



The MER Sector Enterprise Survey: Understanding Economic Complexity in the MER Sector Space

A brief guide to the Economic Complexity and how it informs the
MER Sector Enterprise Survey

What is the purpose of the MER Sector Enterprise survey?



merSETA Commissioned
Research Project

The survey forms part of a broader research study commissioned by merSETA, titled: *Understanding Economic Complexity in the MER Sector Space.*



Desktop Phase:

Use economic complexity and relatedness analytics to analyse the economic complexity of the MER sector

How do we build economic complexity in the MER sector?



Survey Phase

Identify diversification opportunities – *frontier products* – that promote the (re)industrialisation of the South African economy

Identify the constraints (capabilities) that hinder (enable) the emergence of these diversification opportunities

Assess the role and impact on SMMEs in building economic complexity



Inform policy aimed at growing the MER sector – this is why your participation matters

Inform industrial policy in SA (e.g. IPAP)

Inform skills interventions

Why should I participate in the MER Sector Survey and is my firm's information safe?



Why should I participate in the MER Sector Survey?

The research aims to identify growth opportunities that have the potential to build economic complexity, drive growth within the MER sector, and thereby contribute to the (re)industrialisation of the South African economy.

Most importantly, the research seeks to determine the constraints that inhibit diversification into these growth opportunities.

By interrogating the constraints plaguing the MER sector's future growth path, merSETA can facilitate skills development interventions, and lobby the relevant policy forums toward interventions and industrial policy formulation to enable the realisation of identified growth opportunities.



Is the information that I provide safe?
Absolutely

The DPRU has employed Citizen Surveys – a respected survey company – to implement the survey

The DPRU has received ethics approval for this survey from the UCT's Ethics Committee (Reference REC: 2021/05/010)

Citizen Surveys is a member of the South African Market Research Association and adheres to its ethical standards, and the strict data protection and storage standards laid out in the POPI Act (2013).

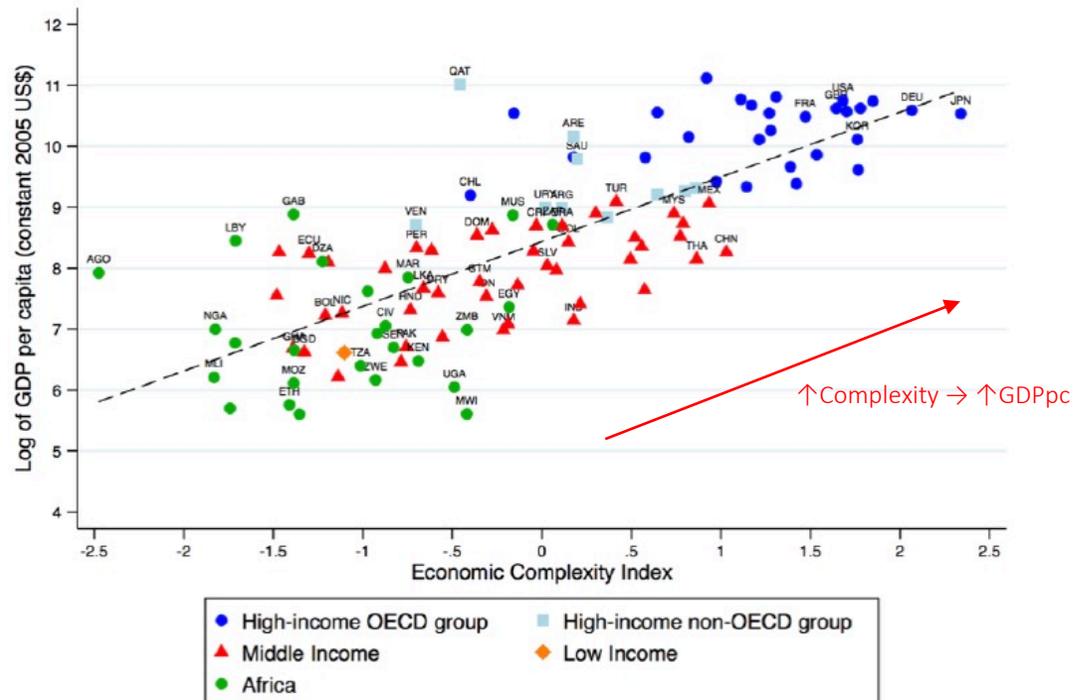
Ethics approval requires a data management plan that ensures all firm-level information will be anonymised, remain confidential, kept secure, and used solely for analytical purposes in such a way that an individual firm's data cannot be identified.

What is economic complexity, and why is it important?

What is Economic Complexity?

The [Atlas of Economic Complexity](#) defines economic complexity ‘as a measure of the productive knowledge or capabilities in a society, expressed in the products it makes’.

‘Countries that are able to sustain a diverse range of productive knowledge and capabilities... are found to be able to produce a wide variety of goods, including complex products that few other countries can make.’



