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# Sustainability and Green Capital Accumulation

## Lessons from the South African Wine Value Chain

*Stefano Ponte*

### 7.1 Introduction

In the past two decades or so, ‘green capitalism’, ‘green growth’, the ‘green economy’, and the ‘circular economy’ have become popular constructs in view of addressing climate change and other pressing environmental crises (popular books include Lovins et al., 2007; Esty and Winston, 2009; Friedman, 2009; McDonough and Braungart, 2010; Schwab, 2017). Considerations of sustainability and resilience have also been widely referred to in the context of the impact of the Covid-19 pandemic and recovery from it. Essentially, these concepts have been employed to argue that the capitalist mode of production can be leveraged to solve the pressing environmental issues that arise from its very logic. We are told that new business models, innovation, and technological progress can save the environment and still facilitate capital accumulation and everlasting growth. In other words, we are led to believe that green capitalism contains the seed of salvation.

Of course, some of the technologies and models have the potential to address pressing environmental challenges—but they almost always address the manifestations rather than the roots of problems, and often focus on individual models and production technologies without exploring the systemic and structural elements in which they are embedded. In other words, while green capital accumulation strategies that optimize production and resource use are helping to lower the relative energy and material intensity of production, they do not address the overall ecological limits to growth because they are based on a logic of continuous expansion (Kovel, 2007; Newell and Paterson, 2010; Higgs, 2014). To restate in slightly different terms, these relate to technological and organizational fixes which do not address the overall structural change required (Coe and Yeung, 2015).

One approach that has been often used to implementing these fixes is for lead firms in global value chains to place new environmental demands on their

suppliers, which come with requests for more information on supplier cost structures and operations (Ponte, 2019). In supplier jurisdictions where regulatory monitoring is poor or difficult, this can lead to pro forma compliance with buyer demands and certifications, while further limiting the actual impact on environmental sustainability. When profit margins decrease for suppliers (negatively affecting their economic sustainability), these demands can also have negative rebounding effects on social sustainability—for example, driving suppliers to cut labour costs or worsen work conditions to recoup the extra environmental costs.

This chapter highlights how sustainability and green capital accumulation go hand in hand—through the analysis of economic and environmental upgrading in the wine value chain in South Africa. These processes of accumulation are built on a structural logic that extracts value upstream from producers as they attempt to improve their environmental performance, and that leaves upstream actors with little leverage on how to (re)capture the ‘environmental value’ that they themselves create. The South African wine industry is widely viewed as a successful example of value chain upgrading, one that changed over the 1990s and 2000s from producing mainly bulk wine of low quality to delivering demand-driven wine styles in the basic quality segment of the industry and higher quality wines in new niches (Ponte and Ewert, 2007; Ponte and Ewert, 2009).<sup>1</sup> In both quality segments, upgrading has included offering certified Fairtrade, organic, and biodynamic wines, and some degree of improvement in environmental practices. Yet domestic producers’ economic returns have been squeezed, while marketers and retailers in importing countries reap the benefits of economic and environmental upgrading.

The rest of this chapter discusses first the general trend of how capital accumulation has taken place along value chains on the basis of addressing (or pretending to address) environmental sustainability concerns. The chapter then moves on to the analysis of different aspects of economic and environmental upgrading in the wine value chain originating in South Africa and ending in the UK, in the context of recent dynamics that characterize the global wine value chain. Upgrading is examined through three kinds of processes: first, product, process, volume, and/or variety—including their environmental aspects; second, changing and/or adding functions; and, third, transferring capabilities between chains. In the next section, the actual economic and environmental outcomes of upgrading are discussed, with specific focus on producers. The chapter concludes with a reflection on what the case study of wine says about structural transformation in South Africa more generally.

<sup>1</sup> <http://www.sawis.co.za>.

## 7.2 Sustainability and Capital Accumulation in Global Value Chains

As competitive advantage becomes denationalized and increasingly shaped by the functioning of global value chains, new winners and losers arise within and across nations (Baldwin, 2016; Milanovic, 2016). In South Africa, inequality has often been examined in relation to the agenda of black economic empowerment (BEE) (Southall, 2007; Khagram and Rohan, 2008; Tangri and Southall, 2008; Mebratie and Bedi, 2013; Bowman, 2019; Bracking, 2019; Hamann et al., 2020; and Chapter 9) and research on production, economic development, and sustainability has paid particular attention to the specific consequences for disadvantaged groups. In this context, discussions on the sustainability of production are discussions that focus on power relations, inequality, and social, environmental, and climate justice.

