TRADE & INDUSTRIAL POLICY STRATEGIES

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# Sustainable complexity: Managing export regulations in the European Green Deal

## OVERVIEW

This policy brief is an initial assessment of the European Green Deal, examining what is currently known about the risks it creates for South African exporters. It provides a summary of what regulatory changes are expected in the EGD, what risks these changes pose for South African firms, and what can be done to begin preparing for these changes.

## INTRODUCTION

The European Green Deal (EGD) is a bellwether for a new generation of environmental regulations on global trade. The deal will directly impact the R270 billion in goods South Africa exports to the European Union (EU), but its impact will be far greater, setting the standard for a new wave of climate-focused rules and norms. As world leaders depart with a string of new emissions-reduction commitments taken at the COP26 conference in Glasgow, complementary initiatives along the lines of the EGD are in progress in major markets such as the United States and Japan. Increasingly, doing business in the global market will require doing business in a sustainable manner.

While the transition to a more sustainable global trading system will safeguard the environment and unlock major new export opportunities, the transition to get to that point will be difficult. The highest risks for South African firms will be in the early phase of this transition – most of which will take place in this decade, ahead of the 2030 timeline for many of the EGD's rules to begin implementation.

Exporters that cannot competitively comply with new rules and standards, cannot prove their compliance, or which struggle to adapt to new technologies may find themselves at risk of being displaced from key export markets, starting with the EU. While complying with these new rules will get easier over time, a temporary displacement risks creating a permanent dislocation of South African exporters, as new competitors expand into these markets and establish the type of relationships that make trade work. Many firms, most notably smaller enterprises, will require state support to manage this complex transition.

These risks are a particularly complex prospect for policymakers. The EGD is a sprawling, rapidly evolving policy framework that is by no means complete. The specific risks generated by the EGD will differ by sector and, in many cases, by the productive technology used by individual firms. Understanding these risks and choosing which support to prioritise will require ongoing monitoring and constant, iterative adjustment of support measures.

## RISK REGISTRY

The European Green Deal is best understood not as a single policy or intervention, but as a framework for a wide range of initiatives all targeting the transition of the European economy to a more sustainable basis. In trade, the headline initiative is undoubtedly the Carbon Border Adjustment Mechanism (CBAM), which places a tax on emissions for imports of heavy industry goods like steel and cement. Other major interventions include the phasing out of

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*The main risks for South African export firms fall broadly into four categories: new and more stringent product standards; a lack of alignment between participation structures; shifting demand patterns; and the compression and fragmentation of value chains.*

internal-combustion engine cars and the allocation of €1.8 trillion in green funding as part of the post-COVID Next Generation EU Recovery Plan.

While these big-ticket items are important, they tend to target the largest emitter sectors, and in the case of South Africa will mainly impact automotive, aluminium, and steel producers.

For smaller firms, and those not in these key sectors, the EGD's larger impact will come from a sprawl of sector-level regulations and initiatives. For most of these initiatives, final plans are not yet in place, and the extent of the knowledge at present is limited to a number of strategy documents released by the European Commission and planning documents released by industry bodies in response to the EGD.

TIPS reviewed about thirty-five of these core documents to develop a registry of the major risks of interest to South African export firms. The risks cover a wide variety of new and existing regulations, adding additional complexity to issues like labelling and control standards, while rolling out new considerations, such as the need for the progressive transformation of hard-to-abate sectors.

These risks broadly fall into four categories:

(1) New and more stringent **product standards;**

(2) A lack of alignment between **participation structures**

(3) Shifting **demand patterns;** and

(4) The compression and fragmentation of **value chains**.

## Product standards

The EU already has some of the most stringent product standards in the world, particularly in the crucial areas of agricultural and chemicals exports. Most of these standards are understandably focused on product safety for consumers, but the EGD signals a notable expansion of the scope of this safety mandate to consider the lasting environmental impact of these products more fully.

The strong existing standards in many of these sectors mean that the shift is less pronounced than it might otherwise have been. Companies that are currently exporting food or chemicals to the EU likely already have complex control systems and understand the difficult process of compliance. But these existing standards have always been among the most serious challenges for small and medium-sized exporters targeting the European market. There is a real risk that these already high barriers to entry become insurmountable for otherwise competitive South African firms.

The specific standards changes expected in the EGD vary significantly by sector.

For food and agricultural exporters, the most immediate issue of concern is a tightening of maximum residual levels (MRL) for pesticides in foods. These have long been a concern for a number of South African sectors because some locally authorised pesticides are not recognised in the European Union, or are subject to much stricter standards. This has left exporters with the task of strictly managing the levels of pesticide exposure on their crops (which can be difficult in the more demanding South African climate), and may require segmenting different parts of their production to comply with different standards in different markets.

