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EQuIP

Enhancing the Quality of Industrial Policies

Introduction to the EQuIP Toolbox

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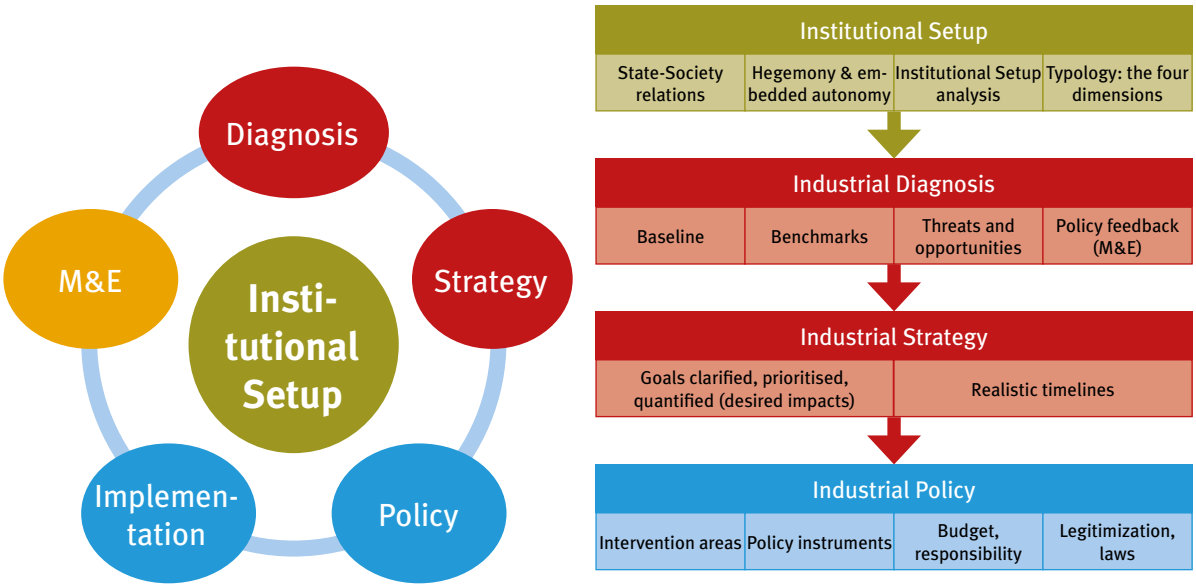
Contents

1. The context

In recent years, industrial policy has experienced a revival and reappeared as a central component of development strategies. In fact, the debate around industrial policies is increasingly shifting from whether or "why" industrial policies should be deployed in the first place to "what", "when" and especially "how" they can be designed and implemented more effectively. Moreover, the development paradigm has changed since the last time industrial policy had its hay-day, and now the scope of such strategies has broadened beyond a narrow focus on growth and must consider an integrated social, environmental and economic landscape for interventions. The key question today is, therefore, **how to best design strategies and subsequent policies which can promote a process of inclusive and sustainable industrial development (ISID).**

Figure 1: The industrial policy cycle



Note: M&E stands for monitoring and evaluation

An ideal approach can be conceived as a policy cycle. Global experience indicates that in order to be effective, the industrial policy process has to be evidence-based, participatory and focused on realistic objectives. International best practice examples suggest that a successful industrial policy cycle must start from a thorough industrial diagnosis that maps the local and global industrial landscape and provides an in-depth understanding of country characteristics, constraints and opportunities as well as global trends. The findings from this industrial diagnosis are then to feed into the design of an industrial strategy which, in turn, forms the basis for the formulation of industrial policies which need to be implemented (and linked to complementary policies). The cycle is closed through monitoring and evaluation (M&E) exercises, the results of which can, in turn, be useful for industrial diagnosis (see figure i for a schematic illustration of such an industrial policy cycle).

Despite the shift in the discourse on and acceptance of industrial policies, **a key challenge for many developing countries is the lack of appropriate capacities** to independently undertake thorough industrial diagnostics and to follow a strategy formulation process that is sufficiently evidence-based. The shortage of adequately trained national analysts often leads to an extensive dependency on international advisors, unrealistic strategic objectives, and ad-hoc and uninformed

decision-making. The result, in many cases, is the formulation of industrial strategies which do not reflect the priorities and realities of the country in question and, consequently, the deployment of inappropriate policy tools.

2. The EQuIP project

In recognition of this capacity gap, the United Nations Industrial Development Organization (UNIDO), the German Development Cooperation (GDC) through the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH have joined forces for the development and deployment of more effective industrial policy support services. The project "EQuIP – Enhancing the Quality of Industrial Policies" aims to support policymakers in developing countries to formulate and design evidence-based strategies for inclusive and sustainable industrial development. The idea is to strengthen the ability of lower-income countries to manage their own future and to enable them to have a larger say in strategy-setting, policy formulation and their engagement with development partners.

At the core of EQuIP is, thus, an institutional capacity-building package to train public servants and analysts for public policy to be based on informed decisions and a critical examination of empirical evidence. This capacity development package builds on an integrated EQuIP toolbox which compiles globally available industrial performance and capability measurement approaches as well as a number of tailor-made new methodologies for industrial diagnosis that also take the social and environmental dimensions of industrial development into account. At the same time the toolbox supports policy makers to design context-appropriate industrial policy packages and to analyze different options for institutional setups which relate to specific country and political economy contexts. All the diagnostic tools, the industrial policy package document and the institutional setup document are freely accessible and available for download from the EQuIP website (www.equip-project.org).

The authors of this toolbox are aware of the limitations of the EQuIP toolbox. The presented tools do not encompass all relevant aspects for industrial diagnosis and analysis, they rather present a selection of the issues, that seem most relevant to the authors. The toolbox is to be seen as work in progress, additions and alterations in the next years will most likely be necessary.

In general, it is rather unlikely that this approach, similar to all other known approaches to industrial policy, will yield the perfect result. An M&E loop is built into the toolbox in order to correct initial decisions which lead towards unintended results. The approaches in the toolbox are based on data which should be available in many of the developing countries and it neglects more sophisticated statistics that would only be found in OECD countries.

In addition, key elements of the toolbox have been converted into an e-learning course to complement hands-on trainings and to facilitate the mastering of EQuIP methodologies. The e-learning course explains the background and the relevancy of the toolkit and provides information about the relation between the tools and key statistical data. Through different modules, it offers a step-by-step presentation as well as sample applications of the different tools and their diagnostic methodologies. The EQuIP e-learning course can be can accessed either through the EQuIP website, the GIZ Global Campus 21 or the UNIDO Institute for Capacity Development E-Learning Platform (http://institute.unido.org/moodle).

With the fundamental objective of capacity building in developing countries, the EQuIP toolbox is operationalized through hands-on trainings based on the EQuIP tool documents, course materials on the different methodologies and the online platform that provides free global access

to the toolbox. This capacity development package has in part been tested in three pilot training workshops for lower-income countries which took place in Namibia, Bahrain and Chile in the first quarter of 2015. These practitioner workshops reached out to the key stakeholders in the industrial policy process in developing countries, including government departments in charge of industrial strategy design and private sector institutions. Ultimately, the EQuIP diagnostic toolbox, together with the accompanying training and capacity building package, aim to support industrial policy practitioners to undertake a thorough industrial diagnosis, to craft evidence-based strategies and to design context-appropriate industrial policy packages for inclusive and sustainable industrial development.