Yet, in its current manifestation, ‘sustainable development’ (including much of the construction of the UN Sustainable Development Goals) has been stripped of its justice elements and has become ‘all but synonymous with “sustained economic growth”’ (Dale et al., 2016). It has embedded unfettered and apolitical technological optimism and ‘sustainability consumerism’. Green capitalism is going hand in hand with green and/or blue ‘grabbing’ that is operated through the exploitation of land and water resources (Benjaminsen and Bryceson, 2012; Fairhead et al., 2012; Hill, 2017), a contemporary instance of accumulation by dispossession (Harvey, 2004). As capitalism metamorphoses into green capitalism, it comes along with its financial imperatives, its (im)moralities and its values, in South Africa and beyond (Bracking, 2012; Sullivan, 2013; Dempsey, 2016; Asiyambi, 2017; Ouma et al., 2018).

Global value chain (GVC) analysis has provided important insights into how sustainability and capital accumulation interact. It does this by examining the power relations that underpin the governance of discrete ‘value chains’ that are explicitly governed by one or more groups of ‘lead firms’ (such as retailers or branded food processors) (Gereffi, 1994). Two dimensions of GVC analysis are especially relevant for the purposes of this chapter. A first dimension concerns various forms of GVC governance (Cattaneo, Gereffi, and Staritz, 2010; Gereffi, 1994; Gereffi, Humphrey, and Sturgeon, 2005; Gibbon and Ponte, 2005; Milberg and Winkler, 2013; Ponte and Gibbon, 2005; Ponte, 2014) and the different kinds of power that shape them. This literature underscores the role played by powerful corporations, especially those that exert ‘buyer power’ by placing large orders in their value chains (e.g. Gereffi et al., 2005) and how lead firms in GVCs are leveraging sustainability to extract more information from suppliers, strengthen power relations to their advantage, and find new venues of value creation and capture (Ponte, 2019).

A second dimension, often coupled with reflections on economic development, refers to GVC upgrading—the paths for value chain actors to add value and extract more rent, eventually moving up the value chain to more sophisticated and skill-intensive operations (Gereffi, 1999; Humphrey et al., 2004; Gereffi, 2014). Much of this literature has highlighted paths for actors to ‘move up the value chain’ for economic gain—identifying the sources of capabilities that facilitate access to new markets (Giuliani et al., 2005; Morrison et al., 2008) and/or how knowledge and information flow within value chains between lead firms and their suppliers (Gereffi, 1999). The research agenda on upgrading has recently moved from the examination of its economic and social aspects to the consideration of environmental concerns as well—and thus to the processes that can improve or minimize the environmental impact of GVC operations, including production, processing, distribution, consumption, and disposal or recycling (De Marchi et al., 2013; Krishnan, 2017).

Elsewhere (Ponte, 2019), it has been shown that the management of sustainability concerns has become a key element of both governance and upgrading in GVCs. Geographically, production is moving to locations that can meet basic sustainability specifications in large volumes and at low cost. Organizationally, multi-stakeholder initiatives on sustainability are playing a key role in redefining the minimum accepted standards for products. And, the need to verify sustainability compliance has led to the adoption of new technologies of measurement, verification, and trust (Busch, 2011; Freidberg, 2013; Freidberg, 2014; Fouilleux and Loconto, 2017). It has also been argued (Ponte, 2019) that the ‘business case’ for sustainability has by and large been solved: lead firms in global value chains not only extract sustainability value from their suppliers, especially those based in the global South, but they can also benefit from internal cost savings, supplier squeezing, reputation enhancements, and improved market capitalization. As the value of goods increasingly depends more on their intangible properties (including those related to the environment) than on their functional or economic value, sustainability management becomes a central function of corporate strategy—filtering through companies’ organization, marketing, operations, and logistics.

Producers in the global South, including in South Africa, have undergone impressive upgrading trajectories. Yet they have achieved limited economic gains (Ponte, 2019). They are offering increasingly sophisticated sustainability features, often to simply keep participating in GVCs as buyers place increasing demands on them. This often leads to lower margins for producers unless productivity gains can more than compensate for higher costs. When producers do manage to receive higher prices, it is usually in the context of much larger gains that buyers obtain in the same GVC. The value created by producers through economic-cum-environmental upgrading is mostly captured by buyers. At the same time, consumers can enjoy a wide variety of special and/or ‘sustainable’ products that deliver a feel-good factor.

In other words, lead firms are using sustainability to appropriate surplus value from other GVC actors—often small producers based in the global South (Starosta, 2010; Quentin and Campling, 2018). This sustainability-driven supplier squeeze (Ponte, 2019) is yet another manifestation of a larger process of value extraction from suppliers that has been observed in many GVCs (Milberg and Winkler, 2013), which can lead to the adverse incorporation of suppliers (Gibbon and Ponte, 2005; Phillips, 2011) and to immiserizing growth (Kaplinsky, 2005).

