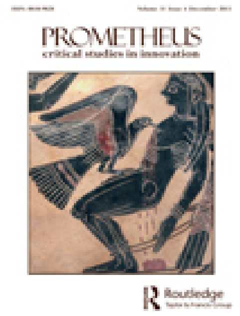

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RESEARCH PAPER

The South African wine industry: bifurcation undermines success

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Examining the South African wine industry reveals an impressive level of success, but one whose long-term prospects are undermined by bifurcation within the industry. The Triple Helix institutions work well in one side of the industry, but are weak or missing in the other. We thus have two industries, one highly successful at reaching world markets with quality wine, and the other focused on local or bulk wine markets. The challenges to cooperation undermine the efforts to build a national brand.

The Triple Helix in a divisive country

South Africa has achieved a remarkable degree of success over the past decade in expanding its wine industry. Yet, South Africa still appears far from reaching its full export potential. As we describe below, the underperformance comes in part from an inconsistent reputation for quality, despite the fact that the better wines it produces are among the best in the world. In fact, with labour costs being the lowest of any of the major producers in our survey, South Africa has the potential to capture a significantly greater share of the global market at a variety of price points. We can trace the current limitations to the institutional breakdown of what was once a unified industry. The industry was once unified under regulatory guidelines with no real explicit Triple Helix (TH) pillars to guide innovation or the upgrading towards quality production during the apartheid years. The singular system, if transformed into a TH system post-apartheid, had the potential to match the quality and export growth of our other successful cases. However, transformation efforts broke down into what we argue are really two innovation systems, as we describe below. In part, this is a reflection of the idiosyncratic nature of South African politics, based on a history of apartheid, severe income and wealth inequality, and a still nascent transition to a unified, cosmopolitan polity.

On the other hand, while we do not want to dismiss the importance of history or the particulars of context, there is also here a cautionary tale for other developing countries about how socioeconomic and political conditions seep into the TH. As we see in the cases of other producers in developing countries such as Argentina and Brazil, simply constructing a unified TH as a formal institutional system does not mean the synergies work as such in practice. As in these other cases, the inequality of the society is matched by an inequality in the TH system itself. This adds to the natural fragmentation present in any industry, and particularly the wine industry, which usually sports strong divisions between grape growers and winemakers; small and large producers; local, regional and multinationals; and bulk vs. premium

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producers. At some point, this level of fragmentation needs to be reckoned with, or, as we will argue here, it can severely constrain the TH system. Overall, the South African case demonstrates that the Triple Helix can be undone as well as done, and that in the presence of large industry differences it may be hard to recreate. In effect, then, we end up with potentially multiple TH systems, which may have some formal overlap but for all intents and purposes are operating in parallel, with differing levels of effectiveness.

Promising takeoff of the South African wine industry

The literature on the South African wine industry is rather limited (as reflected in the References), however we have been able to create an overview through field research interviews with industry representatives and participants. Email surveys, phone and Skype interviews were carried out by the author in spring and summer 2012. In addition, the author held several informative discussions with local experts during the AAWE Conference in Stellenbosch in summer 2013. Experts came from academia, industry and government, as one would expect with a study using TH. Several experts reviewed the document for factual accuracy (though the interpretations are solely those of the author). From these sources it is possible to sketch the innovation trajectory from the perspective of a TH framework. The South African case highlights the vital importance of the institutional and regulatory environment for the wine industry, and thus lends support for the TH premise that systemic innovation, rather than natural comparative advantage, is responsible for the success of industries.

South Africa has long had a natural comparative advantage in producing wine. Given the Mediterranean climate present along the coast of South Africa (SA), it is not surprising that wine production has a long history there, according to some accounts dating back to the Dutch arrival in 1655 (see the 'Back to the Beginning' on the Wines of South Africa website). At the beginning of the nineteenth century, 90% of all exports were wine. However, a UK agreement with France in the late nineteenth century to reduce import barriers, as well as the spread of phylloxera to the Cape, destroyed most of the vineyard (Ponte and Ewert, 2009, p.1639).