3. The EQuIP toolbox – what kind of tools?

The first phase of the EQuIP project consisted of a literature review to identify existing conceptual approaches, tools, methodologies and indicators which can provide countries with relevant information to design an evidence-based industrial strategy that considers the economic, social and environmental dimensions of industrial performance. Traditionally, industrial development has been focused on enhancing the competitiveness of a country's manufacturing sector whilst ensuring its stable growth. Over the years, in view of countries experiencing unbalanced industrial development confined to (often export-oriented) enclave sectors, the inclusiveness of industrialisation processes has become more prominent and increasing emphasis has been put on the industrial sector providing broad-based employment opportunities, creating shared prosperity and reducing poverty. More recently, concerns about climate change and environmental degradation have highlighted the importance of the sustainability of industrial development processes which is about respecting the planet's boundaries, decoupling growth from ecological damage, and promoting cleaner and resource-efficient production. In short, while economic competitiveness remains a central objective of industrial development, the social and environmental facets and impacts of industrialisation can no longer be ignored - which is also the rationale underlying the EQuIP approach.

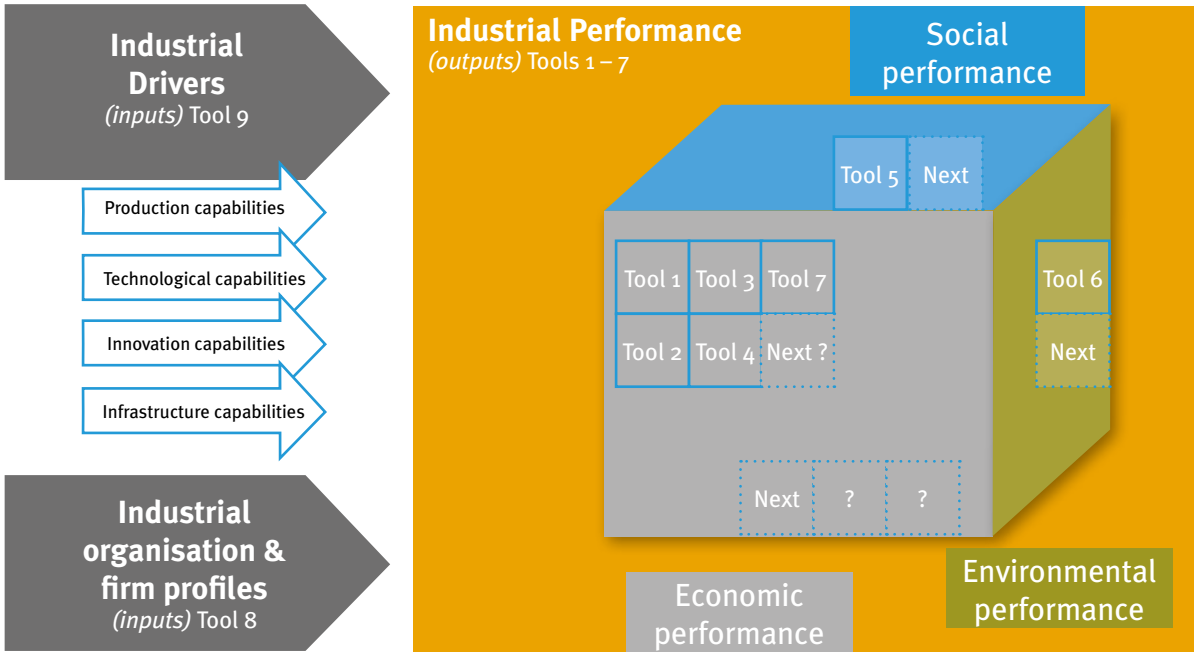
The objective of the literature review was to identify key evidence-based methodologies which could be integrated or adapted for the EQuIP toolbox. In addition, UNIDO developed a number of new measures and methods to fill gaps and to complement existing tools. However, it has to be emphasized that since the ultimate objective of EQuIP is not to achieve scientific breakthroughs but rather to help build analytical capacities in developing countries, a premium has been given to tools which are simple and intuitive. The real value of the indicators chosen/developed lies in the conceptual ideas they illuminate. From the perspective of this toolkit it does not matter so much if analysts are able, for example, to determine the exact wage effects of a particular industrial intervention. Rather, the hope is that wage effects will be considered in future industrial strategy-setting processes because policy makers have an understanding of why and how they relate to other industrialisation dynamics. The EQuIP toolbox therefore prioritizes quantitative diagnostic methods (rather than qualitative or perception-based diagnostics) which help to shed light on intersections between the social, environmental and economic dimensions of industrial development. Overall, the idea of EQuIP has been to compile tools that are as rigorous as possible while still being replicable and usable for the target group.

The different tools of the toolbox cover topics such as industrial growth, sub-sectoral competitive performance, diversification, productive employment generation, and greening of industry. With that, the EQuIP toolbox offers stakeholders a range of methodologies to consider for industrial diagnosis and strategy design in their countries, acknowledging that the most appropriate approaches and tools vary according to country characteristics.

4. Which tools?

In the course of the EQuIP project, a first set of nine diagnostic tools on various issues related to inclusive and sustainable industrial development has been developed and compiled. Each of these nine tools broadly relates to one of the three pillars of inclusive and sustainable industrial development (industrial competitiveness and economic performance, social inclusiveness, and environmental sustainability) and its "drivers". Figure 2 provides an overview of the diagnostics that can be undertaken with the methodological tools that are part of the EQuIP toolbox. The three pillars of inclusive and sustainable industrial development are represented and captured by an "industrial performance cube", a three-dimensional object that connects the three areas. Generally speaking, EQuIP tools 1-7 deal with the "output" side of industrial development, capturing different facets of industrial performance, while tools 8 and 9 cover the "input" side which relates to the "drivers" of performance as well as framework conditions and structural issues (such as industrial organisation and firm profiles).

Figure 2: EQuIP diagnostics – The industrial performance cube & drivers of performance



Although these tools have been fully developed, they will benefit from future evaluation and feedback from eventual EQuIP users and training participants, and thus remain "living documents" that are to be improved continuously. While, ideally, later versions of the toolbox will be even more comprehensive and cover even more topics (e.g. domestic industrial linkages, untapped domestic demand potential, regional inclusiveness, and minimization of environmental impacts of industry), the following provides an overview of the diagnostic tools currently available and the key questions that each of them addresses:

Industrial growth and capacity – domestic and export dimensions

Where does a country stand with regard to the level of industrialisation of its economy? How has this changed over a certain period of time in the past? Is the country moving from an agrarian state

to an industrial one? What can be said about its capacity to produce and export manufactures competitively – and how can this be improved? How does its capacity and growth performance compare to peer or benchmark countries? What is the potential for industry's future growth? What is the importance and impact of a country's industrial sector in the global arena? Is it a small or a large global (or regional) player?

Sub-sector competitive performance

To what extent is a country able to produce and export products of a particular sub-sector? How is that country's performance in different sub-sectors compared to main competitors and role models? And how has the capacity to produce and export changed over time in individual sub-sectors? What role does a country have as a global (or regional) player in a specific sub-sector, and how has its world (or regional) market share changed over the years? How much does a particular sub-sector contribute to the manufacturing industry of the country?

Industrial and export upgrading

At the macro level, how fast have the country's productive and export structures moved towards higher-technology activities or products, relative to its comparators? Within a given sub-sector, what are the products that generate higher returns? How well did the country tap into those products, relative to its comparators? What have been the upgrading strategies for different products within a sub-sector? Do they contribute to higher value-added relative to a given sub-sector's total output?