### 7.3 Economic and Environmental Upgrading in the South African Wine Value Chain

In GVC analysis, the general term *upgrading* has been used to highlight paths for actors to ‘move up the value chain’ for economic gain. There are two broad orientations within this literature. A first orientation seeks to identify the *sources* of capabilities that facilitate access to new markets. Some argue that ‘horizontal’ flows are key, including locational and interactive knowledge built in clusters (Giuliani et al., 2005; Morrison et al., 2008). Others focus on ‘vertical’ relations and how knowledge and information flow within value chains between lead firms and their suppliers (Gereffi, 1999). But integrative efforts assessing which paths and aspects of upgrading originate from combinations of socio-spatial dynamics and ‘learning from global buyers’ have also been developed (Giuliani et al., 2005; Murphy, 2007; Gereffi and Lee, 2016; De Marchi et al., 2017).

A second orientation, the one taken in this chapter, is concerned with the nature of upgrading and its trajectories, often based on four kinds of economic upgrading (Humphrey and Schmitz, 2002, 2004, and 2006): (1) product upgrading: moving into more sophisticated products with increased unit value; (2) process upgrading: achieving a more efficient transformation of inputs into outputs through the reorganization of productive activities; (3) functional upgrading: acquiring new functions (or abandoning old ones) that increase the skill content of activities; and (4) inter-chain upgrading: applying competences acquired in one function of a chain and using them in a different sector/chain.

GVC scholars initially highlighted the importance of a ‘high road’ trajectory to upgrading (from process to product to functional upgrading) eventually leading to performing functions in a value chain that have more skill and knowledge content (Gereffi, 1999). Others have argued that a specific trajectory should not be an end in itself, and that attention should also be paid to what conditions can improve the position of disadvantaged actors along GVCs (e.g. smallholder producers, developing country processors, women entrepreneurs) and more generally achieve a ‘better deal’ for developing country-based operators (Tokatli, 2012; Glückler and Panitz, 2016a). This includes examining in detail the complex upgrading and downgrading trajectories that are emerging (Gibbon, 2001;

Gibbon and Ponte, 2005; Tokatli, 2007; Ponte and Ewert, 2009; Cattaneo et al., 2010; Mitchell and Coles, 2011; Tokatli, 2012; Hansen et al., 2014; Ponte et al., 2014; Blažek, 2015; Bernhardt and Pollak, 2016; Gereffi and Lee, 2016; Glückler and Panitz, 2016b). Recent efforts in GVC scholarship have attempted to go beyond the discussion of economic upgrading to also examine social upgrading trajectories and the interactions between the two (Barrientos et al., 2010; Gereffi and Lee, 2012; Barrientos and Visser, 2013; Coe and Hess, 2013; Milberg and Winkler, 2013; Rossi, 2013; Pegler, 2015; Bernhardt and Pollak, 2016; Gereffi and Lee, 2016).

The research agenda on upgrading in GVCs is also finally moving to the consideration of its environmental aspects (Lister et al., 2015; Poulsen et al., 2016). Environmental upgrading in the literature is seen as ‘a process by which actors modify or alter production systems and practices that *result in positive (or reduce negative) environmental outcomes*’ (Krishnan, 2017: 117; emphasis in the original). This emerging literature has usefully distinguished between different drivers of environmental upgrading, and between upgrading as a process vis-à-vis upgrading as an outcome (Krishnan, 2017), an effort that continues in this chapter.

### 7.3.1 The Global Wine Value Chain: The Global Context and Overall Trends

The global wine value chain has perhaps the most complex and sophisticated quality infrastructure in the agrofood industry. It has been going through a major process of restructuring in the past few decades—where the application, challenge, and re-interpretation of different ideas and representations of quality and sustainability have been contested and redefined in the context of the emergence of large multinational companies (Anderson, 2004) and an increasing level of concentration in the marketing of wine.

Recent trends in the geography of wine production, trade and consumption, as well as changes in the quality composition of supply and demand, have been well documented (Anderson 2004; Unwin 2005; Anderson and Nelgen 2011; Hira 2013; Gilinsky et al. 2015). These included, in the last decades of the twentieth century, a dramatic fall in production volumes and per capita consumption in traditional (so-called ‘Old World’) wine-making and wine-consuming countries, such as Portugal, Spain, France, and Italy; this was partly compensated by growing production and exports in ‘New World’ producing countries (Argentina, Chile, South Africa, New Zealand, Australia, and the USA) and by increasing consumption in the UK, the USA, and in some Asian countries. Table 7.1 shows the ranking of the top wine-producing and wine-consuming countries from 2010 to 2018. The top five producing countries by volume (Italy, France, Spain, the USA, and Argentina) in 2018 accounted for 64 per cent of global supplies. The top five

consuming countries (USA, France, Italy, Germany, and China) accounted for 49 per cent of global demand (see Table 7.2).