The KWV (Cooperative Winegrowers of South Africa) was the key regulator and coordinator for the industry through much of the twentieth century, having been founded in 1918 and run as a cooperative until 1997 (after which it became a private company). KWV was set up as a regulator by statute to reduce grape surpluses, and guided 95% of the industry. The majority of grape growers were also required to sell through cooperatives, of which there were at least 70. From 1918, the South African wine sector was highly regulated, with KWV controlling prices, with one set for trade wine and the other for surplus grapes (that could not be sold in wine markets). From 1965, KWV began using a quota system that set total grape producing area for each farmer and set prices for grapes, based purely on volume. The quota was designed to avoid surplus grapes, however, growth in demand outstripped supply during the 1960s–70s. Moreover, labour conditions were problematic, with an estimated 73% of farmers in the Western Cape receiving part of their remuneration in alcohol in 1976 (Kassier, 1997, pp.7 and 9). Eighty percent of wines were white. The end result was poor quality wine, emphasising quantity over quality (Wood and Kaplan, 2008, p.114), reflecting a price system based on volume rather than quality. In fact, in 1988, exports took just 0.8% of total output (Ponte and Ewert, 2009, p.1639). The failures of the quota system to keep up with market signals on demand, varietals and quality led to its demise in 1992 (Kassier, 1997, p.8). This history questions the assertion that natural comparative advantage, aka *terroir* in the language of vinophiles, is the major source of the ability to produce quality wine.

Reflecting the revolution represented by the end of apartheid and accompanying sanctions, the South African wine industry has also been undergoing deep transformation, and gaining recognition in world markets from the 1990s. According to interviewees, privatisation led naturally to overexpansion, fuelling the need to find export markets. The industry experienced a growth spurt throughout the 1990s with the novelty of South African wine in international markets and the weak Rand helping to establish exports. The number of wineries increased from 295 in 1997 to 573 in 2010 (Vink *et al*., 2012, p.3). Meanwhile, according to SAWIS statistics, export volumes increased from 23 million to 379 million litres from 1991 to 2010, though it has declined from 412 million litres in 2008. The percentage of total production exported has increased remarkably over this period, from 5.8 to 48.5%. Thus, the export boom has largely reshaped the nature and orientation of the industry.

Figure 1 shows both the increase in overall production and how the percentage of exports has increased over the past decade, despite some slowdowns.

Most exports go to European countries, principally the UK, as noted in Figure 2. Initially, according to interviewees, the export boom was fuelled by UK retailers who bought SA wine in bulk and rebottled it under their own brand names. Bulk wine sales continue in this way, however, much of it is now distributed under SA labels. An examination of shares from 2001 vs. 2010 shows a relative decline in exports as a percentage going to the UK and the Netherlands, with Germany and Sweden moving in the opposite direction.

Behind these improvements were the elements of an innovation and technology upgrading system, as identified by the TH. Along with the increasing ability to begin differentiating by quality, a flowering of consultancy and KWV's extension services helped to improve knowledge. Interviewees suggest that SA wine companies anticipated the end of apartheid sanctions as well as privatisation and so began major investments as early as the 1980s. During this period, many of the coops became private companies (Ponte and Ewert, 2009, pp.1639 and 1644). Despite improvements in technology, informal labour practices continued to be problematic (Ponte and Ewert, 2007, p.9). The result is two different South African wine industries – one focused on

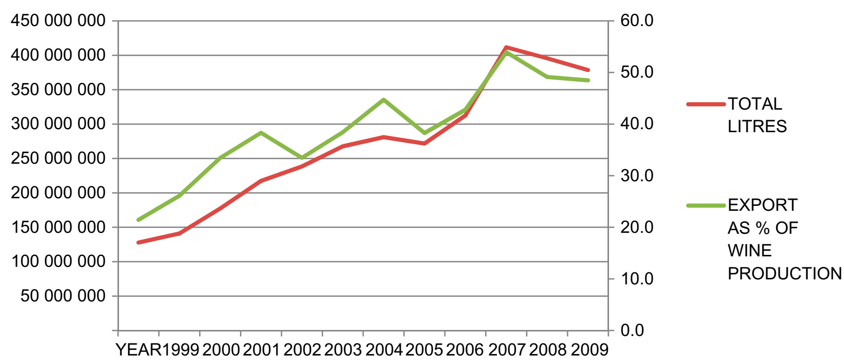

Figure 1. Wine production (L) and % of total wine exported, 1997–2009
Source: SAWIS, South African Industry Statistics, No. 35, accessed online 28 May 2012.

