SDG 17: Partnerships for the Goals

A review of research needs

Annex to the Formas report *Forskning för Agenda 2030: Översikt av forskningsbehov och vägar framåt*

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Summary

Sustainable Development Goal (SDG) 17 calls for strengthening the means of implementing the Agenda 2030. In particular, it calls for investing in the global partnership for realising sustainable development all over the world. Achieving the ambitions of Agenda 2030 will require mobilising political will and deepening partnerships between government, the private sector and civil society. It will also require increasing international cooperation and improving coherence between policies and initiatives both domestically and internationally. SDG 17 addresses these needs and calls for actions to increase capacity for implementing the SDGs at all levels. As such, meeting the targets and ambitions of SDG 17 is absolutely essential for successfully advancing the entire SDG agenda.

This literature review and assessment of research needs focuses on a selection of the 19 targets under SDG 17 and related targets from SDG 16 and SDG 9. This study has concentrated on those targets that point clearly to research areas and research questions that could contribute in important ways to the achievement of the SDGs. The review identifies areas of research interest within both developing and developed country contexts and research areas that could contribute to improving international partnerships for the achievement of SDGs.

Given the wide range of issues touched upon by the 19 targets of SDG 17, several important areas of research could not be included within the scope of this review. This study has been limited to four themes. The first theme is on improvements in *public administration and the quality of government*, including improvements in government revenue collection (17.1, 17.9, 16.3, 16.5 and 16.6). The second theme is on *policy coherence* in the implementation of SDG goals and targets (17.13 and 17.14). The third theme addresses *access to technology* (17.6, 17.7, 9.5, 9.a and 9.b). The fourth and final theme addresses *multi-stakeholder partnerships*, which are relevant for the global partnership in general (17.3, 17.6, 17.9, 17.16 and 17.17). An expert workshop on the research needs for SDG 17 was held in Stockholm in May of 2018 to provide complementary insight for this report.

Overview of the goals and targets

Table 1. Overview of SDG 17. Targets included in this review are in bold.

SDG 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development	
17.1	**Strengthen domestic resource mobilisation, including through international support to developing countries, to improve domestic capacity for tax and other revenue collection**
17.2	Developed countries to implement fully their official development assistance commitments, including the commitment by many developed countries to achieve the target of 0.7 per cent of ODA/GNI to developing countries and 0.15 to 0.20 per cent of ODA/GNI to least developed countries; ODA providers are encouraged to consider setting a target to provide at least 0.20 per cent of ODA/GNI to least developed countries
17.3	**Mobilize additional financial resources for developing countries from multiple sources**

17.4	Assist developing countries in attaining long-term debt sustainability through coordinated policies aimed at fostering debt financing, debt relief and debt restructuring, as appropriate, and address the external debt of highly indebted poor countries to reduce debt distress
17.5	Adopt and implement investment promotion regimes for least developed countries
17.6	**Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism**
17.7	**Promote the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favourable terms, including on concessional and preferential terms, as mutually agreed**
17.8	Fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology
17.9	**Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the sustainable development goals, including through North-South, South-South and triangular cooperation**
17.10	Promote a universal, rules-based, open, non-discriminatory and equitable multilateral trading system under the World Trade Organization, including through the conclusion of negotiations under its Doha Development Agenda
17.11	Significantly increase the exports of developing countries, in particular with a view to doubling the least developed countries' share of global exports by 2020
17.12	Realize timely implementation of duty-free and quota-free market access on a lasting basis for all least developed countries, consistent with World Trade Organization decisions, including by ensuring that preferential rules of origin applicable to imports from least developed countries are transparent and simple, and contribute to facilitating market access
17.13	**Enhance global macroeconomic stability, including through policy coordination and policy coherence**
17.14	**Enhance policy coherence for sustainable development**
17.15	Respect each country's policy space and leadership to establish and implement policies for poverty eradication and sustainable development
17.16	**Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries**

17.17	**Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships**
17.18	By 2020, enhance capacity-building support to developing countries, including for least developed countries and small island developing States, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts
17.19	By 2030, build on existing initiatives to develop measurements of progress on sustainable development that complement gross domestic product, and support statistical capacity-building in developing countries

We also include in our review a number of targets from SDG 16 on peace, justice and strong institutions, and from SDG 9 on industry, innovation and infrastructure. These are:

- 16.3 Promote the rule of law at the national and international levels and ensure equal access to justice for all
- 16.5 Substantially reduce corruption and bribery in all their forms
- 16.6 Develop effective, accountable and transparent institutions at all levels
- 9.5 Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending
- 9.a Facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support to African countries, least developed countries, landlocked developing countries and small island developing states, and
- 9.b Support domestic technology development, research and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities.

Summary findings: research needs

Below is a summary of the research directions identified under each theme. The proposals made by experts during the workshop on SDG 17 are indicated under theme 2 on policy coherence.

Theme 1: Public administration and the quality of government

- Expand existing research on the impacts of quality of government to cover a broader range of the social, environmental and economic outcomes encompassed by the 17 SDGs.
- Better understand the potential for trade-offs between gains in the quality of government and environmentally oriented SDG targets, and how to mitigate any potential trade-offs.