Source: Borhat, Ewinyu, Lilienstein, Rooney, Steenkamp & Thornton (2019)

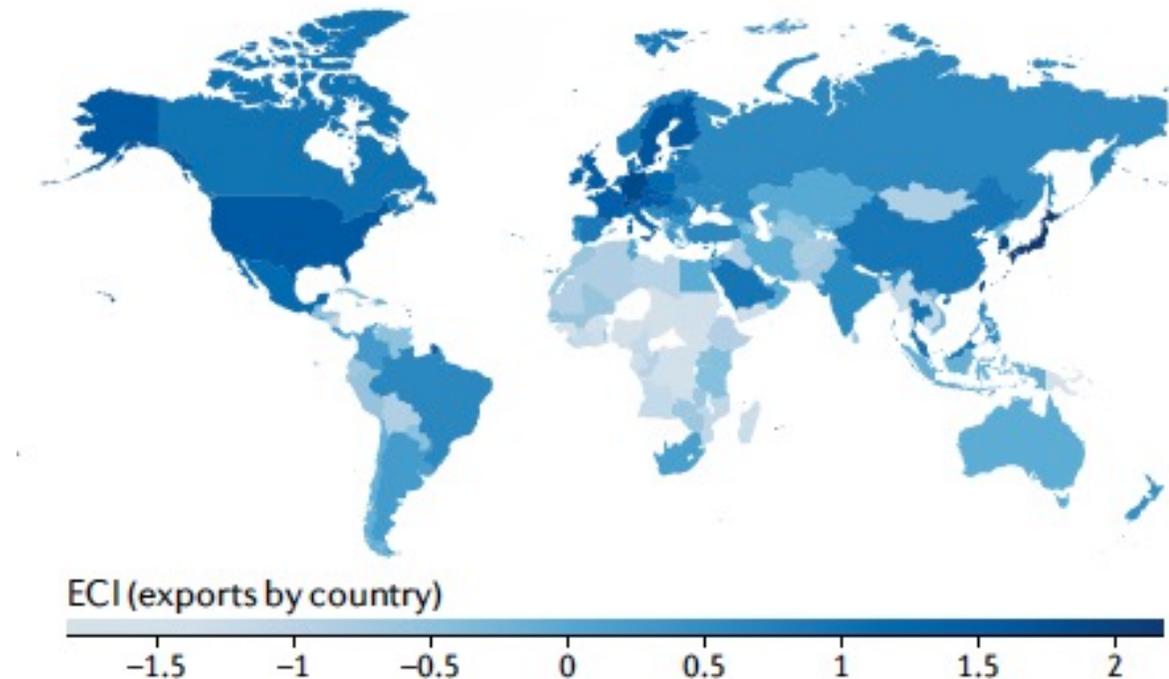
Why is Economic Complexity important?

Richer countries are more complex (measure using the Economic Complexity Index (ECI)).

Economic Complexity predicts future economic growth.

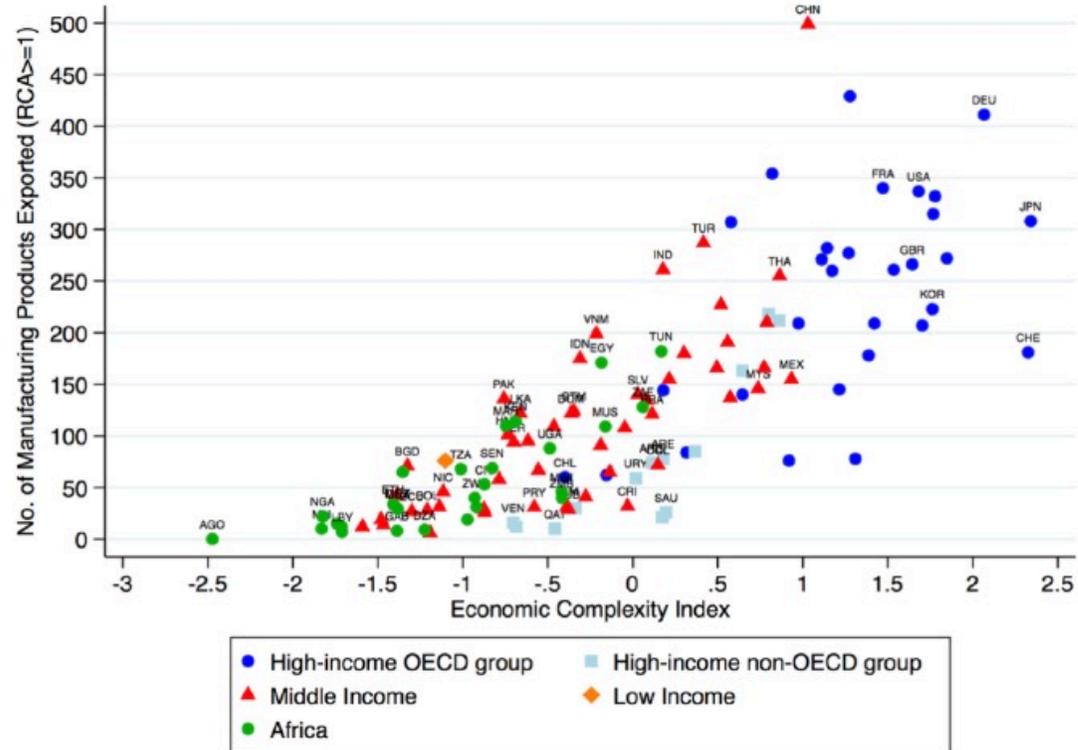
Thus, building economic complexity, through the accumulation of productive knowledge and capabilities, is key to a country’s evolution toward a higher level of economic development.