Diversification – domestic and export dimensions

How concentrated – or, conversely, how diversified – is a country's productive structure? Is its industrial sector dominated by a few sub-sectors only? Which are the dominant sub-sectors? How concentrated or diversified is a given country's export structure? That is, is the country's export basket dominated by a few products only? Are its exports concentrated in a few export markets only? Which are the dominant export products and markets? How has all this changed over time in the recent past? Has the country been diversifying its productive and export structures? How does the degree of diversification of the country's productive and export structures compare to peer or benchmark countries? What are promising avenues to (further) diversify? Which new/additional export markets could be targeted? Which products or product groups could a country possibly add to its export basket to increase diversification?

Industrial employment and poverty alleviation

How efficiently is industrial development generating more and/or better jobs for your country's population? Which industrial sub-sectors are generating the most/least productive employment opportunities? In which sub-sectors is increased productivity contributing the most/least to rising labour incomes? What is the relationship between the formal and informal manufacturing sector and how does this impact the livelihoods of formal and informal workers? What are the potential indirect employment effects of industrial activities and how could industrial interventions ensure more broad-based sectoral growth through stronger linkages? Which sub-sectors are contributing most to poverty alleviation as they expand (on the basis of formal/informal employment, wage generation, skill requirements and gender dynamics)?

Greening Industry – Module 1: Energy efficiency and vulnerability

How self-sufficient is an economy with regard to energy supply, i.e. how dependent is the overall economic system on energy imports from abroad? Which manufacturing sub-sectors are most dependent on energy imports and thus most vulnerable with regard to their energy supply? How do manufacturing sub-sectors compare in terms of their energy efficiency, i.e. the value added

created per unit of energy consumption? Is the energy efficiency of certain sub-sectors below or above that of benchmarking countries? Which sub-sectors should receive priority attention in energy efficiency initiatives?

Greening Industry – Module 2: Material efficiency

How has the absolute material use of the national economy developed over time? How has the material efficiency performance of a country developed over time and how can the performance be evaluated compared to other countries? How self-sufficient is an economy with regard to raw materials, i.e. how dependent is the overall economic system on raw materials imported from abroad? What is the share of the manufacturing sector in the overall material demand of the domestic economy? Which are the manufacturing sub-sectors with the highest material use in a country? How do the various manufacturing sub-sectors differ with regard to their demand for certain raw materials? Which manufacturing sub-sectors are characterised by high value added, while having relative less material use compared to other sub-sectors and thus should receive special attention in a greening industry strategy?

Global Value Chains (GVCs)

In what key sectors is the country integrated in GVCs? What is a country's typical position in GVCs? Which are the country's key GVC partners? Is the country directly linked to final markets in GVCs? Or is it linked through an assembly hub? What is the source of participation of specific manufacturing activities in a GVC and how sticky/footloose is this integration? Is the integration of the country in GVCs related to low production/labour costs or trade preferences? Does proximity to markets play a role? Or does the availability of special skills play a factor? Who controls the participation of a specific sub-sector in a GVC? What is the country's potential for upgrading its manufacturing activities, e.g. through emerging and regional GVCs?

Industrial organisation and firm profiling at sub-sector level

What is the degree of firm competition in a given sub-sector? How has this changed over time? How attractive is the sub-sector to firms? Is investment dynamic? What are the basic characteristics (i.e. size, legal structure, average age) of firms in a given sub-sector? How has this changed over time? How do firms in a given sub-sector integrate globally? To what extent are foreign firms present in a given sub-sector?

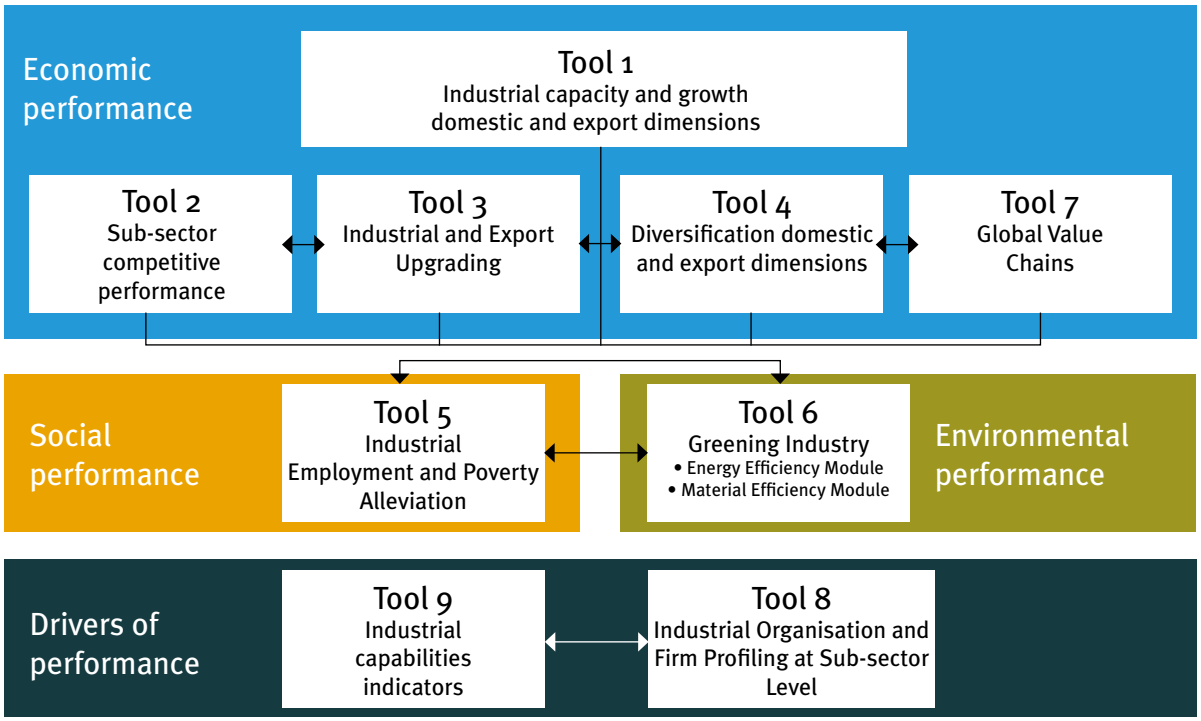
Industrial capabilities

Where does a country stand with regard to the production capacity as well as the production and organisational capabilities owned by its firms? What can be said of its firms' technological capabilities and innovation capabilities? What are the country's industrial capabilities related to physical and institutional infrastructures? How do the country's industrial capabilities compare to peer or benchmark countries? How have these different types of capabilities changed over a certain period of time in the past? Has the country's industrial sector seen fast or slow processes of industrial capabilities development and accumulation? How can the country's industrial capabilities be improved?

Please note that the numbering and sequence of the tools in the above list by no means reflects a ranking or prioritisation. There is also the intention to add more tools in the future. Moreover, it has to be stressed again that the EQuIP tools are conceptualised to be "living documents" that can and will be frequently modified according to users' feedback as well as adapted and tailored to specific country needs. That is, they are designed to be, in a sense, "constant work in progress" which will continuously benefit from user feedback and adaptation. Some of the tools can be considered to be fully developed first versions, while others are still more in an advanced draft stage.

Figure 3 provides an overview of the above-mentioned tools and illustrates how they interrelate. Furthermore, this figure shall help to decide on an adequate combination of tools to be applied. Diagnosis should be based on the results from the application of Tool i, since this tool provides the reader with basic data regarding the overall level of industrialisation and growth capacity of the economy. Depending on the country context and the results from the application of Tool i, this economic diagnosis should be deepened by the application of one or several other tools that relate to economic performance (Tool 2, Tool 3, Tool 4, and/or Tool 7). To make sure that economic development is both inclusive and environmentally sustainable, the economic diagnosis should be complemented by an analysis of the social (Tool 5) and environmental (Tool 6) performance. Diagnosis of the output (industrial performance) side can also be complemented by an analysis of input variables, such as industrial capabilities (Tool 9) and/or industrial organisation and firm profiling at sub-sector level (Tool 8).