- Better understand how the institutional context in which growth occurs affects the full range of sustainability outcomes entailed within the SDGs (i.e. environmental, social, and economic).
- Assess where achievement of SDGs requires longer-term investments from governments (i.e. investments where returns and benefits arrive over the longer-term) and identify the conditions for sustained public support for making these investments.
- Existing research suggests that the key determinants of public support for public regulation and public investment may interact in different ways with the very diverse economic, social, and environmental sustainable development objectives encompassed within the SDGs. These relationships should be better understood.
- Better understand how public-private financing models for mobilising private investment in the SDGs can be designed to maximise trust between partners and support from the public.
- Fill theoretical gaps on the fair distribution of financial risk between public and private actors in the transition to sustainability.
- Assess how local conditions – with respect to information, culture and trust – and how local public administration capacity impact the prospects for an effective global partnership for realising Agenda 2030.
- Assess how perceptions of the quality of government in receiving countries affect support for foreign aid in donor countries. Are there significant feedback loops between levels of domestic institutional capacity and investment in international support for SDG achievement that can be exploited or need to be mitigated?
- Conduct more work explaining why countries at similar levels of economic development vary so significantly in fiscal capacity.
- Assess, in general, how to better support taxation capacity in developing countries.
- Assess, in particular, which policies have worked to improve public revenue generation capacity and redistribution in developing countries, and assess what political economy conditions have allowed some states to increase tax revenues.
- Assess how to support local leadership for reform.
- Identify reform programmes that better link taxation to state-building and governance objectives in developing countries.
- Better understand the complexities in the relationships between development aid and building taxation capacity.
- Better understand the impacts of the international policy context on the advancement of national and local revenue generation capacity.
- Assess how perceptions of the legitimacy of the tax system in developing country contexts can be improved in conjunction with governance improvements (i.e. where such improvements occur).
- Investigate if there are ways other than increasing tax collection capacity that can simultaneously increase government revenue and the quality of government. Are there other revenue-related, self-reinforcing drivers for SDG achievement?
- Conduct more research on the impacts of increases in infrastructure spending on land-use change in developing country contexts (i.e. changes as they relate to greenhouse gas emissions).
- Conduct more research that identifies strategies for how to better manage non-tax-based revenue in developing country contexts. This appears very important.
- Research how the global partnership for SDG achievement should address the “political resource curse”, given that countries importing, for example, oil from

countries with low quality of government may be directly implicated in obstacles to SDG achievement. Extending the empirical, normative, and policy research base are all important.

Expert recommendations

- There are multiple scales at which quality of government could be used as a lens of analysis for SDG implementation, including at the city, sub-regional and even NGO level.
- The assessment of quality of government for the SDGs requires advancements in how we measure the quality of SDG implementation and achievement.
- More research should be directed at better understanding existing action gaps for SDG achievement.
- We need to understand and develop strategies to address low levels of general public engagement in the SDG agenda.
- More strategic-oriented work is needed on how to actually bring about better quality of government and minimise corruption.
- Research is needed on strategies for broadening the tax base in contexts where public services have been poor and trust in broad payment low (i.e. as an issue that exists prior to broadening the tax base for SDG achievement).
- There is a need to better understand how international support and international cooperation can actually contribute to domestic quality of government improvements in different regions.
- We need a better understanding of Sweden's own challenges with quality of government and where the country can best be viewed as a role model.
- We need a better understanding of the problem of a retreat in quality of government in more developed countries.
- More sociological work on culture and how it relates to quality of government should be prioritised for the achievement of a societally transformative sustainability agenda.
- More thinking on how different dimensions of quality of government are related to the question of power seems important given the transformative nature of Agenda 2030.

Theme 2: Policy coherence

- In general, better understand interactions between SDG goals and targets and how policy can promote positive interactions and mitigate negative interactions. Part of the challenge is to improve or develop new analytical tools for characterising and quantifying interactions.
- Conduct comparative research on policy coherence strategies and tools, to determine which work in different contexts and why.
- Identify and analyse organisational models that incentivise and properly resource efforts for policy coherence and increase the ability of policy-makers to tackle complex problems.
- Research cases of policy incoherence, to identify sources of resistance to policy coherence.
- Look into the effects of policy coherence, using empirical research.
- Measure and follow-up on coherence and its impacts.

Expert recommendations proposed during the workshop on SDG 17

- Work on how existing institutional arrangements for governance – such as the World Trade Organization and the Paris Agreement – interact with the SDG agenda. Assess how the legal commitments of many international regimes affect the advancement of Agenda 2030 given its voluntary structure.
- Understand policy coherence and SDG interactions at different scales, especially at the global level and sub-national level.
- Better understand how civil society and, especially, local government can cooperate for the advancement of the SDGs.
- Understand interactions between successfully broadening the tax base in developing countries and impacts on Foreign Direct Investment (FDI), tech transfer and remittances.
- The development of models and tools for achieving policy coherence is an important research task.
- Go beyond characterising SDG interactions to understand causality between SDG targets.
- Think deeper about trade-offs. Can we really address poverty and achieve sustainable consumption at the same time? Can we really accelerate global trade and achieve environmental goals?
- Conduct case studies assessing trade-offs between effectiveness in achieving SDG targets versus perceptions of legitimacy in the means of achievement.