The years 2002–7 marked a period of major growth in wine consumption. This was accompanied by a spurred interest in firms applying environmental management systems as part of a multiplication of wine offerings and the search for new differentiation strategies (Atkin et al., 2012; Gilinsky et al., 2015). As the global financial crisis hit in 2008, the wine industry suffered a dramatic downturn with global consumption starting to decline. This led to downward pressure on prices and margins, and a drop in the introduction of new wine brands and offerings, at least in the USA.<sup>2</sup> By the second half of the 2010s, however, the trend had reversed, and the industry's volume of consumption was back to the levels of the mid-2000s.<sup>3</sup>

Growing concentration led to the top four global wine merchant groups controlling almost 10 per cent of the global market in 2006, a figure that had decreased only marginally by 2012 (see Table 7.3). It is worth noting that the same top three groups, all US-based, rank at the top in both periods. In 2012, the fourth-placed company (based in Australia) was a spin-off of the wine division of Fosters into an independent company in 2011. This suggests that there has been little change in the top rankings overall. Wine retail, which was traditionally the domain of small specialist shops, is now in the hands of supermarket chains, especially in northern Europe, the UK, and the USA, but increasingly in southern Europe as well. Although there are fears of homogenization of styles and offerings in the wine market, this is still an industry that produces a phenomenal array of different products, which are sold under a combination of brand names, grape variety, sustainability certifications, and/or indications of origin (Ponte, 2009).

Many of the main wine companies, both globally and in South Africa, are to different degrees vertically integrated—they may also produce wine and may own a number of flagship estates for grape production. The general tendency, however, has been for these conglomerates to concentrate more on value-chain functions that require less capital investment, and to find an appropriate equilibrium between own production (usually for top-quality wines) and purchasing from external suppliers (Ponte and Ewert, 2009).

In relation to sustainability issues, organic certification (and Fairtrade for social issues) has been the early mover in wine, as in many other agrofood GVCs. Although the cultivation of organic grapes for winemaking is still a minor proportion of total production, it has been growing rapidly and has reached 5 per cent of the total area under production in Spain, the leading country in this field (Gilinsky et al., 2015: 42). Organic grape cultivation has also grown dramatically in New World producing countries, where producers have fewer restrictions on

<sup>2</sup> <http://www.oiv.int/en/databases-and-statistics/statistics>.

<sup>3</sup> <http://www.oiv.int/en/databases-and-statistics/statistics>.



Table 7.1 Top ten wine-producing countries (2010–18)

Rank (2018)	2010		2011		2012		2013		2014		2015		2016		2017		2018		
	mhl	World share	mhl	World share	mhl	World share	mhl	World share	mhl	World share	mhl	World share	mhl	World share	mhl	World share	mhl	World share	
1	48.5	18.4%	42.8	16.0%	45.6	17.7%	54	18.7%	44.2	16.3%	50	18.2%	50.9	18.9%	42.5	17.1%	54.8	18.8%	
2	44.4	16.8%	50.8	19.0%	41.5	16.1%	42.1	14.6%	46.5	17.2%	47	17.2%	45.3	16.8%	36.3	14.6%	48.6	16.6%	
3	35.4	13.4%	33.4	12.5%	31.1	12.1%	45.3	15.7%	39.5	14.6%	37.7	13.8%	39.7	14.7%	32.5	13.1%	44.4	15.2%	
4	20.9	7.9%	19.1	7.1%	21.7	8.4%	23.6	8.2%	23.1	8.5%	21.7	7.9%	23.7	8.8%	23.3	9.4%	23.9	8.2%	
5	16.3	6.2%	15.5	5.8%	11.8	4.6%	15	5.2%	15.2	5.6%	13.4	4.9%	9.4	3.5%	11.8	4.7%	14.5	5.0%	
<b>Top 5</b>	<b>165.5</b>	<b>62.7%</b>	<b>161.6</b>	<b>60.3%</b>	<b>151.7</b>	<b>58.8%</b>	<b>180</b>	<b>62.3%</b>	<b>168.5</b>	<b>62.2%</b>	<b>169.8</b>	<b>62.0%</b>	<b>169</b>	<b>62.6%</b>	<b>146.4</b>	<b>58.8%</b>	<b>186.2</b>	<b>63.8%</b>	
6	8.8	3.3%	10.5	3.9%	12.6	4.9%	12.8	4.4%	9.9	3.7%	12.9	4.7%	10.1	3.7%	9.5	3.8%	12.9	4.4%	
7	Australia	11.4	4.3%	11.2	4.2%	12.3	4.8%	12.3	4.3%	11.9	4.4%	11.9	4.3%	13.1	4.9%	13.7	5.5%	12.9	4.4%
8	Germany		9.1	3.4%	9	3.5%	8.4	2.9%	9.2	3.4%	8.8	3.2%	9	3.3%	7.5	3.0%	10.3	3.5%	
9	South Africa	9.3	3.5%	9.7	3.6%	10.6	4.1%	11	3.8%	11.5	4.2	11.2	4.1%	10.5	3.9%	10.8	4.3%	9.5	3.3%
10	China	13	4.9%	13.2	4.9%	13.8	5.3%	11.1	3.8%	13.5	5.0%	13.3	4.9%	13.2	4.9%	11.6	4.7%	9.1	3.1%
	Russia	7.6	2.9%																
<b>Top 10</b>	<b>215.6</b>	<b>81.7%</b>	<b>215.3</b>	<b>80.3%</b>	<b>210</b>	<b>81.4%</b>	<b>235.6</b>	<b>81.5%</b>	<b>224.5</b>	<b>82.8%</b>	<b>227.9</b>	<b>83.2%</b>	<b>224.9</b>	<b>83.3%</b>	<b>199.5</b>	<b>80.1%</b>	<b>240.9</b>	<b>82.5%</b>	
	World	264		268		258	289	271	271	274	274	270	270	249	249	292	292		