Watch this [video](#) by Prof. Ricardo Hausmann from Harvard University.



Source: Hidalgo (2021)

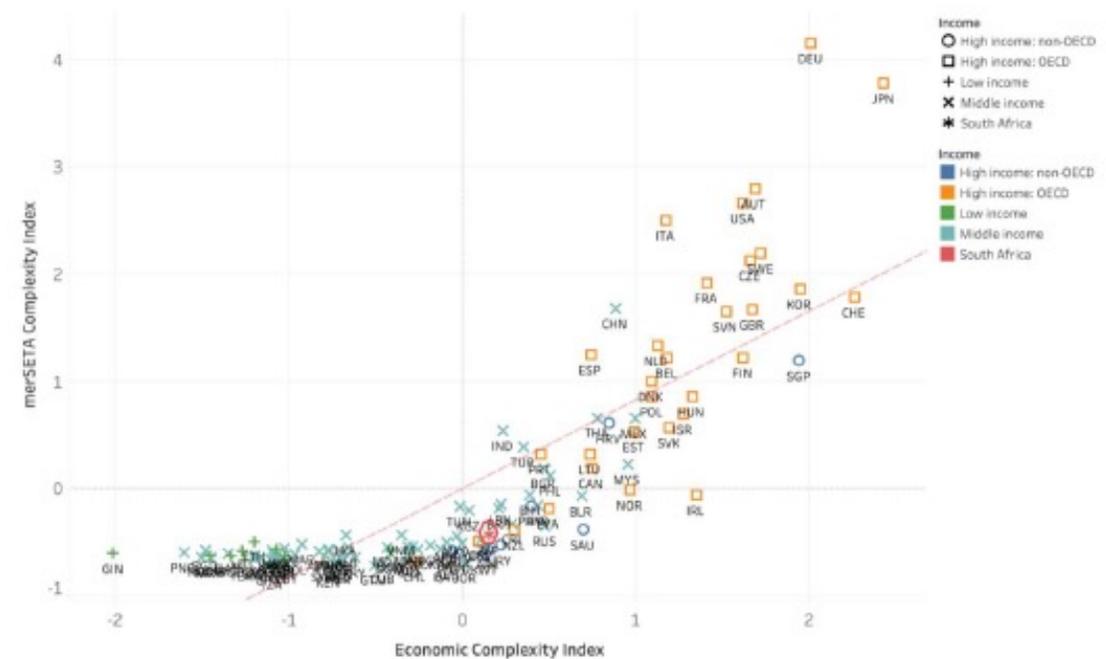
How does Economic Complexity relate to Manufacturing?



Source: Borhat, Ewinyu, Lilenstein, Rooney, Steenkamp & Thornton (2019)