Figure 3: Overview of EQuIP tools



5. How to read and use the tools?

Each tool starts on page 1 with a table that provides some **quick facts** and an overview of the objectives of the tool, the indicators used and the key (analytical) questions addressed. This is followed by an introductory section which introduces the topic and provides a rationale why the topic is relevant for inclusive and sustainable industrial development more generally and the EQuIP project more narrowly. This section also presents and motivates the key questions addressed in the tool and provides an introduction and definition of key concepts used in the tool.

Next comes a section that describes the **methodology,** i.e. the analytical process and the different analytical steps. It outlines which indicators are used and how they are calculated and it also includes some suggestions where relevant data can be found. In most cases it is stressed that the methodologies presented can be applied to different units of analysis at different levels of aggregation: the macro level (i.e. where the economy as a whole is the unit of analysis), the sectoral

level (where the industrial sector or the manufacturing sector as a whole are the units of analysis) and the sub-sectoral level (where individual industrial sub-sectors are the unit of analysis).

The third section then applies the methodology for an empirical example (i.e. a case study) in order to illustrate what kind of **analyses** can be undertaken with the methods presented in the previous section. In doing so, it is also shown how the data and indicators used in the tool can be displayed in tables and graphs. Most importantly, this section also makes suggestions on how the findings generated through the application of the tool can be **interpreted** and what **conclusions** can possibly be drawn from the analyses and it outlines how this potentially can be useful for industrial strategy-setting.

The fourth section is dedicated to the discussion of **"possible extensions"** of the tool. This is reflecting our recognition that the tools present are simple methodologies and this section highlights options how this could be refined and/or extended.

The following section discusses how the tool in question **links** to other tools in the toolbox or, more precisely, how the topic presented in the tool links to other subjects in the area of inclusive and sustainable industrial development. Hence, this section puts the topic of the tool into a broader context and sketches some ideas on how the linkages to other subject areas can possibly look like while trying to keep in mind that many of the relationships between the different phenomena that the toolbox is covering are most likely not to be linear or unidirectional but rather complex, circular, mutually reinforcing, trade-offs, etc.

Each tool concludes with listings of possible **data sources** for the analyses (with a certain focus on international databases), of potential other interesting data and indicators (that are not yet available but which might be useful once data has been collected) and, finally, of references and further readings.

6. How to use the diagnostic tools for strategy design and monitoring?

The EQuIP project does not stop with the diagnostic toolbox. In fact, as mentioned at the beginning, it aims to be helpful in particular during the first two stages of the policy cycle. That is, it aims to support not only a sound industrial diagnosis but also an informed and **evidence-based industrial strategy formulation** process.

Moreover, the diagnostic toolbox can also be used for **monitoring and evaluating (M&E)** the effectiveness and success of industrial policy measures. First and foremost, the set of indicators compiled in the different tools allow establishing a comprehensive diagnosis of the current status of a country's industrial sector which, in turn, can serve as a quantitative **baseline** against which to monitor progress with regard to the objectives that are spelled out in the country's industrial strategy. In other words, a collection of selected quantitative indicators (drawn from the EQuIP toolbox) can serve as the frame and baseline of an evidence-based M&E setup. Such an M&E setup increases **transparency** in the industrial policy-making process and thereby helps to reduce the risk of the policy-making process to be captured by vested interests and rent-seeking behaviour. These quantitative baselines can also help policymakers to come up with a logical framework (a "log-frame") and a "theory of change" that clarify the expected impact of industrial policy. More specifically, such a "theory of change" lays out and explains how policymakers foresee the intended policy measures to lead to the achievement of desired results and outcomes in terms of industrial development. Modern M&E systems are not so much about rendering definite judgements on the

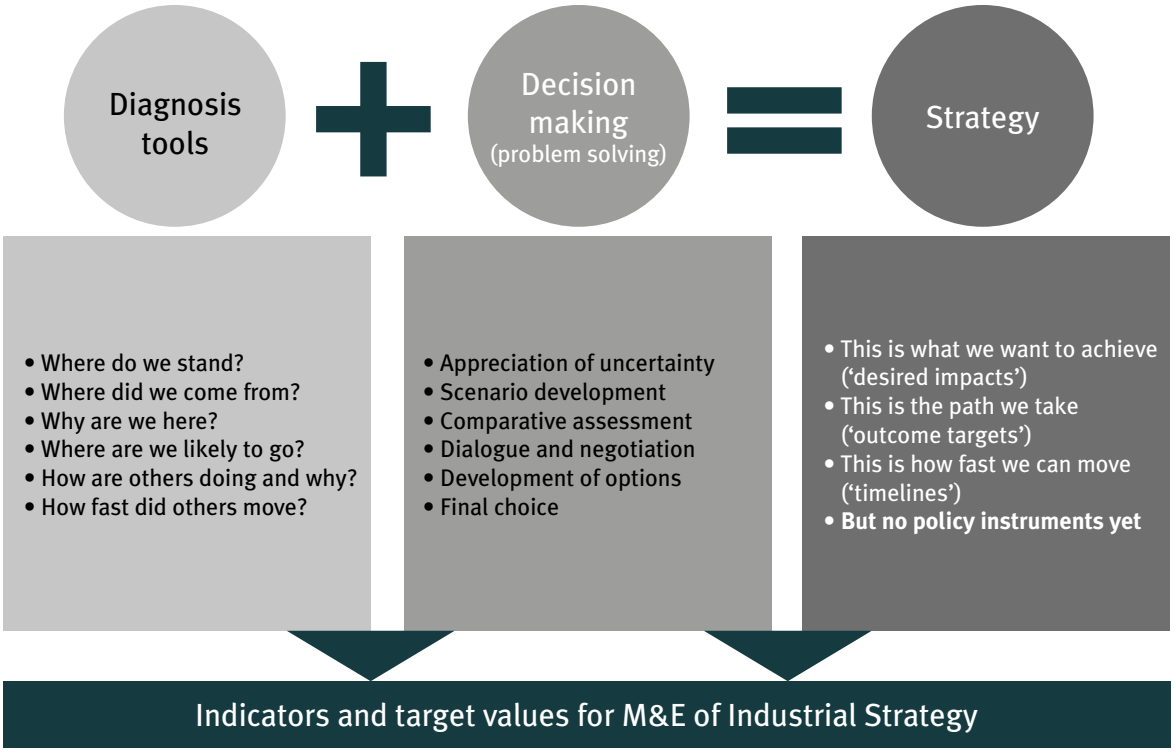
success or failure of certain policy initiatives but rather emphasize the important **feedback loops and learning effects** that continuous M&E delivers to policymakers. That is, observing changes in the quantitative indicators selected for M&E purposes provide feedback on which policy measures have worked (in the form of delivering the expected results) and which measures have not worked, thereby generating valuable insights and learning for policymakers.

While, as we have just seen, the EQuIP diagnostic toolbox can also be very useful for M&E purposes, in the following the focus will be on how the analytical findings that can be generated through applying the EQuIP methodologies can be utilised to inform an evidence-based industrial strategy design process.

An **evidence-based industrial strategy** builds upon a sound and comprehensive diagnosis (see figure 1 above). At the core of any industrial strategy stands the definition of concrete, quantified targets and commitments to achieve them within realistic timelines. It is an attempt by the government to define the framework it will use in the development of its industrial sector. It serves as a compass and outlines a strategic vision of the challenges the government is seeking to resolve, along with a set of strategic objectives.