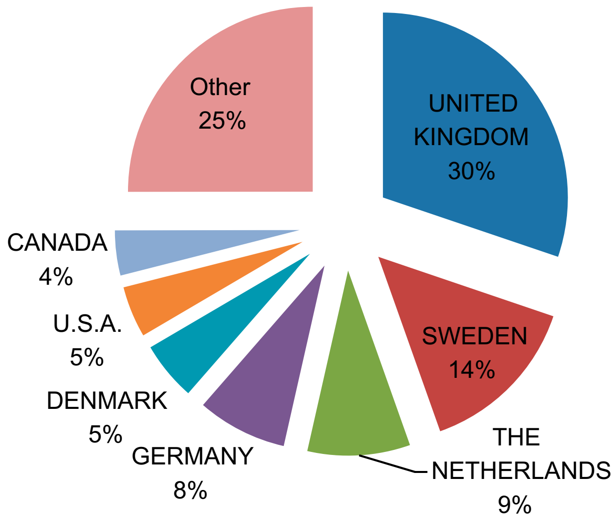

Figure 2. South African exports by destination, 2010
Source: SAWIS, South African Industry Statistics, No. 35, accessed online 28 May 2012.

low cost and low quality, and the other aiming for higher markets. Indeed, a perusal of current SAWIS statistics reveals that far more low quality wine is sold abroad based on the type of container than wine sold in glass bottles, the vessel of choice for all quality wine, as demonstrated in Table 1. Unfortunately, values by dollar amounts are not available.

Two oceans, two industries

Attempts to integrate the industry around a single TH

The TH envisions a harmonious system of knowledge being created in the research pillar being disseminated in a natural and harmonious flow to industry with the help of a government-authorised coordinating body. As we see in the cases of Australia, New Zealand and Oregon, there are other informal aspects, such as a shared consensus and sense of fate, that are behind the ability of the TH system to adapt to local conditions and thrive in terms of creating collective goods for the industry.

By contrast, the South African industry, starting from much more daunting socio-economic and political conditions, appears to be at a crossroads between the efforts to improve global reputation and increasing sales of bulk wines. According to industry insiders, and as reflected in the following analysis, there is no consensus on these

Table 1. Wine exports by type of container, 2010 (litres)

Type of container	Wine exports	
Package/bulk	370,973,326	62.5%
Tetra box	676,455	0.1%
Bag in box	53,520,920	9.0%
Glass	168,135,071	28.3%

Source: SAWIS, South African Industry Statistics, No. 35, accessed online 28 May 2012.

issues across the South African wine industry. The lack of clear long-term strategy reflects, in turn, institutional issues. South Africa is unusual in having a large number of cooperative producers in addition to small producers, larger incumbents and companies focused on wholesale trade. About half of wine grape farmers produce less than 100 tons of grapes per year. At the same time, the domestic wholesale trade was traditionally highly concentrated with Kaapwyn (later called Distell) controlling 80% of the domestic market in 1985. KWV owns 30% of Distell. Distell remains a major player in the SA wine market.

Besides the continuing concentration of the industry through Distell and other large companies, in 1973, a 'wines of origin' appellation system was set up for the different SA regions. The effect of this upon privatisation (unintentionally) has been to separate out the larger high quality firms concentrated in the Stellenbosch area from the fate of other regions. To deal with this concentration, a move was made to lift up smaller producers. The South Africa Wine Industry Trust (SAWIT) was set up in 1999 as part of the privatisation of KWV to help promote the transformation and restructuring of the industry following its deregulation and the liberalisation of agricultural trade. The funds from it were used to set up the key wine institutions as embodied in the South African Wine and Brandy Corporation (SAWB). Trustees were appointed by the Ministries of Agriculture and of Industry (half each).

However, the other side of this was the establishment of a minimum wage for farmworkers (most are black) and ongoing attempts at land reform to help improve racial differences. This resulted in a bifurcated production structure, with large incumbent producers able to produce world class wine on the one hand, but smaller and newer firms (including most black enterprises in the sector) struggling to move out of being price takers on the other. Such a dual structure creates obvious problems for both institutional structure and strategy. This has led to well-intentioned attempts to fuse the two together for a healthy TH including the establishment of the Wine and Agricultural Ethical Trade Association (WIETA) in 2002 to promote black empowerment via fair trade production coordinated among corporations, trade unions and NGOs. WIETA is a non-profit with origins in a UK ethical trade project begun in 1999. In 2004, KWV agreed to sell the Black Economic Empowerment (BEE) (based on the 2003 act of its name) consortium 25.1% of its shares to improve empowerment efforts. A Wine Industry Transformation Charter was launched to set up a long-term empowerment strategy in 2007 (Williams, 2005; Agri-Africa, 2008; Wood and Kaplan, 2008, pp.110, 114 and 116; Moseley, 2008; McEwan and Bek, 2009; Ponte and Ewert, 2009, p.1644).