This balancing act is expected to get more complex. A 2020 decision by the European Food Safety Authority has already tightened maximum levels for a range of pesticides, and indicated that a number of pesticides not recognised in the EU may no longer qualify for entry. While these changes partly reflect the growing priority given to standards issues by European consumers, they also directly aim to influence behaviour in other regions of the world. Under the EGD's agricultural component, the Farm-to-Fork Strategy (EC, 2020a), the EU pledges that its "trade policy should contribute to enhance cooperation with and to obtain ambitious commitments from third countries in key areas such as animal welfare, the use of pesticides and the fight against antimicrobial resistance" – indicating that a long-term integration of stricter standards will likely become a feature of European trade policy in the coming decade.

The second headline shift in standards will impact chemicals exports, including a range of retail chemicals like cosmetics and cleaning goods. Under the EU's Chemicals Strategy for Sustainability (EC, 2020b), a significant tightening of rules under Classification, Labelling and Packaging (CLP, which governs warnings and labelling requirements) and Registration, Evaluation, Authorization and Restriction of Chemicals (REACH, which governs the use of chemicals) regulations is expected. Both will be familiar to exporters as among the world's most stringent control systems for chemicals products.

The specifics of which chemicals will face additional controls and what those controls will look like are still

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unknown, but the strategy understandably focuses on the environmental impact of chemicals (as opposed to the existing strong focus on human and animal health). This means existing South African exports that are considered environmental hazards are most at risk – which will put a range of intermediate chemicals in the firing line, such as sulphates of copper, acyclic hydrocarbons, sodium dichromate, and butyl acrylate. Exporters that use these or other chemical inputs in their production process will need to carefully monitor the evolving landscape of these changing rules.

## Participation structures

While a tightening of standards will primarily impact already strictly governed sectors, many more sectors will be affected by what is broadly referred to here as participation structures. Participation structures are institutions that allow firms to meet the conditions for export. As an example outside of the environmental space, the ability to get access to certificates of origin is a vital enabler of trade with most countries. Importantly, local institutions typically have to be equipped to provide these services, and any major disconnect between the work of key domestic bodies like certification agencies or regulators can make it more difficult for companies to realise otherwise competitive export opportunities.

Many of these challenges are most apparent when new productive techniques require the development of new standards or certification systems. The most obvious case is organic farming, which – although not envisioned as a regulatory requirement – is increasingly prioritised under the EU's Farm to Fork strategy. While South Africa has some privately run organic certification systems, there is no officially recognised standard or process, making South African exports vulnerable to the increasing formalisation of requirements to bear marks like the organic label in Europe.

Similar concerns are apparent in the increasing prioritisation given to the bioeconomy in a wide range of EGD strategies. Strategies drafted for sectors as diverse as chemicals, clothing and cement prioritise the potential for biomaterials to replace harmful inputs in their production processes, or to allow for more sustainable alternatives to dirty inputs like petroleum.

At its base, the expansion of the bioeconomy presents enormous opportunities for South African exporters, particularly those in the agriculture space. But participation in the bioeconomy value chain requires having access to an established system to categorise, grade and market products that are traditionally treated as either food or biowaste – something that remains a major institutional gap in the South African market. Competition to supply bioeconomy value chains will likely be partly determined by which country can develop and capacitate these institutions early, while those without the means to systematically connect to these value chains risk being locked out of crucial supply relationships just as the sector hits a period of exponential growth.

While most of these participation structures are about building formal institutions like standards bodies, South Africa's own transition plans are similarly a vital institutional determinant of export potential. Outside a few niches, very few firms are purely export-driven – most will first succeed in the domestic market, and only export once they have developed the skills and resources needed to compete. This means that if the market for environmental goods like solar panels or wind turbines is significantly misaligned between the EU and South Africa, firms will struggle to manufacture for export and take advantage of new opportunities in the green economy.

With the rollout of the EGD and the still uncertain energy transition in South Africa, the mismatch in ambition between the two regions is likely to widen, leaving potential exporters struggling with an ever more difficult leap straight into one of the most competitive export markets in the world, with no domestic base to stabilise their efforts. Perhaps the most important participation structure of all is a credible green deal for South Africa.

## Demand patterns

While new rules and standards, and the systems that make them work, will be challenging, most of these shifts are feasible, provided companies have adequate funds and capacity to adjust to these new requirements. However, the more fundamental shifts in demand and to the structure of value chains are much more challenging to address.