While a laissez-faire approach to industrial policy is theoretically possible, industrial strategies typically include interventionist elements, such as prioritising support for specific sub-sectors that are deemed to be of strategic importance. In particular, they are often oriented towards correcting imbalances in the industrial sector's performance and involve the assumption by government of a prominent role in facilitating or effecting economic change. In most cases, they present a nuanced narrative for the envisioned structural change process the country wants to accomplish within a certain time-frame (the "theory of change" mentioned above).

Figure 4: From diagnosis to strategy formulation

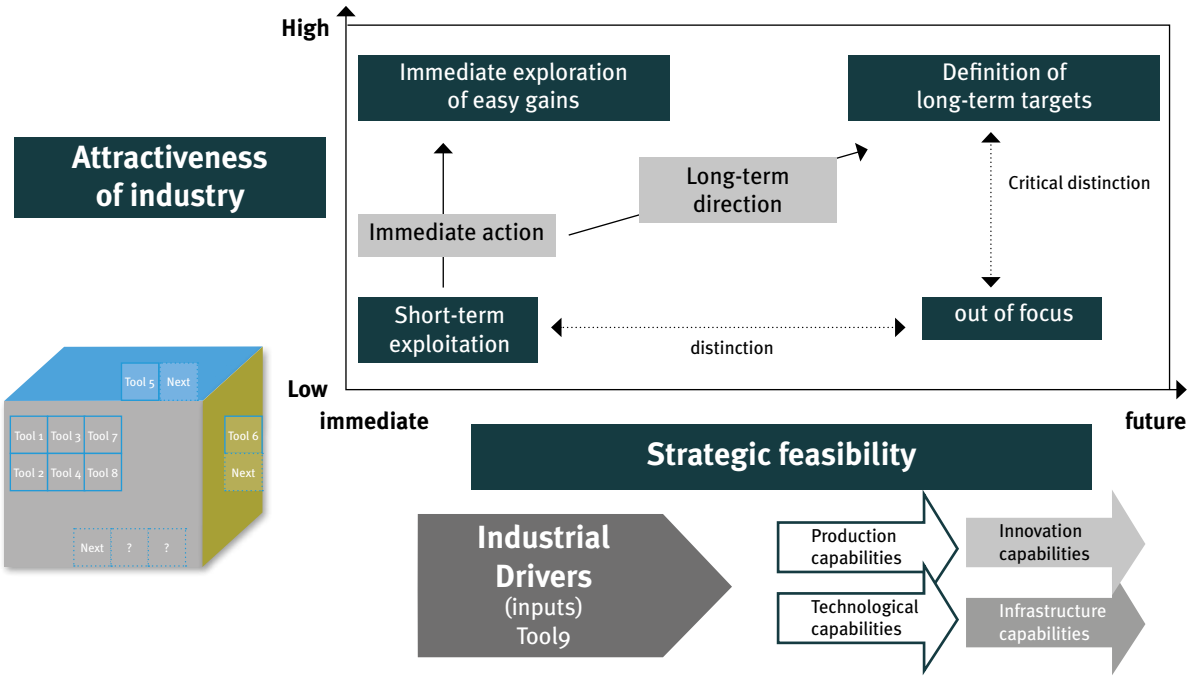


The findings from applying the diagnostic EQuIP tools can support policymakers in developing countries to formulate strategies that promote inclusive and sustainable industrial development (see figure 4). But governments typically lack the information as well as the technical and implementation capacity for such ambitious all-encompassing strategies. Therefore, **prioritisation of objectives** is an essential part of any industrial strategy formulation exercise.

Moreover, **each country can have different strategic objectives and priorities.** Some governments might want to promote as fast industrial growth as possible while others might prioritise industrial employment creation or resource and energy efficiency improvements. It is unlikely that countries come up with identical industrial strategies that disregard their specific circumstances. Rather, industrial strategies are likely to differ according to domestic opportunities and constraints. This calls for an approach to industrial strategy formulation that is contingent on a given country's economic, social and environmental characteristics and conditions. Given that inclusive and sustainable industrial development is a highly complex process, there will be not only win-win scenarios but also trade-offs between different (conflicting) objectives which strategy setters will have to deal with. The EQuIP toolbox aims to account for all this. It aims to neither be deterministic nor prescriptive and to leave users sufficient latitude in applying the different tools and in interpreting the findings generated.

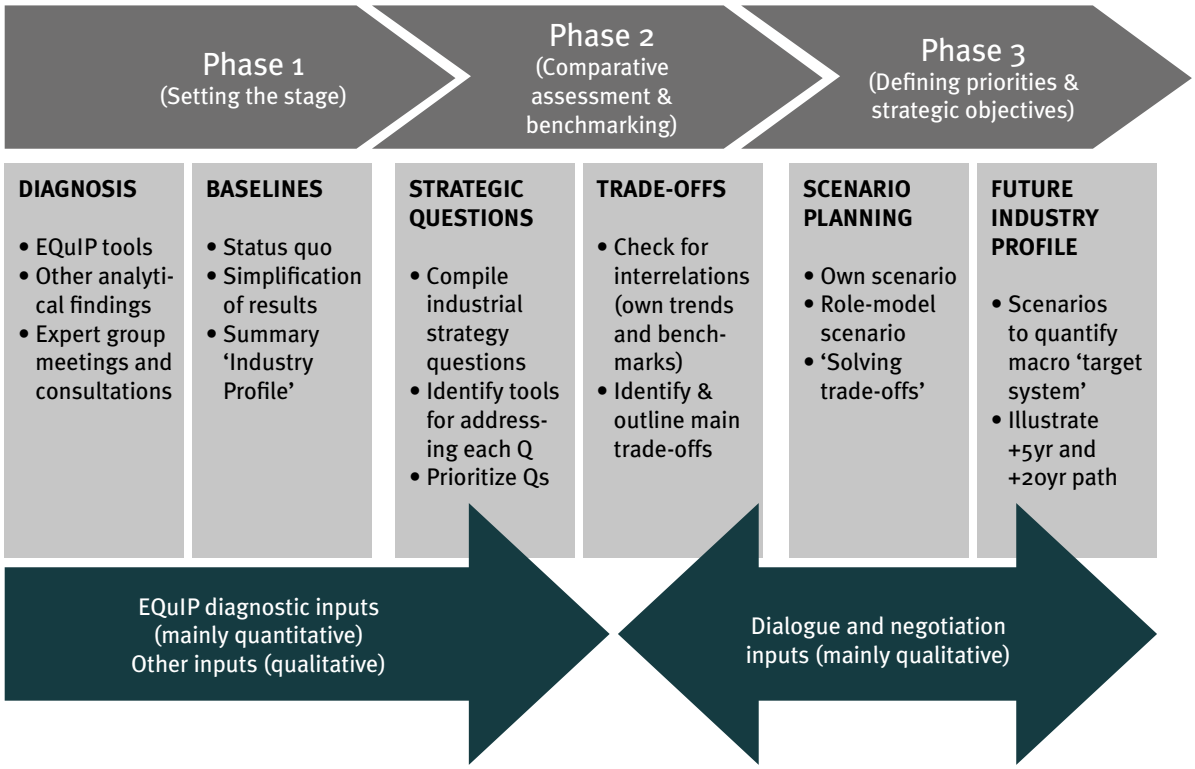
The analytical findings of the diagnostic tools will support policymakers in identifying sectors and activities that are **attractive** to support and it will involve benchmarking against other countries to get a reality check on the **feasibility** of the strategic targets spelled out. The framework allows defining both short term priorities in line with current (latent) comparative advantages as well as more ambitious long-term priorities that require the strategic enhancement of industrial capabilities to build new competitive strengths in advanced sectors (see figure 5).