Source: OIV—Statistical report on world vitiviniculture (2010–19).

Table 7.2 Top ten wine-consuming countries (2010–18)

Rank (2018)	2010		2011		2012		2013		2014		2015		2016		2017		2018		
	mhl	World share	mhl	World share	mhl	World share	mhl	World share	mhl	World share	mhl	World share	mhl	World share	mhl	World share	mhl	World share	
1	USA	27.6	11.5%	28.4	11.7%	30	12.3%	30.2	12.5%	30.6	12.7%	30.9	12.7%	31.7	13.0%	32.6	13.3%	33.0	13.4%
2	France	29.3	12.2%	28.3	11.7%	28	11.5%	27.8	11.5%	27.5	11.4%	27.3	11.2%	27.1	11.1%	27.0	11.0%	26.8	10.9%
3	Italy	24.6	10.2%	23	9.5%	21.6	8.9%	20.8	8.6%	19.5	8.1%	21.4	8.8%	22.4	9.2%	22.6	9.2%	22.4	9.1%
4	Germany	20.2	8.4%	19.7	8.1%	20.3	8.3%	20.4	8.4%	20.3	8.4%	20.5	8.4%	20.2	8.3%	19.7	8.0%	20.0	8.1%
5	China	15.1	6.3%	16.3	6.7%	17.1	7.0%	16.5	6.8%	17.4	7.2%	18.1	7.4%	19.2	7.9%	19.3	7.8%	17.6	7.2%
<b>Top 5</b>		<b>116.8</b>	<b>48.5%</b>	<b>115.7</b>	<b>47.8%</b>	<b>117</b>	<b>48.0%</b>	<b>115.7</b>	<b>47.8%</b>	<b>115.3</b>	<b>47.8%</b>	<b>118.2</b>	<b>48.6%</b>	<b>120.6</b>	<b>49.4%</b>	<b>121.2</b>	<b>49.3%</b>	<b>119.8</b>	<b>48.7%</b>
6	UK	12.9	5.4%	12.8	5.3%	12.8	5.2%	12.7	5.2%	12.6	5.2%	12.7	5.2%	12.9	5.3%	12.7	5.2%	12.4	5.0%
7	Russia	12	5.0%	12.2	5.0%	11.3	4.6%	10.4	4.3%	11.1	4.6%	10.8	4.4%	10.5	4.3%	11.1	4.5%	11.9	4.8%
8	Spain	10.9	4.5%	10	4.1%	9.9	4.1%	9.8	4.0%	9.8	4.0%	9.8	4.1%	9.9	4.1%	10.5	4.3%	10.5	4.3%
9	Argentina	9.7	4.0%	9.8	4.0%	10.1	4.1%	10.4	4.3%	9.9	4.1%	10.3	4.2%	9.4	3.9%	8.9	3.6%	8.4	3.4%
10	Australia	5.3	2.2%	5.3	2.2%	5.4	2.2%	5.4	2.2%	5.4	2.2%	5.5	2.3%	5.4	2.2%	5.9	2.4%	6.0	2.4%
<b>Top 10</b>		<b>167.6</b>	<b>69.5%</b>	<b>165.8</b>	<b>68.5%</b>	<b>166.5</b>	<b>68.2%</b>	<b>164.4</b>	<b>67.9%</b>	<b>164.1</b>	<b>68.1%</b>	<b>167.3</b>	<b>68.8%</b>	<b>168.7</b>	<b>69.1%</b>	<b>170.3</b>	<b>69.2%</b>	<b>169.0</b>	<b>68.7%</b>
	<b>World</b>	<b>241</b>		<b>242</b>		<b>244</b>		<b>242</b>		<b>241</b>		<b>243</b>		<b>244</b>		<b>246</b>		<b>246</b>	

Source: OIV—Statistical report on world vitiviniculture (2010–19).

