smaller' large businesses on the fringe) with a proven track record to scale operations and transition to a much larger size. This would require them to become more entrepreneurial and take on more risk, but this is precisely where financial markets typically fail.

210.3.3. There exists huge scope within government and state-owned enterprise ("SOE") procurement to promote and sustain SMEs in the relevant value chains. Government procurement touches on all parts of the economy and while there may be short-term imperatives to contain costs, these need to be balanced against promoting a more competitive and inclusive economy. Procurement contracts can also provide the basis for SMEs to secure financing for growth. There may be a need for government to set specific targets for SME

procurement within each department.

210.3.4. Aside from procurement and funding, there exists scope within other government levers to provide greater support for the transitioning of SMEs to larger, more sustainable businesses. This may include sectors where government licensing occurs or may take the form of targeted industrial incentives. State support through technology or extension services has been effective in the past to support industrialisation of the country, and can be used once more to support those that historically did not have an opportunity to participate.

210.4. Fourthly, the private sector needs to actively support structural transformation of the economy as the task is too significant for government to achieve on its own. Even if some firms are the beneficiaries of the current structure, the vast majority of businesses are not necessarily well served by the current structure given the greater benefits from higher levels of inclusive growth that can be achieved by removing these structural constraints. Furthermore, private businesses have the opportunity to promote structural change through their financing, procurement and sales conduct.

210.4.1. Funding constraints at a governmental level means that the private sector financial institutions must do more in the funding and development of SMEs and businesses owned by historically disadvantaged entrepreneurs. These institutions already have divisions dedicated to such funding but transforming the structure of the economy requires that more ambitious and concrete targets should be set for these institutions, alongside annual reporting against these targets. This may require more widespread concessionary funding and fintech innovations that provide for the reduction of risk and the use of less onerous funding terms.

210.4.2. In the area of procurement, private companies across the economy have the ability to scale up efforts to procure from SMEs and HDP-owned firms, and should have the imperative to do so in order to promote more inclusive growth. As with charters on ownership transformation, industries should consider similar charters and concrete commitments on supporting the entry and expansion of SMEs and HDP-owned firms in their supply chain. Whilst incentives do exist within the BBBEE codes for some directed support, these can be strengthened considerably to set more ambitious targets.

210.4.3. Aside from private sector led initiatives, government can also make greater use of conditionalities placed on sectors subject to state support, including procurement and licensing.

210.5. Finally, an initial focal point for applying competition policy across government departments to systematically address growing concentration and a lack of participation could target the agricultural value chains. These

value chains provide much promise for growth and participation, as well as the provision of an important social safety net by contributing to food security. However, there are significant barriers to achieving this vision given the current structure of the markets and the lack of space for entry, expansion and transformation. The potential of the sector and the barriers are recognised in the ERRP which also makes it a suitable candidate to focus on initially.

210.5.1. An inter-governmental initiative is required given the host of different barriers to entry and expansion that exist for emerging farmers, and the need to solve them simultaneously. For instance, access to land is a basic requirement through land reform, but it needs to be complemented by water rights, finance and access to inputs at competitive prices. Solutions also need to address access to markets and structural features which disadvantage smaller emerging farmers both on the input and output sides.

210.5.2. Such an initiative will require funding on a larger scale than is possible through the current Land Bank. Government will need to identify how emerging farmers can be supported financially in the initial stages. This can be complemented by firm commitments and targets for support from agricultural financial institutions, including the former cooperatives and the major banks. Innovations will be required in insurance markets to reduce the risks faced by the farmers themselves and those that fund them.

210.5.3. The retreat of government funding for agricultural research and extension services following the Uruguay Round at the World Trade Organisation ("WTO") is also something that needs to be reversed. The growing concentration by global firms in agricultural inputs is partly a result of the demise of a strong public research effort in areas such as seed varieties, livestock genetics and crop treatment. Furthermore, these support measures were instrumental in building the agricultural industry in the first place and the emerging farmers of today will similarly require that support if they are to be successful. Again, deliberate assistance and stronger commitments from the former cooperatives could ensure more material support for greater inclusion and the scaling of smaller emerging farmers on a systematic basis, including scaling new entrants and emerging farmers.

NOTES

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