Figure 5: Assessing relative attractiveness and feasibility of sub-sectors to establish priorities



The industrial design process sets out a number of steps that users are suggested to follow (see figure 6).The first step consists of applying the different EQuIP tools in order to get to a comprehensive diagnosis of the shape and characteristics of the country's industrial sector. Additional diagnostic inputs obviously can also come from other tools and sources (e.g. qualitative information from industry experts, etc.). The facts and figures compiled through this diagnosis can be used to establish a country "Industry Profile" and can serve as baselines for the strategy formulation. In a next step, it has to be clarified which strategic questions and objectives are most relevant for the country. This will also require pondering about and identifying possible trade-offs between different objectives. Next follows scenario planning which is about checking the feasibility of certain targets while accounting for above-mentioned (possible) trade-offs or, conversely, win-win scenarios. The figures produced through the scenario planning exercise can feed into a "Future Industry Profile" which serves to quantify the "target system" of the industrial strategy.

Figure 6: Illustration of an industrial strategy design process



While more deterministic approaches to industrial strategy design can deliver a "new strategy" within several weeks or few months, the EQuIP toolkit aims at creating lasting strategic decision¬making capacities rather than quick fixes. We believe that this is more in line with the idea of an iterative and experimental approach to industrial policy which has been emphasized in recent academic and practitioners' debates. Hence, EQuIP does not aim at the design of the most sophisticated 5 or 20-year industrial strategy for a given country by international advisors. Rather, it aims at **creating national pockets of excellence for industrial strategy design,** monitoring and continuous adaptation that can review existing plans/strategies, question new advice received from international advisors, propose new initiatives, and (maybe most importantly) monitor whether ongoing programs are delivering results which are in line with the strategic vision of the country. In a nutshell, EQuIP will not deliver industrial strategy blueprints for developing countries as other approaches to industrial policy design attempt (e.g. Justin Lin's *Growth Identification and Facilitation Framework, GIFF)*. Instead, it will provide a range of inputs into an independent national industrial strategy-setting and experimental policy learning process. Accordingly, it is based on

a number of principles that jointly ensure an evidence-based and flexible approach to industrial strategy formulation (see figure 7).

Figure 7: Some principles for industrial strategy formulation with the EQuIP toolbox

Evidence-based industrial strategy	Flexible industrial strategy
1. Developed by national analysts within a capacity development process (independence from external advisors).	5. Includes concrete, quantified targets with consistent indicators & realistic timelines.
2. Conceptualized on the basis of transparent (quantitative) evidence on a country's characteristics and conditions.	6. Is flexible and designed as an open-ended cycle that allows constant adaptation.
3. Acknowledges synergies and trade-offs between different objectives (e.g. growth vs. jobs vs. environment; or export vs. domestic market focus).	7. Is the starting and reference point for a continuous learning process (experimentation).
4. Distinguishes ‚performance objectives' & ‚industrial capabilities'.	8. Is not a straight-jacket for 5-20 years, but foresees regular reviews, impact assessments, reconfigurations of targets & timelines.

7. How to formulate and implement industrial policy?

The EQuIP toolbox addresses the questions of *how policies and instruments can be deployed to achieve the strategic objectives and which types of instruments are best suited for which industrial policy objective*. The fact that different countries have different policy objectives illustrates the importance of **country-specific** approaches to the selection of industrial policy instruments so that they are fully aligned to national priorities and reflect the shared values and beliefs of policy makers and society. The EQuIP toolbox provides tools supporting developing countries´ efforts to independently design **context-appropriate industrial policy packages.**

The Industrial Policy Design Document outlines ten common industrial policy objectives which span across social, economic and environmental dimensions of development and contains a classification device of different types of policy instruments that countries can consider as options when designing their industrial policy packages. It presents a structured method for independently assessing and combining instruments into coherent packages that logically connect the prioritized objectives. The Annexes 1 and 2 of the Industrial Policy Design Document contains a long list of over 300 industrial policy instruments for further consideration.

The EQuIP toolbox can also be very useful to analyze different options for institutional setups which relate to specific country and political economy contexts like the state-society-relations, power constellations and interests within and among the state and different social groups. The EQuIP Insitutional Set up Manual focuses on the **creation of institutional structures** and proposes a three phase institutional setup methodology – first, analysis of state-society relations, second, analysis of institutional setup dimensions and, third, monitoring, evaluation and adaption. The first two phases involve an analytical process that informs the respective decisions on the comprehensiveness of industrial policy and the institutional setup. The third phase stresses the importance of continuous monitoring and evaluation.

Hence, the focus of the EQuIP toolbox is not on identifying any universal best institutional setup, but on **analyzing different options for institutional setups** which allows policy makers to assess and adapt their institutional setups related to their specific country and state-society context. It aims to enable governments and other stakeholders in developing countries to take informed decisions regarding the institutional setup which best fits the objectives of a specific country when it comes to the design, implementation, governance, monitoring, and evaluation of industrial policy. The EQuIP toolbox is thus meant to help countries which experience difficulties with the effective setup of governmental institutions or with the proper institutionalization of non-governmental stakeholders, e.g. in the private sector.

8. Concluding remarks

Within the scope of the "EQuIP – Enhancing the Quality of Industrial Policies" project, a team of experts from UNIDO, GIZ and other institutions developed an integrated methodological toolbox that compiles, for now, nine diagnostic tools to analyse the different dimensions of inclusive and sustainable industrial development as well as an Industrial Policy Design and Institutional Setup Document. The overarching objective of EQuIP is to support evidence-based industrial policy-making processes in developing countries.

By way of concluding, a few remarks are warranted on the current version of the EQuIP toolbox:

- First, the EQuIP toolbox is meant for long-term capacity development services that make industrial policy processes in developing countries more independent; it is absolutely not meant to provide quick fixes.
- Second, the EQuIP approach is not the only solution for effective industrial policy-making, but arguably a very sustainable one. Still, it should be complemented by other approaches.
- Third, the EQuIP tools developed so far offer a comprehensive package of analytics that can shed light on various aspects of industrial development.
- Fourth, the diagnostic tools can be deployed in modular manner. However, obviously, the more tools are applied, the more findings can be generated, and the more information can be fed into the strategy formulation exercise.
- Fifth, the tools are considered "living documents" (or "constant work in progress") that will be continuously improved based on users' feedback and comments.
- Sixth, the toolbox allows (and requires) customization to country characteristics (depending on the country's stage of development, specific priorities, pre-existing analytical capacities, etc.)
- Seventh, further tools could be developed in order to cover additional topics of importance for inclusive and sustainable industrial strategy-setting.
- Eighth, the different pieces of information created through the application of the EQuIP diagnostic tools can be pulled together in order to help policymakers taking informed decisions when formulating an industrial strategy for their country.

- Ninth, while it was suggested to use the EQuIP toolbox for the diagnosis and strategy formulation segments of the policy cycle, it can actually also be very useful for increasing the transparency of strategy-setting processes as well as for monitoring and evaluation (M&E) purposes, not least because a premium has been given to quantitative measures.

- Tenth, the EQuIP toolbox offers a support to independently design context-appropriate industrial policy packages.