Table 7.3 World's top wine marketers

Rank	Company	Headquarters	World share (%)
2006			
1	Constellation Brands	USA	3.9
2	E&J Gallo Winery	USA	2.7
3	The Wine Group	USA	1.6
4	Foster's Wine Estates	Australia	1.5
Top 4			9.7
2012			
1	E&J Gallo Winery	USA	2.7
2	Constellation Brands	USA	2.2
3	The Wine Group	USA	1.6
4	Treasury Wine Estates	Australia	1.8
Top 4			8.3

Sources: Own elaboration of data from Marketline.com (for 2012) and *Impact* 37(11–12), June 1 and 15, 2007, p. 6 (for 2006).

viticulture and wine-making practices. Biodynamic production, whether certified or not, is also spreading worldwide, but remains a small niche. In France and Italy, small vineyards in traditional wine-producing regions, such as Bordeaux and Chianti, also make claims of 'reasonable' viticultural practices or the production of 'natural wines' based on the characterization that traditional local techniques are similar to those used in organic production.

New World producing countries have spurred a number of broad sustainability initiatives (Borsellino et al., 2016). Programmes for carbon-footprint minimization are also starting to be considered in the wine industry (Flint et al., 2016). Most of the current wine sustainability programmes and certifications focus on environmental issues, rather than social concerns. Exceptions are Fairtrade and some South Africa-specific initiatives—such as the Wine and Agricultural Ethical Trade Association (WIETA) and other projects attempting to address black economic empowerment issues in the wine industry (Du Toit et al., 2008).

### 7.3.2 The South African Wine Industry

What are the implications of this sustainability focus for economic and environmental upgrading in the South African wine industry? In order to answer this question, upgrading is broken down into three broad categories: first, improving product, process, volume, and/or variety; second, changing and/or adding functions; and third, transferring capabilities between chains (see details in Ponte, 2007; Ponte and Ewert, 2007; Ponte, 2009; Ponte and Ewert, 2009).

### 7.3.2.1 Upgrading through Improving Product, Process, Volume, and/or Variety—Including Environmental Aspects

Substantial upgrading took place in the South African wine industry in the broad category of improving product, process, volume, and/or variety. Environmental sustainability has been an important element of this (see Table 7.4). Throughout much of the twentieth century, the wine industry in South Africa was centred around cooperative wine cellars, which were responsible for a large proportion of total wine production. They supplied bulk wine of low quality and their farmers were dependent on cheap black labour. Although some upgrading had taken place before the formal ending of apartheid in 1994, the industry has upgraded substantially since. This was most evident in the 1990s, followed by a less steep curve in the 2000s (Ponte and Ewert, 2007 and 2009).<sup>4</sup>

Environmental issues have also played a role in the upgrading trajectories of the wine value chain in South Africa. These initiatives can be observed in two categories. The first category includes global, codified and standardized best practices that are embedded in sustainability certifications that include environmental content, such as the BRC Global Standard-Food and/or the IFS-Food standard. The popularity of general environmental management standards, such as ISO 14001 certification, is also on the rise (in 2005, only a handful of cellars held this certification). And exports of organic or biodynamic certified wines have also grown, albeit from a small base.<sup>5</sup>

### 7.3.2.2 Upgrading through Changing and Adding Functions

The case study of wine in South Africa suggests two key features on upgrading through changing and/or adding functions (see Table 7.4). First, wine producers-wholesalers have shed off upstream functions linked to grape and wine production. Where complete outsourcing has not been possible, value-chain operators across the board have tried to move from hands-on management systems (requiring close supervision) to more hands-off systems, with the exception of top-quality wines. Most small and medium-scale wineries rely to some degree on own-grape growing and always make their own wine. All marketers, by definition, do not grow grapes or make their own wine—they rely on contracted wineries (often producer cooperatives). But even the largest and historically most important producer-wholesalers have been moving away from grape growing on their own farms and in some cases even winemaking—thus becoming pure marketers (Ponte and Ewert, 2009). Large cooperatives (or ex-cooperatives) do not have outsourcing options because their members are grape growers. As a result, they are increasingly holding stock (and facing higher risks)

<sup>4</sup> <http://www.sawis.co.za>.

<sup>5</sup> <http://www.sawis.co.za>.