South African research is world class

The Wine Industry Network for Expertise and Technology (Winetech) is the effective hub of research and extension activities, including a board composed of each of the key public and private stakeholders. Winetech is the primary funding body for research, taking moneys from the levy on exports and disbursing them to industry research priorities through competitions. Part of Winetech's mandate is extension of research, so it demands that all funded research be presented directly to end users and published in at least one academic and one popular outlet. It also organises industry meetings and 'road shows' to demonstrate new technologies.

The key technical support institution is the Agricultural Research Council (ARC), called ARC Infruitec-Nietvoorbij, which was founded in 1997 with the merger of the ARC-Stellenbosch Institute for Fruit Technology and ARC-Nietvoorbij Institute for Viticulture and Oenology. ARC is funded both by the state and by industry, and has close ties with Stellenbosch University's Institute for Wine Biotechnology (Wood and Kaplan, 2008, pp.111–12). There are approximately 22 wine researchers in the former and 32 in the latter. Unfortunately, according to interviewees, the research cluster is oriented towards serving the larger, more successful industry participants who focus on exporting quality wines. These tend to be the well-established, generally white-owned Stellenbosch firms who have been around for many years. Their close ties to European markets, sometimes familial and related to direct investment from there, and increasing ability on an individual brand basis to distinguish their product demonstrates the possibility that SA on the whole could improve its product. This pillar of the TH seems to be healthy, leading us to look elsewhere for the source of competitiveness issues.

Policy breakdown

The non-profit South African Wine and Brandy Corporation (SAWB) was the head institution designed to govern the industry, taking over from the KWV, and following the path of a central TH coordinating body with public authority. There was also the same attempt to produce a consensual-based long-term plan. The Vision2020 Strategic Programme was designed by stakeholders to develop a new, market-driven wine industry and designated SAWB as an umbrella body to coordinate Wines of South Africa, SAWIS (South African Wine Industry & Information Systems), WIDA (Wine Industry Development Association) and Winetech. SAWB functions included research, marketing and the transformational goals related to racial inequities noted above. SAWB included all facets of the industry, including winemakers, growers, labour and traders, and was designed to develop a strategic consensus for the industry (Wood and Kaplan, 2008, p.112). For example, it set up the Wine Industry Strategic Plan around 2003.

In 2000, Wines of South Africa (WOSA) was set up to help market South African wines to export markets. WOSA is run as a non-profit export council, funded by an export levy. WOSA runs marketing seminars for (would be) exporters and sets up marketing events and representatives in major overseas markets (Williams, 2005). WOSA has been pushing for differentiation of South African wines, but the lack of leading labels has strained this effort (Ponte and Ewert, 2009, p.1645). We can see that the improved institutional basis of the South African industry coincides with its takeoff in export markets as illustrated in Figure 1.

However, we also see a plateauing effect for growth in more recent years (Figure 1). We can posit the possibility that the slowdown and more importantly the struggle to move to higher quality production overall may equally reflect more recent institutional issues. Indeed, in 2006, the South Africa Wine Industry Council was set up to take over the functions of SAWB but it was disbanded in 2008. According to interviewees, the larger producer wholesalers 'found it a nuisance' to work through the formal organisation, and there were some personal political issues involving the leadership of the organisation. Unfortunately sources were unwilling to divulge any further details about this breakdown, understandable given their ties to the principals.

A second plan, the Wine Industry Strategic Plan, was set up in 2007, including elements related to competitiveness, black empowerment and sustainability. These reflect the mission of WIDA and are discussed below. WOSA also champions the Biodiversity & Wine Initiative (BWI), to highlight sustainable practices as part of its marketing strategy. According to interviewees, BWI will help to rebrand SA wines as being environmentally friendly and diverse. Presumably, BWI also helps to transform any remaining taint on SA production from apartheid. What we see in the more recent period, then, is that a lack of clear consensus around the long-term strategy, and struggles to unify behind a central coordinating institution, may well have slowed down the South African wine industry's attempt to improve its competitiveness as a collective brand.