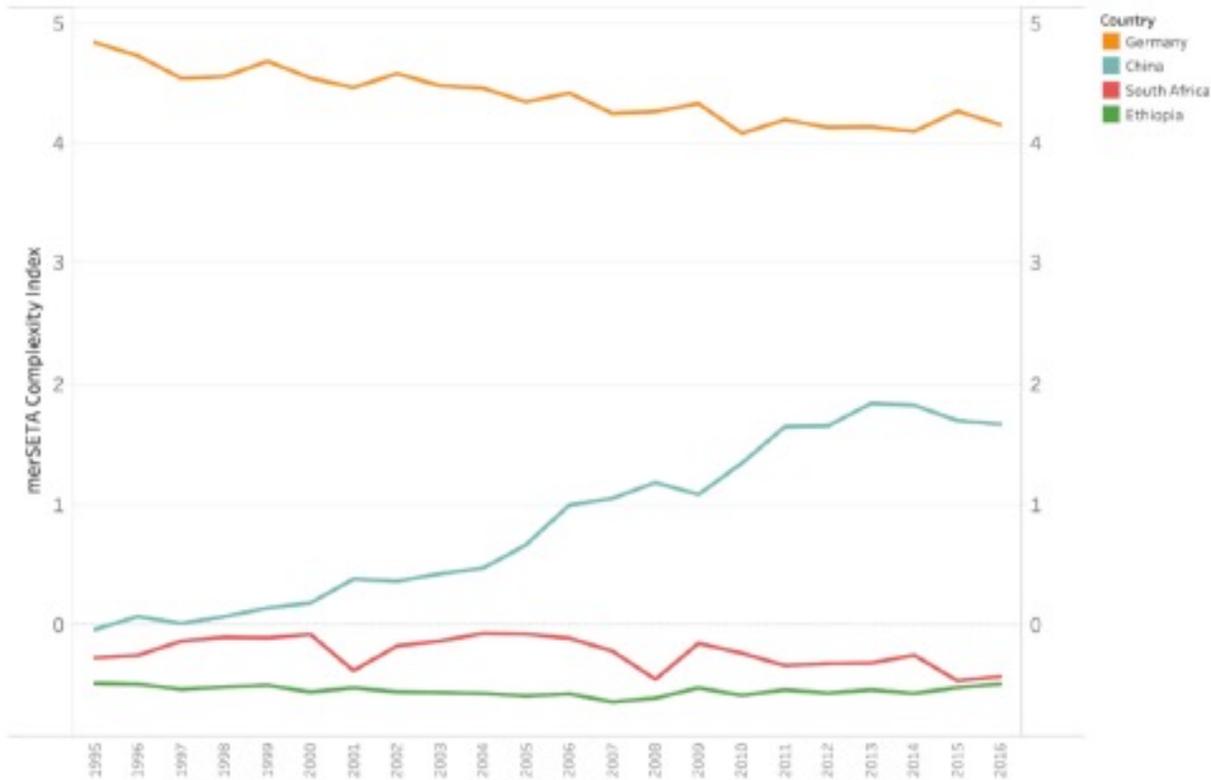
Economies that are more complex tend to have more diverse manufacturing sectors

Economies that are more complex tend to have more complex MER sectors



Source: Allen & Borhat (2021)

How has the economic complexity of the MER sector evolved over time?



Source: Allen & Borat (2021)

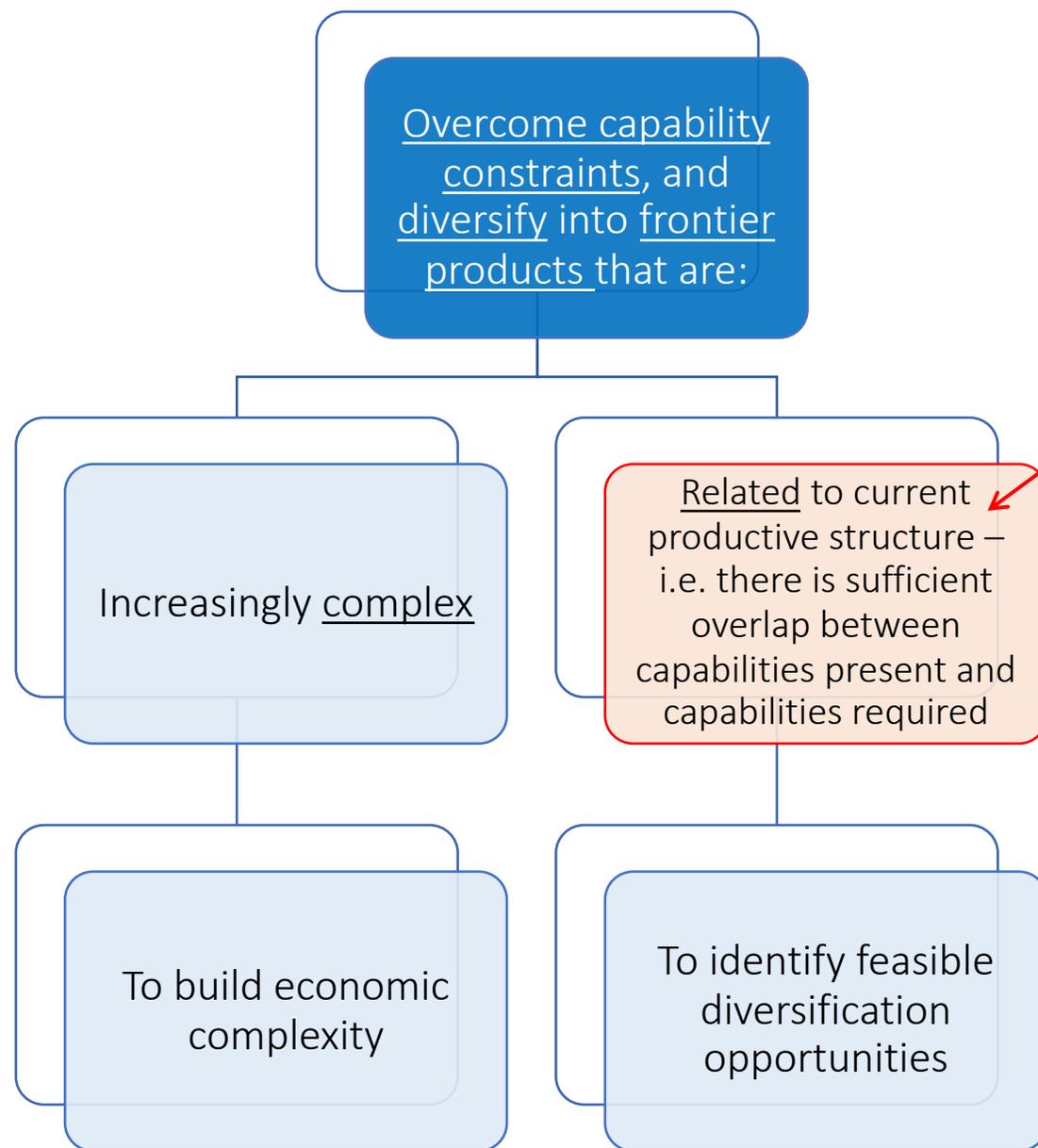
BUT, the Economic Complexity of South Africa's MER sector has stagnated, if not declined, since 1995.