**Table 7.4** Overview of economic and environmental upgrading trajectories in the South African wine industry

<b>Improving product, process, volume, and/or variety</b>	
Aspect of upgrading	General trend in South African wine industry
overall intrinsic quality	improved
proportion of bottled exports vs bulk exports	increased, but then stagnated in the 2000s
proportion of natural vs rebate/distilling wine production	more or less the same
noble variety proportion	increased
top quality wines	number and visibility increased
proportion of wine certified under Wine of Origin Scheme	increased
product consistency	improved
economies of scale	increased (mainly in coops)
economies of scope	improved
managerial systems	improved
viticultural practices	improved
wine-making practices	improved
marketing, advertising, provision of promotional support	improving, but still a relatively weak point
sustainability certifications	increasing sales of organic and biodynamic wines
biodiversity preservation	BWI initiative promoted conservation efforts, but current status is unclear
environmental management	large proportion of operators meet IPW scheme standards
Changing and/or adding functions	
Location of functional upgrading/downgrading in South Africa	General trend in South African wine industry  cellars and producer-wholesalers moving away or reducing their engagement in grape-growing marketers moving away from winemaking cooperatives becoming more engaged in marketing and branding through joint ventures product innovation increasingly done by European/US marketers and agents
in Europe	South African producer-wholesalers and marketers divesting from own agencies in the UK and Europe, or entering in joint ventures  Brand ownership by South African actors decreasing
Inter-chain capability transfer	
tourism industry	mutually beneficial interactions and joint capability building
environmental sustainability	leveraged to build brand recognition and sales

*Source:* Author's own analysis; adapted and updated from Ponte (2007), Ponte and Ewert (2009), and Ponte (2019).

on behalf of other actors downstream in the value chain. This is a classic vertical specialization process, common in many GVCs, that in the wine sector entails many private cellars and producer-wholesalers moving away from, or reducing their engagement in, grape growing. Some of the most successful producer-wholesalers have largely abandoned even winemaking, thus divesting from holding fixed capital and becoming pure marketers (Ponte, 2007 and 2009).

Second, the few South African producer-wholesalers and marketers used to have their own agencies in the UK and Europe. They have now divested from them or have entered in joint-ventures with Europe-based branders and marketers. Many of the most successful brands of South African wine in the UK are owned or co-owned by overseas companies. These are processes of functional *downgrading* from a point of view of South African producers—yet, they have yielded positive results in terms of successfully selling their stock before the next harvest comes in (what operators call ‘moving volume’). Conversely, many cooperatives and ex-cooperatives have become more engaged in direct marketing and branding through joint ventures. This is an example of functional upgrading on their part.

UK agents and marketers have also upgraded functionally. Under pressure from shorter lead times, they had to increase their control over logistics—with some importers selling to retailers with delivery executed at the warehouse in the UK instead of ‘free-on-board’ on the ship in Cape Town as in the past. As retailers are seeing themselves increasingly as shelf-space providers, the replenishment function now falls upon UK agents. Much product innovation, new packaging, and new presentations and styles are also generated by these agents/marketers. This does not mean that upstream learning is not taking place. Up to the early 1990s, quality in South African wine was ‘producer-generated’, whereas now cellars and South African marketers are able to interpret consumer market changes and react to downstream requests much more quickly and efficiently.

### 7.3.2.3 Upgrading through Transferring Capabilities between Chains

Wine tourism is a well-developed industry in the Western Cape, the major wine-producing region in South Africa, with a number of organized wine routes. Cape Town is part of the Great Capitals of Wine network. A good proportion of cellars are open to the public and have tasting facilities. Many have restaurants and some have hotels on-site. Scenic beauty and many flagship properties displaying Cape Dutch architecture (and some interesting contemporary architecture as well) add flavour to the ‘Cape wine experience’. A large share of the revenue accruing from wine tourism comes from food sales and accommodation—the volume of wine sales at the cellar-door is not significant in absolute terms—with the exception of some flagship estates such as Vergelegen, Boschendal, or some Constantia-based cellars and farms.<sup>6</sup> Branding and marketing capabilities are used for promoting

<sup>6</sup> <http://www.wosa.co.za/Wine-Tourism>.

both wine sales and broader tourism-related income. Cellar and property visits tend to improve wine sales beyond the tasting room, and visibility in retail can bring tourists to a property as well. While for the major producer-wholesalers wine sales are far more significant than wine tourism income, their flagship properties with wine-tasting rooms, restaurants, and/or hotels continue to be important elements of their overall brand offering. South Africa is considered a sophisticated player in the global tourism industry, and can offer excellent value for money—benefiting the wine industry as well (Bruwer, 2003; Ferreira and Hunter, 2017).

#### 7.4 Discussion: The Economic and Environmental Outcomes of Upgrading

As has been examined elsewhere (Ponte, 2019), governance in the wine GVC underwent a major transformation between 1960–90 and 1990–2018. It moved from a multipolar structure where producers, international merchants, and retailers exerted limited power on each other, to an increasingly unipolar one with retailers at the helm. These transformations in the wine GVC have led to a series of new demands placed on merchants and producers in South Africa, especially in the low-end quality segment, and the pressure to deliver wines at scale at different quality points. Within South Africa, in terms of governance, what has emerged is a value chain where the main drivers are producer-wholesalers and marketers, although their power over other actors in the South African segment of the value chain is limited by their own need to deliver volume and quality to importers and retailers in importing countries.