Clearly, there has been no sparing of effort in repairing the bifurcation, but as yet such efforts have not been as successful as one might have hoped, reflecting the past divisions of the country as much as industry dynamics.

Integration struggles reflect industry divisions

The third pillar of the TH – industry – also shows serious issues. Black empowerment policies continue to divide the industry. SAWIT was set up along two lines: Busco (or Wine Industry Business Support Company) and Devco (Wine Industry Development Corporation). Busco received 55% of the funds and was designed to promote the industry and provide information services previously given by KWV. Devco was charged with empowerment, yet, according to Ponte and Ewert (2007, p.11), 'it did little to support new entrants … as compared to Busco'. It is important to note that part of the empowerment effort was to create new black winegrape growers and winemakers, since such a limited number existed when the apartheid system fell apart.

According to some interviewees, it is hard to gauge what, if any, progress has been made in terms of empowerment, and criteria are hard to come by. According to others, government studies of empowerment show some level of success. The structure of the industry may also create obstacles. A 2007 report by the South African Wine Council (2007, p.12), states that while 60% of respondents to a survey of winemakers from 2004–5 'either favoured BEE or were willing to become involved', over 80% 'said that they did not have the capacity to become involved with BEE, mainly citing the small size of their farms'. This opinion does not reflect, according to one source, that the BEE Charter still makes provisions for empowerment based on different sizes of farms. The problem likely reflects the lack of financing and economies of scale for many of the new black farmers seeking to enter the industry, and suggesting inadequate support for the policy initiative. Recognition of these issues led to the development of the 'Vision 2020 Strategic Plan' to push for more vigorous land (and labour) reform (Vink *et al.*, 2004), however interviewees report scepticism about the potential results. It appears that a more updated and politically- and economically-realistic plan is needed given the fact of resistance to land reform and its potential to disrupt industry gains if done without adequate resources or policy design. Until these structural issues have been clarified, it is hard to see how a consensually-based long-term plan that undergirds the TH in our successful cases can be established.

On top of these industry issues, there appear to be coordination issues in the TH that have impeded the original plan of lifting new and smaller producers up to the level of the world class producers. The public mechanisms for knowledge dissemination to other producers appear to be fairly limited in terms of reaching producers marginal or new to the game. The South African Wine Industry & Information Systems (SAWIS) is a non-profit that collects and disseminates information including statistics for dissemination, and runs the appellation system. The SA Society for Enology and Viticulture runs a journal and short courses out of ARC. It is membership driven, with 14 board members from companies. The Institute of Cape Winemakers tests and certifies winemakers around the world as well as providing learning and marketing opportunities. Vinpro is a consulting and extension company set up to serve its 4000 members. Originally a cooperative formed upon the breakup of KWV in 2003, it became a private company in 2008. According to Wood and Kaplan (2008, p.111), the wine sector has benefited from significant support by state institutions in both marketing and technical improvements. On the other hand, Lorentzen (2011, pp.192–93) states that just a few large estates deal on a regular basis with universities and research centres, yet still contends that the wide variety of dissemination agents from Winetech to Vinpro as well as exposure to international research spread knowledge widely, and that knowledge dissemination was the key to its current level of success. Lorentzen reinforces our conclusion that South Africa's knowledge efforts are industry- not state-centred (2011, p.196):

> The influence of policy on catch-up has been muted. Of course, policy played the key role in liberalizing the agricultural sector in the 1990s. It also created a framework that allowed the industry to set up organizations to support it in its drive to improve quality, gain global market share, and increase returns. It further promoted scientific capabilities that are relevant for the wine sector even though they are not directly or exclusively aimed at it. Yet although some of these organizations receive public funding, it would be an exaggeration to say that either national or provincial governments are aggressively targeting coordination or information failures in the industry. By contrast, the industry largely takes care of these issues itself.