This is consistent with the notion that South Africa has undergone premature deindustrialisation.

How do we reverse this process of deindustrialisation?

BUILD ECONOMIC COMPLEXITY

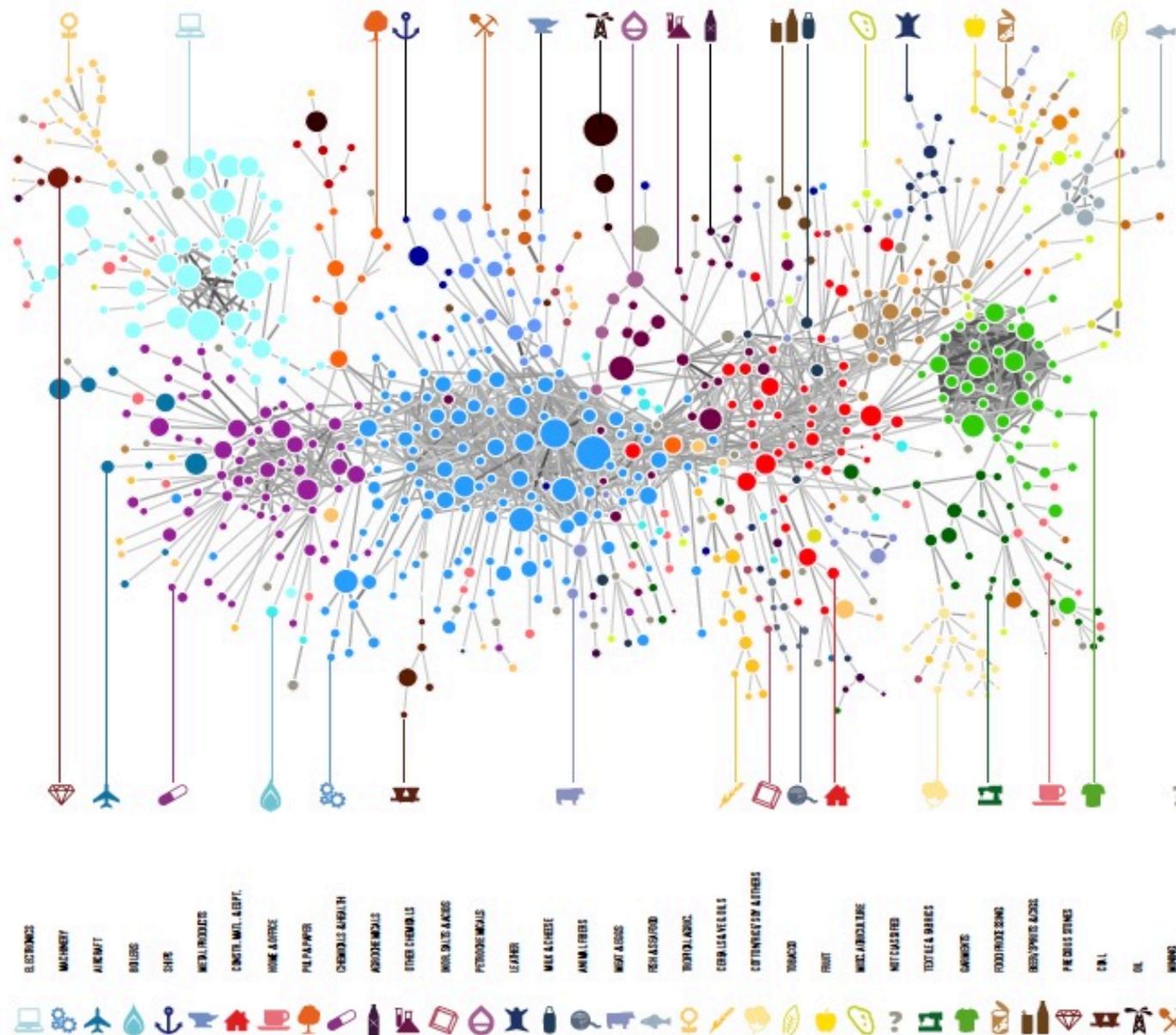
How do we build economic complexity?