- Eleventh, the Industrial Policy Design Document contains a classification device of different types of policy instruments that countries can consider as options when designing their industrial policy packages

- Twelth, the focus of the EQuIP toolbox is not on identifying any universal best institutional setup, but on analyzing different options for institutional setups

- Thirteenth, the EQuIP Institutional Setup Manual focuses on the creation of institutional structures which are related to the specific country and state-society context.

- Last but definitely not least, the EQuIP toolbox should not be interpreted as being deterministic. Rather, the main objective of the EQuIP toolbox is to strengthen the capacity of policymakers and analysts to think independently and critically. That is, with its emphasis on capacity-building (which is not confined to technical capabilities only), it aims to bolster their ability not only to answer questions but also to ask the right questions, i.e. to identify those areas that are particularly relevant for promoting an inclusive and sustainable industrial development process in their country.

The following pages provide a short summary of the main features of the currently available tools.

Enhancing the Quality of Industrial Policies (EQuIP) – Tool 1	
Name of the tool:	**Industrial capacity and growth – domestic and export dimensions**
Objective:	The aim of this tool is to provide a general overview on the magnitude, strengths, competitiveness and performance of a country's industrial sector. It outlines how an analysis of a country's industrial capacity and its patterns of growth can look like. It covers both the dimensions of domestic production and exports, thereby recognizing the capacity to produce and the capacity to export as key ingredients for economic growth and industrial competitiveness.
Key questions addressed:	Where does a country stand with regard to the level of industrialization of its economy? How has this changed over a certain period of time in the past? At which pace is the country moving from an agrarian state to an industrial one? What can be said about the country's capacity to produce and export manufactures competitively – and how can this be improved? How does its capacity and growth performance compare to peer or benchmark countries? What is the importance of a country's industrial sector in the global (or regional) arena? Is it a small or a large global (or regional) player?
Indicators used:	Share of manufacturing value added (MVA) in gross domestic product (GDP) Share of manufactures in total exports MVA per capita Manufactured exports per capita Share in world MVA Share in world manufactured export

Enhancing the Quality of Industrial Policies (EQuIP) – Tool 2	
Name of the tool:	**Sub-sector Competitive Performance**
Objective:	This tool aims at measuring the competitiveness of any given sub-sector within manufacturing in a multifaceted manner. The methodology is in line with that of Tool 1 on Industrial Capacity and Growth, and it helps to measure both the production and the export performance of any sub-sector using a number of indicators. Through the comparison of performance across sub-sectors, this tool helps identify sub-sectors that can contribute the most to overall industrial and export competitiveness and growth. This tool provides a methodology to analyse current performance and past developments of sub-sectors, while supporting the sub-sector selection exercise in the strategy-setting phase of the industrial policy cycle.
Key questions addressed:	To what extent is a country able to produce and export products of a particular sub-sector? How is that country's performance in different sub-sectors compared to main competitors and role models? And how has the capacity to produce and export changed over time in individual sub-sectors? What role does a country have as a global (or regional) player in a specific sub-sector, and how has its world (or regional) market share changed over the years? How much does a particular sub-sector contribute to the manufacturing industry of the country?
Indicators used:	Sub-sector value added per capita Sub-sector exports per capita Share in world value added of sub-sector Share in world exports of sub-sector Share of sub-sector in total manufacturing value added (MVA) Share of sub-sector in manufactured exports

Enhancing the Quality of Industrial Policies (EQuIP) – Tool 3	
Name of the tool:	**Industrial and Export Upgrading**
Objective:	Upgrading a country's industrial sector and exports towards more attractive and higher value-added activities is an important dimension of industrial development. This tool aims to outline methodologies to analyse upgrading processes within a country's industrial sector at various levels, including the macro level (i.e. the industrial sector as a whole), the sub-sectoral level and the product level.
Key questions addressed:	At the *macro* level, how fast have the country's production and export structures moved towards higher-technology activities or products, relative to its comparators? Within a given *sub-sector,* what are the products that generate higher returns? How well did the country tap into those products, relative to its comparators? What have been the upgrading strategies for different *products* within a sub-sector? Do they contribute to higher value-added relative to a given sub-sector's total output?
Indicators used:	Share of medium- and high-tech (MHT) activities in Manufacturing Value Added (MVA) Share of MHT exports in total manufacturing exports Share of high-value products in sub-sector's total production Share of high-value products in sub-sector's total exports Change in export unit values Change in world export market share Share of value-added in total output of a sub-sector

Enhancing the Quality of Industrial Policies (EQuIP) – Tool 4	
Name of the tool:	**Diversification – domestic and export dimensions**
Objective:	The aim of this tool is to help analysts find out whether a country's industrial and export structures are diversified or rather concentrated in a few activities/sub-sectors and markets. It covers both domestic and export dimensions and points to different possible approaches to measure the degree of diversification (or, conversely, concentration) of a country's manufacturing sector, export basket and export markets.
Key questions addressed:	How concentrated – or, conversely, how diversified –- is a country's productive structure? Is its industrial sector dominated by a few sub-sectors only? Which are the dominant sub-sectors? How concentrated or diversified is a given country's export structure? That is, is the country's export basket dominated by a few products only? Are its exports concentrated in a few export markets only? Which are the dominant products and markets? How has all this changed over time in the recent past? Has the country been diversifying its productive and export structures? How does the degree of diversification of the country's productive and export structures compare to peer or benchmark countries? What are promising avenues to (further) diversify? Which new/ additional export markets could be targeted? Which products or product groups could a country possibly add to its export basket to increase diversification?
Indicators used:	Share of top-3 manufacturing sub-sectors in total manufacturing value added (MVA) Share of top-3 manufactured exports in total exports Hirschman-Herfindahl Index (HHI) for the domestic industry HHI for export products HHI for export markets Manufactured product diversification index (MPDI) Export market diversification index (EMDI)

Enhancing the Quality of Industrial Policies (EQuIP) – Tool 5	
Name of the tool:	**Industrial Employment and Poverty Alleviation Tool**
Objective:	The aim of this tool is to provide analysts with some simple and intuitive diagnostic methods, which can help them to promote a process of structural change, which generates widespread, quality employment and contributes to poverty alleviation.
Key questions addressed:	How efficiently is industrial development generating more and/or jobs for your population? Which industrial sub-sectors are generating the most/least productive employment opportunities? In which sub-sectors is increased productivity contributing the most/ least to rising incomes? What is the relationship between the formal and informal manufacturing sector and how does this impact the livelihoods of formal and informal workers? What are the potential indirect employment effects of industrial activities and how could industrial interventions ensure more broad-based sectoral growth through stronger linkages? Which sub-sectors are contributing most to poverty alleviation as they expand (on the basis of formal/informal employment, wage generation, skill requirements and gender dynamics)?
Indicators used:	Poverty Rate Employment Composition (Economy & Manufacturing (Formal and Informal) Employment Growth Rate (Manufacturing & Sub-sector (Formal and Informal) Manufacturing Value Added Growth Rate (Manufacturing & Sub-sector (Formal and Informal) Employment elasticity (Manufacturing & Sub-Sector (Formal and Informal)) Manufacturing Wage Bill/MVA Manufacturing Sub-Sector Wage Rates Relative to Minimum Wage (or GDP/Capita) for Formal & informal Sector Wage Growth Rates (Manufacturing and Sub-Sector (Formal & Informal)) Manufacturing Sub-sector Wage Elasticity of Productivity (Formal & Informal) Manufacturing Sub-Sector Female Share of Employment (Formal & Informal) Manufacturing Sub-Sector Gender Wage Gap (Formal & Informal)