In many ways, the EGD lags behind significant shifts in consumer behaviour, which is increasingly driving demand towards more environmentally conscious goods. While this is far from complete, and consumer demand is still largest in traditional segments, the EGD is likely to exacerbate this existing trend towards sustainability being a central pillar of any major marketing strategy. While shifting consumer behaviour is difficult to quantify, a range of major export sectors will need to start preparing for it now.

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These risks are typified in the challenges facing the leather sector, an emerging export sector dominated by a few small and mid-sized exporters in South Africa and regional neighbours like Namibia and Botswana. Leather sits on two major environmental fault lines – with linkages to the carbon intensive livestock value chain, and to the metals and mining sector through the use of tanning chemicals such as chromium. Consumer pressure for the use of green leather in both primary leather products and in key client industries, such as automotives, leaves the sector's network of small producers at high risk of a sharp turn against current industry practices.

While individual consumer choices are likely to be an important consideration regardless of the EGD, the deal is likely to accelerate the pace of these shifting behaviours, while also directly impacting consumer and industrial demand by introducing new regulations on end products and, down the value chain, suppressing demand for their inputs.

The headline example of this is automotives. The EGD commits EU member states to a 55% reduction in automotive emissions by 2030, and countries that account for 81% of South Africa's auto exports to Europe (which itself accounts for two-thirds of total auto exports) have pledged to completely end the sale of combustion engine vehicles over a period stretching from 2020 to 2040 (Burch and Gilchrist, 2020). While South Africa has belatedly produced a green paper on the local production of electric vehicles (EVs), and some hybrid manufacturing capacity is already in place, domestic production remains almost entirely concentrated in combustion engine vehicles.

The dynamics of the auto industry are complex. Decisions are made by lead firms in global value chains, and the nature of domestic production is largely determined by decisions made in headquarters outside national control. This slow transformation pace of one of South Africa's largest manufacturing export industries is a major risk that can significantly transform the nature of trade with the EU. A rapid finalisation of the national policy on EVs, combined with the need to transform the domestic retail auto industry, is urgently needed to protect the sector.

The changes in automotives, along with a range of sector-level regulations, will significantly alter industrial demand for intermediate products and raw materials, with important implications for South Africa's mining sector. For some sectors, like platinum group metals (PGMs), exporters will both benefit from and be harmed by the shift, with an expansion in battery-storage demand potentially offsetting the collapse in catalytic converter demand resulting from the rollout of electric vehicles.

Beyond these headlines the picture is less clear. A comprehensive audit of South Africa's major commodity exports is needed to better understand how core mining demand will change as a result of the green transition. An initial examination indicates that iron ore and zirconium are at risk from their downstream connection to energy-intensive heavy industries, while metals like titanium and chromium may benefit from increased demand from new green technologies. Others, such as manganese, may see reduced demand for traditional uses, but may gain new demand through uses in battery storage technologies.

## Value chains

Industries will similarly be impacted in their ability to access key productive inputs, both through shortages that may be created by changes to the structure of industry, and by technological changes that require a significant shift in the nature of production.

A good example of the complexity of how regulations interact with input patterns is in the case of steel. Under the Circular Economy Action Plan (EC, 2020c), the EU is aiming to "ensure that the EU does not export its waste challenges to third countries". Under current definitions of waste, this ban would stop the export of scrap steel, a crucial input to the production of almost all types of steel.

If restrictions were placed on scrap exports, European metals producers would gain access to a captive market for a core productive input, at a time in which various countries – including South Africa – are struggling to access cheap, reliable sources. While South Africa does not source scrap from the EU, existing global scrap shortages could be worsened by a major scrap exporter like the EU limiting exports. For example, India is by far the largest purchaser of South African scrap, and would lose access to roughly US$226 million in imports of scrap from the EU – potentially resulting in expanded efforts to source scrap from existing suppliers like South Africa.

With an already weakened domestic steel industry, combined with these global disruptions in the supply of core inputs, steel – and sectors in similar positions – could struggle to fund the complex transition to new sustainable productive technologies and techniques. The Green Deal contains a significant focus on large investment in technologies to transform hard-to-abate sectors. A successful transition of these technologies is widely anticipated in various EGD strategies as a preamble to increasingly stringent

regulation on the pricing and control of carbon and other emissions associated with these products. In short: the capacity to adopt new technologies will likely be a vital enabler of trade.