Producer-wholesalers and marketers are reshaping the functional division of labour within the wine value chain in South Africa, with inventory being pushed upstream (in terms of volume and duration) all the way to cooperatives and other wine producers. At the same time, large South African producer-wholesalers have moved away from branding and marketing operations in Europe to concentrate on value-chain functions within the country. Although this is a *downgrading* trajectory from a traditional GVC perspective, it has been important in terms of securing volume of purchases from other, previously competing, international merchants (Ponte and Ewert, 2009).

While sustainability demands from international marketers and retailers have been relatively limited so far, South African operators and regulators placed strategic importance in proactively profiling sustainability to secure elements of additional competitive advantage in a crowded global supply field. This led to a number of actions and initiatives to deliver environmental content, including most wine producers meeting the (relatively low) sustainability standards of the Integrated Production of Wine (IPW) scheme.

A superficial reading of these trends would suggest a successful upgrading story for South Africa's wine industry: delivery of demand-driven wine styles; volume and consistency have allowed the industry to grow in the basic quality segment of the industry, while the proliferation of higher quality wines has opened new niches. In both quality segments, South Africa has also increased its offering of certified Fairtrade, organic and biodynamic wines; wine producers are now able to comply with an increasingly demanding package of specifications expected as a given; this has in turn stimulated a further process of upgrading in the form of improved vineyard operations, wine-cellar innovation, better managerial and environmental practices, and more systematized quality management.

However, the economic *outcomes* for South African wine producers and grape growers remain problematic, as the margins for improvement have now decreased in many areas. The extras (e.g. promotional support, certifications, sustainability) that the industry delivers to obtain or even just maintain a listing with major retailers are becoming more complex and costly. Margins remain extremely low in the retail markets of the UK, Germany, and the Netherlands, and the industry has a limited presence in the more lucrative US market (Ponte, 2007 and 2009). According to a 2005 study of all South African wineries with a revenue of less than R25 million (approximately US\$4 million), 36 per cent were making a loss, and of those with a revenue of R25–90 million (US\$4–14 million), 25 per cent were making a loss. The average profit in small wineries was reported at R13 (US\$2) per 9-litre case, against R20 (US\$3.1) in Australia. Fast-forward to 2016, and the picture has become even worse, with returns to investment dropping to less than 1 per cent. VinPro data indicate that only 13 per cent of the 3,300 producers operate at sustainable income levels, 44 per cent are operating at break-even, and 40 per cent are making a loss.

The implication of these findings is that South African grape and wine producers have made substantial strides in terms of processes of economic and environmental upgrading. But this has not translated into positive *economic outcomes* in the aggregate. This suggests that while suppliers are delivering more content to buyers (including marketable environmental sustainability features), they are facing profitability challenges. At the same time, consumers—both in South Africa and in importing countries—can enjoy a variety of wine qualities at competitive prices, including those delivering sustainability features.

Comprehensive evaluations of the *environmental outcomes* of these upgrading processes and related sustainability initiatives in South Africa are not available. However, it is probably safe to assume that there have been some positive impacts in terms of biodiversity conservation, decreasing agrochemical application (when farms convert to organic or biodynamic), and better environmental stewardship of the land and water resources. At the same time, grape growing is a mono-crop cultivation method that when applied to previously natural areas destroys rather than enhances biodiversity (McEwan and Bek, 2009).



In sum, the case study of the South African wine value chain suggests that: first, sustainability is used opportunistically by global 'lead firms' for marketing, reputational enhancement, and risk management purposes; second, South African value-chain actors and institutions have invested heavily in portraying the industry and individual companies as caring for the environment, and painted this portrait along with scenic and natural beauty of the winelands in this country; although the wine GVC is becoming more unipolar and driven by retailers, South African suppliers have driven environmental sustainability proactively in view of highlighting the unique features that can provide some form of competitive advantage; and third, major economic and environmental upgrading processes in the South African wine value chain took place, but did not lead to positive economic outcomes for most domestic players, and to environmental outcomes that are likely to have been limited. Collectively, these lessons suggest a combined process of capital accumulation by lead firms, coupled with a process of supplier squeeze.

## 7.5 Conclusion

The case study of the wine industry in South Africa is, at a superficial level, a global value chain story of economic and environmental upgrading and of improved international competitiveness. This has included the lead firms and key institutions driving environmental sustainability as part of consumer positioning of South African wines in the global market. However, the growing concentration of the wine industry globally has come together with increased bargaining power by retailers and international merchants, which is leading to a cascade of squeezed margins upstream all the way to grape and wine suppliers and their workers. In other words, lead firms in the global wine industry are using sustainability opportunistically to shape a structurally unfavourable functional division of labour along the value chain. This is happening as the South African industry is carrying out all sorts of upgrading processes, including those related to environmental management and certification, while diverting attention from the fundamental changes required in the Cape peninsula—one of the most unequal areas in the world and one of those most at risk from the climate crisis.

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