Diversifying into related products means you diversify into products where there is sufficient overlap between the capabilities present in the economy and the capabilities required by the new product(s) – thus you build off your existing productive structure

This can be depicted graphically using a network diagram called the product space...

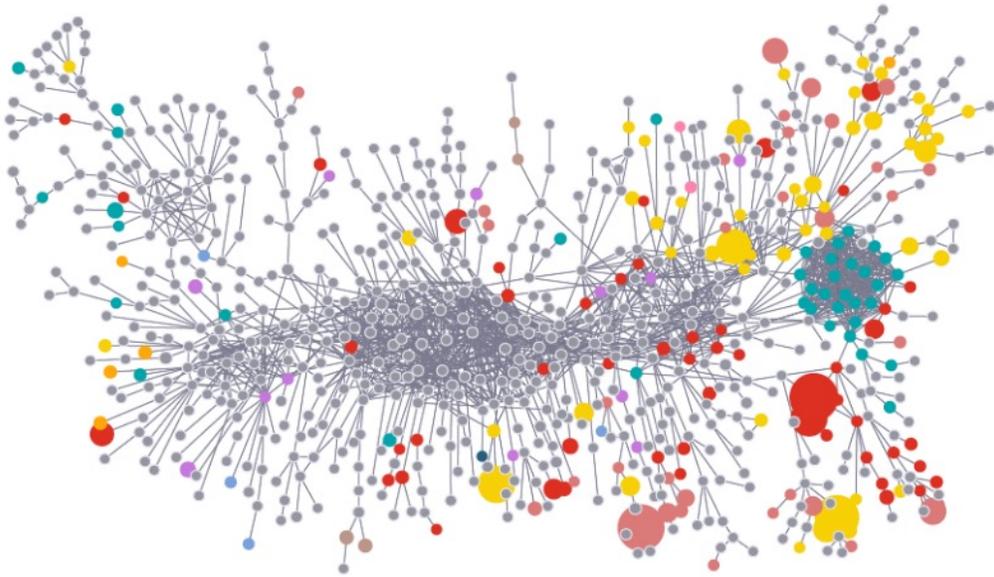
What is the *product space*?



How does one interpret the *product space*?

- It's a representation of a country's productive structure
- Nodes (circles) are products.
- Shaded nodes show products that a country produces competitively
- Edges (lines between nodes) show products that are related to one another – i.e. they require similar capabilities to produce, and if you produce one, you can feasibly produce the other.
- The disconnected periphery of the *product space* is mainly comprised of less complex mining and basic agricultural products
 - To diversify from these products is harder since they are less connected to other products
- The core of the *product space* with clusters of connected products is mainly comprised of complex manufactured products
 - It's easier to diversify to other 'nearby' connected products from these products
 - Put differently, it is easier to expand your manufacturing sector if there is a pre-existing industrial base

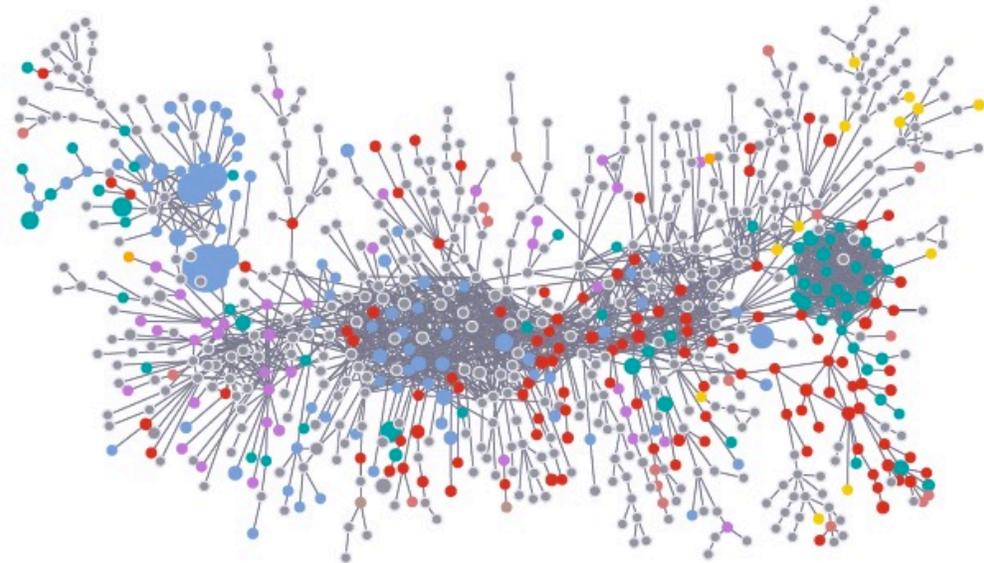
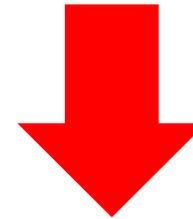
What does an industrialising country look like?