This technological transformation will impact a wide variety of industries. Petrochemicals sit in a similar position to steel, with an expected decline in core inputs (which are largely by-products of a declining petroleum refinery sector) alongside the need to invest in complex new control systems and technologies for new inputs like biomaterials. Glass producers are likely to need to transition to new, more efficiency electrical furnaces. However, due to the continued reliance on a coal-based grid, they are unlikely to reap the environmental benefit a similar transition would have in a more sustainable European energy grid, or in a South African grid transformed by the rollout of renewable energy and green hydrogen.

For sectors with no sustainable alternative production process, the focus will have to be on efficiency improvements such as energy recycling. In other sectors, investments will need to expand production lines for new demand from the sustainable economy. For example, European pulp and paper producers are increasingly focused on diversifying production to operate as multi-output biorefineries, expanding beyond pulp to the new bioeconomy.

For all of these transitions, old assumptions about competitiveness will be thrown into doubt, and trade patterns will shift to those that can best adapt their value chains to the new reality of sustainable production. Good policy and sound decision-making by businesses can reduce the impact of these changes – but the same is not true for all the shifts the EGD will inspire. Different technologies will have different scopes for firms to participate in value chains. As digital technologies replace mechanical parts, and physical components become more complex and dependent on specialist skills, value chains may contract around a few core producers.

This risk is most clear for automotives. The engine and drivetrain for a combustion engine has about 149 moving parts, compared to 29 in an EV. With fewer parts, there is much less scope for component manufacturers to participate in the EV value chain – with around 33.4% of South Africa's auto components exports at high risk of being displaced. While policy can help cushion the blow of these types of value chain contractions, there is no real way to stop or avoid them. Like any major technological transition, focus has to be on both driving the change for those that can benefit from it, and helping those that technology leaves behind.

## POLICY IMPLICATIONS

Table 1 (see pages 6 and 7) details the 19 core risks for South African exporters resulting from the EGD. But the core message of these risks is the scale and diversity of the change it will bring with it, and the complexity this poses for policymakers. Any one of these changes would require careful attention and support to allow industries to adapt – a laundry-list of these changes points to the need for a comprehensive strategy to manage a complex and uncertain generational shift in South Africa's export markets.

Given this broader challenge, policy needs to focus on structural interventions to allow the state to be prepared to rapidly identify and deploy support for key risk areas. While specific sectoral interventions have been identified (and can be seen in the full report), building a state that is institutionally prepared for this uncertain future must be the priority.

Three interventions are worth considering.

First, structured monitoring needs to be developed to track these changes and evaluate their impact on South African exporters, with an eye to both the European New Deal, and the wider transformation of global trade regulation and production. This **Observatory of Sustainable Trade** should ideally be a joint public-private initiative, and should be the frontline to guide what risks require attention, and where policy should intervene.

Second, the more complex question of assessing the low-level impact of how these changes impact individual companies will require capacitating industries themselves to monitor and evaluate these changes. Supporting export councils to establish **transition champions**, which are charged with monitoring and evaluating the changing regulatory environment for trade, would be a useful way to implement this.

Finally, and perhaps most importantly, is the urgent need to establish a credible and implementable strategy for the broader transformation of South Africa's domestic industry.

This is a big-ticket item, and will need to be largely driven by considerations outside of trade. But the capacity to actually support firms to manage the transition ultimately runs up against the fact that firms are unlikely to export a product if they do not have a domestic market to underpin their production. A **South African Green Deal** would create the conditions needed to drive exports, and provide policymakers with the tools they need to support this complex transition.