Future development of the TH

There are reasons for optimism about the long-run prospects for the SA wine industry. As noted, the knowledge system via ARC-University of Stellenbosch and foreign investors is world class. Given the geographic concentration of the industry around the Cape, extension is a feasible priority. One can also argue that the lower costs of land, labour and transportation to Europe enable SA to occupy lower price points than other New World competitors such as Australia. SA has distinguished itself as the premier producer of Pinotage, which, if it is able to establish a quality reputation, could open the way for the myriad of other varietals (types of wines) it produces. Insiders suggest that a slow evolutionary process of linking certain regions to leading varietals is underway. Interviewees note SA inroads into new markets, such as Germany, where demand has moved towards reds, and particularly in other parts of Africa, where a discerning middle class consumer group is emerging and where there is a regional brand advantage. In terms of the latter, SA supermarkets' investments in other African countries are helping to provide distribution channels for low cost wine. It is possible that the move to other African countries, where presumably a dual market consisting of a few high end consumers and many low cost bulk producers, could benefit the lower cost SA producers as well. However, the issue for the TH is whether the smaller and low bulk producers have the means and knowhow to tap these promising export markets. For the moment, the answer appears to be no, implying again the need for further evolution of the TH which is focused toward high end European markets at present.

Yet there are clearly problems that go well beyond empowerment issues. First, the domestic market, which can act as a buffer to international shocks, has been limited in its growth. One interviewee states that most South Africans are still beer drinkers. As seen in Figure 1, 50% of production is sold domestically, however much of this is at very low price points. SA previously had rates of protection (import duties) as high as 160%. Since 1996, these have been reduced to 25% for non-EU countries, and even less for EU ones (based on a bilateral trade agreement), raising the levels of competition for the domestic market. Indeed after a growth spurt in the early 2000s, some reports suggest declining world competitiveness which they link to environmental conditions, such as macroeconomic instability and crime (Van Rooyen *et al.*, 2010). According to interviewees, it is hard to gauge the overall level of foreign investment in the country, though one estimated perhaps 15% foreign ownership. Given the variety of ways and degrees of ownership, it would be impossible to verify this figure, however personal experience suggests that the figure underestimates the degree of foreign interest in the SA industry, especially if confidence in the governance system improved. In fact, interviewees state that the level is considerably lowered by uncertainty about property rights.

As for the BWI (biodiversity initiative), Ponte and Ewert (2007, pp.71–72) point out that the new slogan 'diversity is our nature', '… sits rather uncomfortably with two facts … that grape growing is a mono-crop cultivation method that destroys rather than enhances biodiversity; and second, that the industry is not diverse in its *human* (sic) nature, especially at the managerial and ownership levels' (referring again to racial diversity). Therefore, even the attempt to create diversity as a central long-term rallying strategy for the industry is problematic.

Moreover, as seen in Table 1, 72% of exports are now produced in bulk containers, potentially undercutting attempts to establish a national brand for high quality. Reflecting the challenges facing South African wines, Vink *et al.* (2004) state that the price of quality wines (from SA) 'may already be in decline' and thus the challenge is to sustain or increase demand for quality red wines. They refer to the fact that most white wine is produced for bulk export; that global demand shows signs of more robust demand for reds, based on health claims and taste preferences; and that SA quality wine for export, such as Pinotage, has been concentrated in reds. Nonetheless, an insider interviewed stated his belief that in the wake of four years of slow growth, horizontal mergers among some of the producer cellars would help the industry to move from its current fragmentation towards greater organisation. In the end, progress may depend most upon the political climate, principally resolution of property rights/land reform issues.

Overall, the South African case demonstrates that Triple Helix institutions can be undone as well as done. The best intentions around creating formal institutions may yet fail if the underlying industry structure creates serious divisions, particularly when these are reflected in divided politics. In such cases, we seem to end up with parallel helix systems, ones that prevent the development of national coordination or branding and the collective goods that TH literature incorrectly expects will naturally occur once the three pillars are in place. As we see throughout our cases, in SA so much more is needed than the three strands of the helix for them to function effectively as an innovation system.

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Institute of Cape Winemakers: http://www.capewinemasters.co.za/.

SA Society for Viticulture and Enology: http://www.sasev.org/.

SA Wine & Industry Information Systems: http://www.sawis.co.za/.

SA Wine & Industry Information Systems Annual Report (No. 35 used above): http://www.sawis.co.za/info/annualpublication.php.

SA Wine Industry Trust: http://www.sawit.co.za/vision.html.

Stellenbosch University Department of Viticulture & Oenology: http://academic.sun.ac.za/viti_oenol/contact.html

Vinpro: http://www.vinpro.co.za/framework/About.asp?P=About

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