China 1965

Peripheral productive structure comprising:

- Food products (yellow nodes) and other primary products (pink nodes)
-and some basic manufactures of clothing (green nodes) and textiles (large red nodes at bottom right)

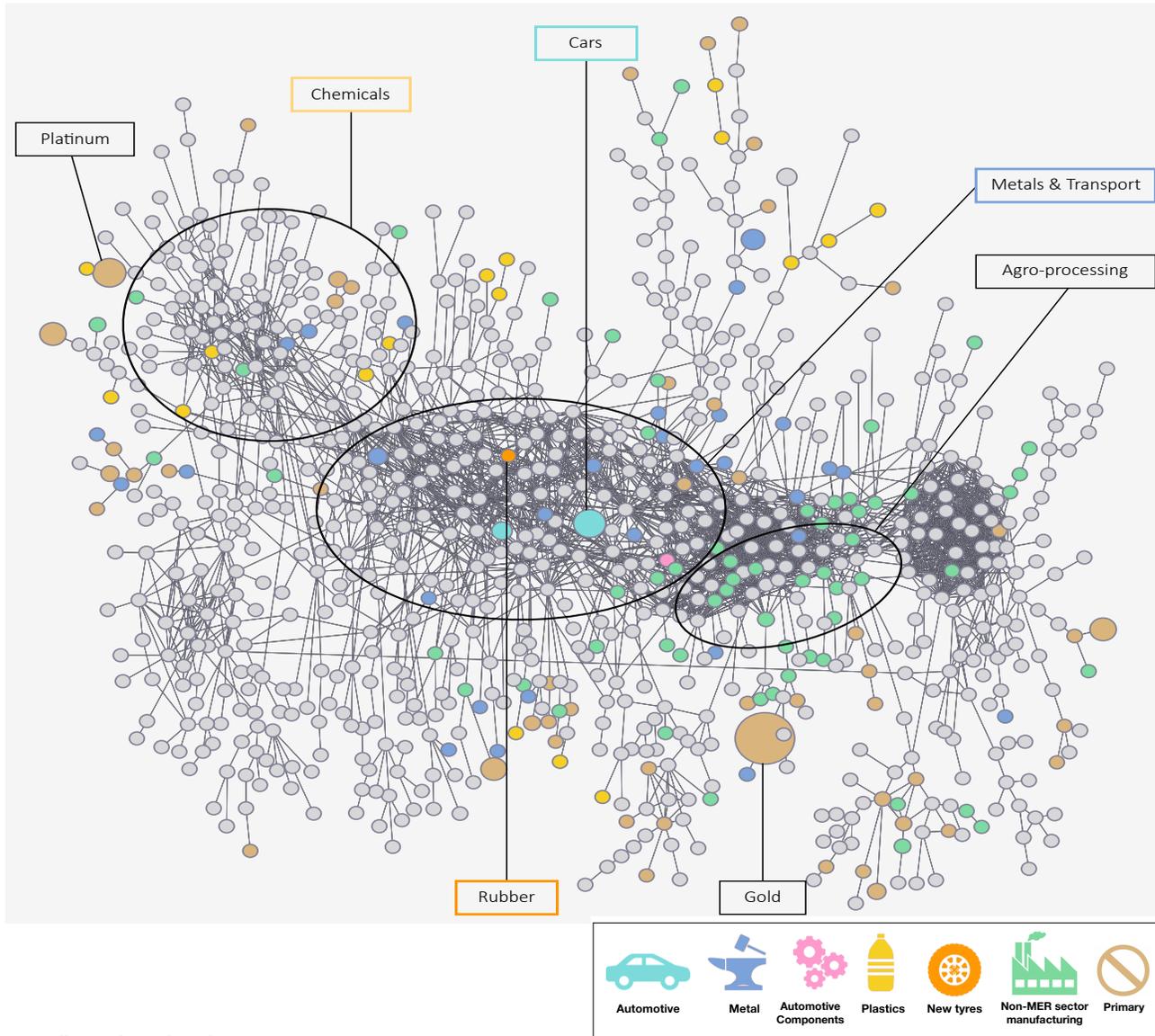


China 2019

Clear shift to the connected core – a pattern of industrialisation – comprising:

- Machinery, transportation and electronics (blue nodes)
- Chemicals (purple nodes)
- Other manufactures (red nodes in core)

What does South Africa look like?