## Table 1: Core risks for South African exporters resulting from the EGD

| Industry | Risk category | Risk | Key document/ initiative | SME exposure | | EU trade exposure |
|---|---|---|---|---|---|---|
| | | | | *Firms* | *Earnings* | |
| **Agriculture, forestry and fishing** | Participation | Inadequate standards and control mechanisms stifle farmers' ability to supply an expanding EU bioeconomy, as demand surges for inputs to sectors like biochemicals and bioplastics. | Farm to Fork strategy | 31.8% | 8.9% | 7.1% |
| **Agriculture, forestry and fishing** | Product standards | Reductions in tolerances and increases in MRL pesticide standards further reduce the ability of small farmers to export to the EU. | Farm to Fork strategy | 31.8% | 8.9% | 7.1% |
| **Agriculture, forestry and fishing** | Participation structures | More stringent organic certification requirements expose the lack of formal standards in South Africa, and impact exporters' capacity to compete in the organic space. | Farm to Fork strategy | 31.8% | 8.9% | 7.1% |
| **Automotives** | Value chains | Compression of EU automotive value chain resulting from the transition from mechanical to electrical components leads to a decline in auto component exports. | Domestic EV regulations, Fit for 55 | 46.1% | 3.0% | 34.8% |
| **Automotives** | Demand patterns | Accelerated timeline for automotive emissions reductions results in EU automotive demand shifting before South African producers have adapted manufacturing capacity. | Fit for 55, Amendments to regulation 2019/631 | 46.1% | 3.0% | 34.8% |
| **Chemicals, plastics and rubber** | Participation structures | Poor biowaste management practises and a lack of biorefinery infrastructure stifle the transition to bio-based chemical production, while collapsing petroleum production leads to surging prices for traditional inputs. | Molecule Managers | 35.1% | 3.9% | 5.,5% |
| **Chemicals, plastics and rubber** | Product standards | Tightening REACH and CLP standards displace some chemicals exports, reducing the viability of a petrochemical sector already strained by falling petroleum demand. | Chemicals Strategy for Sustainability | 35.1% | 3.9% | 5.5% |
| **Coal and petroleum products** | Value chains | Declining petroleum production leads to sharp price increases in traditionally cheap by-products like paraffin wax and petroleum jelly, undermining South Africa's petroleum products exports to the EU (and the production of downstream cosmetics) | Fit for 55 | 15.6% | 0.6% | 3.9% |
| **CTFL** | Demand patterns | Consumer backlash against the environmental impact of leather undermines the development of a fragile emergent sector. | Consumer trends | 53.7% | 12.3% | 1.6% |
| **Food and beverages** | Demand patterns | Increased attention to the carbon embodied in freight and packaging results in pressure for the bulk shipment of wine, displacing bottled wine exports and reducing margins for smaller producers. | | 41.1% | 2.5% | 2.1% |
| **Food and beverages** | Value chains | Domestic glass producers do not reap benefits of industry's rollout of electrical furnaces, due to a dirty energy grid, undermining the broader export of pre-packaged food products. | Furnace for the Future | 41.1% | 2.5% | 2.1% |
| **Machinery** | Demand patterns | Mismatch in ambition in domestic rollout of renewable energy undermines South Africa's capacity to manufacture renewable energy components for export. | | 41.8% | 5.6% | 0.9% |

## Table 1 (continued): Core risks for South African exporters resulting from the EGD

| Industry | Risk category | Risk | Key document/ initiative | SME exposure | | EU trade exposure |
|---|---|---|---|---|---|---|
| | | | | *Firms* | *Earnings* | |
| **Metals** | Value chains | Persistent underinvestment by a strained steel industry harms competitiveness, as EU firms rollout technologies like improved heat recycling. | Masterplan for a Competitive Transformation of EU Energy-Intensive Industries | 40.2% | 5.6% | 10.5% |
| **Metals** | Value chains | Limits on the export of scrap metal worsen global shortages, harming marginal steel producers like South Africa. | Circular Economy Action Plan, Amendments to regulation 1013/2006 | 40.2% | 5.6% | 10.5% |
| **Metals** | Participation structures | Inadequate state investment in carbon capture infrastructure limits the uptake of capture technologies among heavy emitter industries, and unduly punishes South African producers. | Cementing the European Green Deal | 40.2% | 5.6% | 10.5% |
| **Metals** | Product standards | High upfront costs for adopting sustainable technologies in hard-to-abate sectors results in lobbying for trade protectionism as a means to offset costs for early adopters. | A green deal on steel | 40.2% | 5.6% | 10.5% |
| **Mining and quarrying** | Demand patterns | Declines in combustion engine production supresses demand for PGMs, worsening existing price volatility and impacting marginal mines. | Fit for 55, Amendments to regulation 2019/631 | 22.4% | 0.4% | 15.9% |
| **Mining and quarrying** | Demand patterns | Changing demand for end-use products leads to declines in demand for some mineral exports, potentially including zirconium and (traditional markets for) manganese. | Chemicals Strategy for Sustainability, Farm to Fork | 22.4% | 0.4% | 15.9% |
| **Pulp, paper and wood products** | Value chains | South African paper mills lag behind in the transition to multi-output biorefineries, eroding global export competitiveness. | 4evergreen | 48.4% | 7.9% | 0.9% |

*Source: SARS Tax Statistics 2020 (SME exposure). UN COMTRADE (EU trade exposure). Note: In the "firms" header, Small and Medium Enterprise (SME) exposure refers to the share of tax-paying firms in the given sector that are SMEs; while in the "earnings" header, SME exposure refers to the share of total declared earnings that are attributed to SMEs.*

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