Enhancing the Quality of Industrial Policies (EQuIP) – Tool 6.1	
Name of the tool:	**Greening Industry/ Module 1: Energy Efficiency**
Objective:	The objective of this tool is to provide a set of indicators and related analyses, which allow (a) to assess the performance of a country regarding energy efficiency and energy vulnerability of its manufacturing sector, and (b) to identify priority sub-sectors with low energy efficiency performance and/or a high vulnerability regarding its energy supply due to limited domestic energy supply.
Strategic questions addressed:	How self-sufficient is an economy with regard to energy supply, i.e. how dependent is the overall economic system on energy imports from abroad? Which manufacturing sub-sectors are most dependent on energy imports and thus most vulnerable with regard to their energy supply? How do manufacturing sub-sectors compare in terms of their energy efficiency, i.e. the value added created per unit of energy consumption? Is the energy efficiency of certain sub-sectors below or above the benchmark of OECD countries? Which sectors should receive priority attention in energy efficiency initiatives?
Indicators used:	Final energy consumption by manufacturing sub-sectors Share of the manufacturing sector in national energy consumption Energy efficiency (value added of manufacturing sub-sectors per energy consumption of manufacturing sub-sectors) Energy self-sufficiency (domestic energy production per domestic energy demand)

Enhancing the Quality of Industrial Policies (EQuIP) – Tool 6.2	
Name of the tool:	**Greening Industry / Module 2: Material efficiency**
Objective:	The material efficiency-related part of Tool 6 provides a set of indicators and related analyses, which allow (a) to inform about the material use and material efficiency performance on the economy-wide level; (b) to reflect on the material self-sufficiency of countries and the implications for the material security of the manufacturing sector; and (c) to analyse the importance of the manufacturing sector in overall material use of the economy as well as the material use of manufacturing sub-sectors.
Strategic questions addressed:	How has the absolute material use of the national economy developed over time? How has the material efficiency performance of a country developed over time and how can the performance be evaluated compared to other countries? How self-sufficient is an economy with regard to raw materials, i.e. how dependent is the overall economic system on raw materials imported from abroad? What is the share of the manufacturing sector in the overall material demand of the domestic economy? Which are the manufacturing sub-sectors with the highest material use in a country? How do the various manufacturing sub-sectors differ with regard to their demand for certain raw materials? Which manufacturing sub-sectors are characterised by high value added, while having relative less material use compared to other sub-sectors and thus should receive special attention in a greening industry strategy?
Indicators used:	Domestic Material Consumption (DMC) on the economy-wide level Material efficiency of the economy (GDP/DMC) Self-sufficiency of the economy (by main material groups) Material use of manufacturing sector (as share of material use of all sectors) Material use of manufacturing sub-sectors (by main material groups)

Enhancing the Quality of Industrial Policies (EQuIP) – Tool 7	
Name of the tool:	**Global Value Chains and Industrial Policy**
Objective:	The aim of this tool is to help analysts in low-income countries examine their current position within Global Value Chains (GVCs) and determine the desirability and feasibility of greater participation in these globally fragmented production networks.
Key questions addressed:	What is our current position in GVCs? What is the source of participation of specific manufacturing activities in a GVC and how sticky/footloose is this integration?
Indicators used:	Structure of exports and imports (share raw materials, semi-processed vs. processed) Share of foreign value added in gross exports (%) Reliance on imported inputs Share of country in total imports of the market Capital to labour ratio Linkage with lead firms and brands

Enhancing the Quality of Industrial Policies (EQuIP) – Tool 8	
Name of the tool:	**Industrial organisation and firm profiling at sub-sector level**
Objective:	The present tool aims to draw a detailed portrayal of industrial sub-sectors and, for that purpose, suggests a list of indicators on sub-sector characteristics related to industrial organisation and firm profiles. Such information on the industrial organisation and firm profiles of different sub-sectors not only deepens the analyses provided by EQuIP's diagnostic tools on different performance aspects of industrial development, but also provides the context for subsequent industrial strategy formulation exercises, especially when the industrial strategy approach also contemplates selective or targeted (i.e. sub-sector specific) measures.
Key questions addressed:	What is the degree of market concentration or, conversely, firm competition in a given sub-sector? How has this changed over time? How attractive is the sub-sector to firms? Is investment dynamic? What are the basic characteristics (i.e. size, legal structure, average age) of firms in a given sub-sector? How has this changed over time? How do firms in a given sub-sector integrate globally? To what extent are foreign firms present in a given sub-sector?
Indicators used:	Total number of firms in a sub-sector Market share of the top-5 firms in a sub-sector Hirschman-Herfindahl Index (HHI) for competition in a sub-sector Gross fixed capital formation per establishment Firm characteristics (employment size, legal forms, age, quality management capability) Percent of firms exporting directly or indirectly (at least 1% of Percent of firms using material inputs and/or supplies of foreign origin Proportion of total inputs that are of foreign origin Percent of firms identifying customs and trade regulations as a major constraint FDI inflow at sub-sector level Share of foreign firms in total output of a sub-sector

Enhancing the Quality of Industrial Policies (EQuIP) – Tool 9	
Name of the tool:	**Industrial capabilities indicators**
Objective:	The aim of this tool is to capture a country's different types of industrial capabilities and to facilitate a better understanding of the role they play in industrial production, technological and structural change. It builds indicators for the factors that either determine or enable processes of industrial capabilities development and accumulation, and links them to different types of industrial outputs, thereby explaining and measuring the role of industrial capabilities as main drivers and enablers of countries' industrial competitiveness and development.
Key questions addressed:	Where does a country stand with regard to the production capacity as well as the production and organisational capabilities owned by its firms? What can be said of its firms' technological capabilities and innovation capabilities? What are the country's industrial capabilities related to physical and institutional infrastructures? How do the country's industrial capabilities compare to peer or benchmark countries? How have these different types of capabilities changed over a certain period of time in the past? Has the country's industrial sector seen fast or slow processes of industrial capabilities development and accumulation? How can the country's industrial capabilities be improved?

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Enhancing the Quality of Industrial Policies (EQuIP) – Tool 9	
Indicators used:	Share of manufacturing in Total Gross Fixed Capital Formation (GFCF) Share of GFCF in gross domestic product (GDP) Manufacturing Value Added (MVA) per manufacturing establishment Electric Power Consumption (kWh per capita) Share of Secondary and Tertiary Educated in Total Population Share of Science and Engineering Students in Total Tertiary Graduates Manufacturing Wages per Worker Labour Force Participation Rate (LFPR) Vocational Students in Secondary Education as a Share of Population Share of Secondary and Tertiary School Enrolment in Population Employment per Manufacturing Establishment ISO 9001 Certificates per 1,000 People Gross Expenditure on Research & Development (GERD) per capita Share of R&D personnel per 1,000 Full-Time Employees Business-Financed GERD in Total GERD Government-Financed GERD in Total GERD GERD on Applied Research in Total GERD GERD on Experimental Development in Total GERD Capital Goods Imports FDI Inflows as a Share of GDP Intellectual Property Rights Payments Stock of Patents in Force Scientific and Technical Journal Articles Patents Granted to Residents per Patent Application by Residents Patents Granted to Non-Residents per Patent Application by Non-Residents Growth Rate of Patent Applications by Residents GERD in Basic Research Share of Patent Applications by Non-Residents Goods Transported by Roads per 100 people Goods Transported by Railway per 100 people Freight Transported by Air Transport per 100 people Telephone Lines per 100 people Mobile Cellular Subscriptions per 100 people Personal Computers per 100 people Internet Users per 100 people Domestic Credit to Private Sector by Banks as a Share of GDP Turnover Ratio Cost of Business Start-up Procedures as a percentage of gross national income (GNI) per capita

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