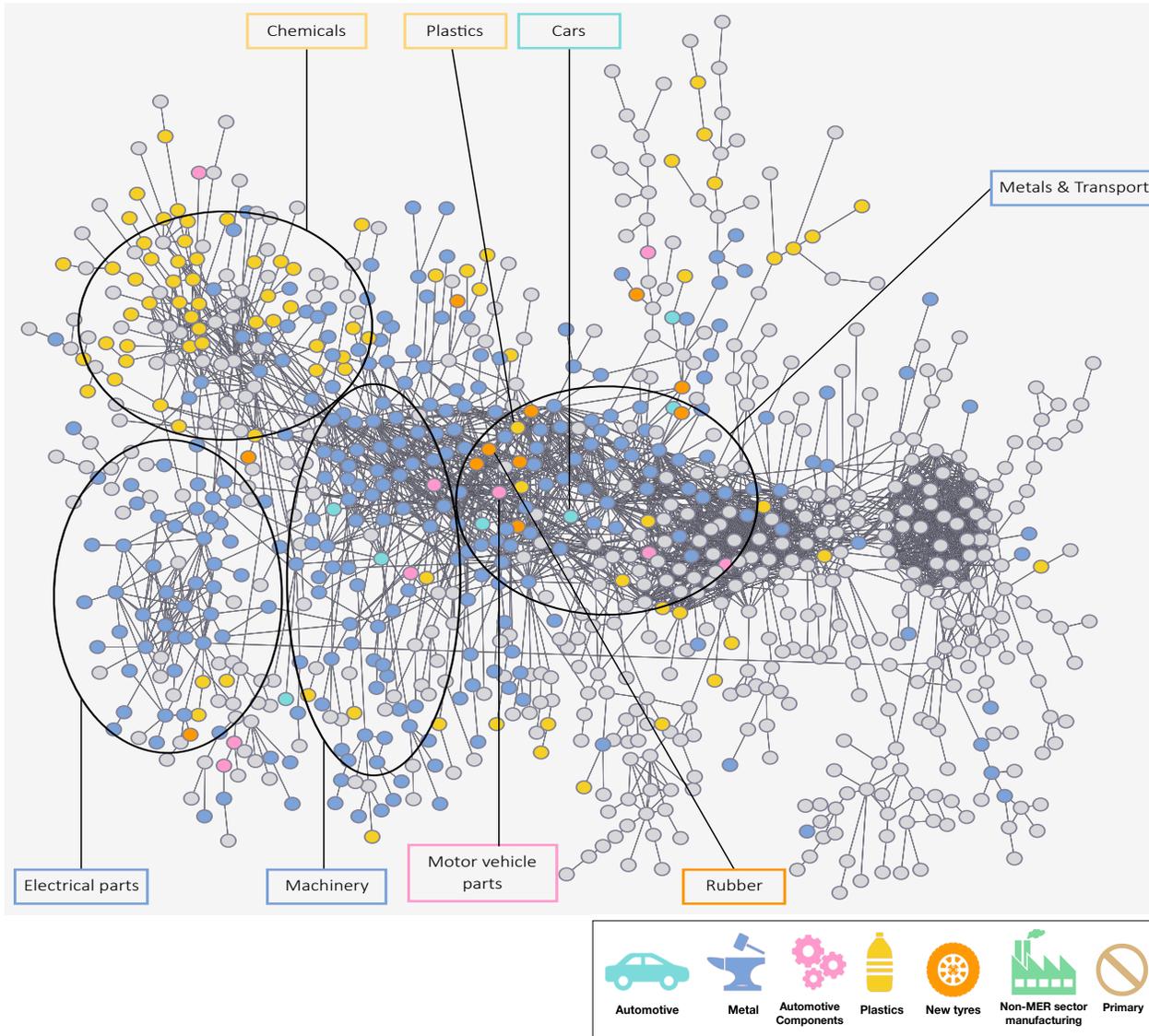
What does South Africa look like?

Peripheral natural resource-based productive structure

- Platinum, gold, coal and other primary mining and agricultural products (light brown nodes)
- ...but, an element of an industrial base...with potential to leverage off
- Motor vehicles and other transport manufactures (turquoise nodes)
- Chemical products (links to plastics)
- Basic metal products and some machinery manufactures (blue nodes)

South Africa needs to (re)industrialise and the MER sector is well positioned to drive this process

Where are MER sector products in the product space?



MER sector products are mainly located in the core of the product space, which is characterised by products that are:

- More complex – one can build economic complexity
- More connected – one can (re)industrialise more easily once one gets a foothold in the manufacturing sector

Therefore, South Africa can build its economic complexity if the MER sector can diversify and grow off its existing industrial base

How does the MER Sector Enterprise Survey contribute?