Theme 3: Technology access and capacity

- In general, identify the most important channels of technology transfer to developing and least developed countries, combined with studies assessing these channels in a wide variety of national and regional contexts.
- Conduct more research on the type of local technological innovation capacity which would most benefit least developed countries.
- Better understand how to match levels of technological complexity with local capacity to absorb technology in order to accelerate productive technological transfer.
- Conduct more general research on how to improve absorptive capacity in least developed countries and on the combined development of technological, financing, and business solutions that are well suited to uptake in LDC contexts.
- Provide more descriptive empirical evidence on the “where” and “what” of existing climate financing flows, given the important role of official forms of finance in supporting technological transfer. How significant is technological transfer within existing official climate finance? Is there a need to improve the ability of official international finances to catalyse technological transfer? This work should be combined with a better understanding of context-specific challenges in individual LDCs to access official forms of climate finance.
- Better understand private investor perspectives on blended finance schemes, in particular expectations on risk/return and the information needed to assess track records. There is also more research needed on the performance of blended finance schemes in general and with respect to facilitating technological transfer specifically. What instruments work in what contexts and why?
- Because rapid diffusion of technologies is heavily dependent on effective policy incentives, more research is needed on how to design instruments such as emissions

markets so that we avoid previous shortfalls and effectively coordinate policies across jurisdictions.

- Conduct more research to understand how to best design intellectual property regimes to help moderate technology transfer obstacles in LDCs.
- Existing research suggests the need for mapping and disaggregating the technology needs for achieving the SDGs sector by sector. In particular, there is a need for more sector-specific analysis of the potential impacts of intellectual property rights on SDG achievement, given variation in the extent to which IPR shapes incentives in different sectors. In addition to being sector-specific, these analyses should also be disaggregated between levels of development in "receiving" countries.
- Recent literature reviews suggest that empirical results on the impact of IPRs in developing countries should be treated with caution due to data gaps, limited timeframes of existing studies, and insufficient indicators/proxies for measuring access to technology. More research is needed to address each of these weaknesses.
- Existing work suggests that there is a research gap on the impacts of IPRs on access to adaptation-oriented technologies.
- Better understand what motivates firms to enter into technology transfer partnerships in developing and least developed countries.
- Conduct more work on the extent to which supply-side incentives for low-carbon technologies in developing countries succeed in also broadening domestic productive and innovation capacity.

<u>Expert recommendations</u>

- Identify ways to address an IPR regime that is too complex and centralised for developing countries and smaller private actors, and thus confers advantages to powerful states and companies.
- Assess how the increasing trend of bilateral and smaller multilateral trade regimes (i.e. as opposed to WTO governance) is affecting developing countries' access to technology.
- Put more focus on local technological innovation and development than is currently expressed within SDG 17.
- Conduct behaviour and choice research to better understand local adoption of technology. Conduct more work explaining why technologies with good prospects for local adoption are not readily absorbed.
- Conduct more basic evaluative research addressing the extent to which technology transfer does in fact advance SDG goals.

Theme 4: multi-stakeholder partnerships

- Existing research suggests that there is a lack of a knowledge base for evaluating the effectiveness of multi-stakeholder partnerships (MSPs) in advancing the transition to sustainable development.
- This points to a need for more work developing assessment methods for MSPs, collecting ex post data, and better linking this academic research to policy-oriented work.
- Existing literature reviews point to a need for theoretical work on the appropriate metrics for MSP success. This includes theoretical work on the appropriate role of and expectations from MSPs in sustainable development transitions. This work should inform efforts to develop better empirical bases for MSP evaluation.

- Existing research indicates quite demanding design principles for achieving effective MSPs. Given high expectations on the operational capacities that need to be in place, there should be more research into the realistic scope for MSPs in bringing about the SDGs. In other words, to what extent do gaps in governance and in achievement of sustainable development goals point to a key role for MSPs? And to what extent can gaps only be addressed by improving the capacity of traditional authorities?
- There is a need for more comparative research examining why some sustainable-development-oriented MSPs are successful in closing achievement and/or governance gaps while others are less so. In addition, comparative studies could provide a better understanding of the variation in roles MSPs could/should have with respect to different SDG goals.

Expert recommendations

- Develop MSP platforms that could better facilitate involvement from different sectoral stakeholders (e.g. private and governmental) and draw lessons learned from existing MSP platforms.
- Identify ways to ensure that MSPs for SDG advancement are representative of all countries and give voice to less powerful groups.
- Examine how MSPs address conflicts of interest within partnerships. How do such conflicts impact effectiveness and legitimacy, and what are the best practices for managing conflicts?
- Problematise the risks and potential of MSPs. Why do actors want them? Is there clarity amongst various actors on what they expect MSPs to achieve? What are the dynamics and outputs of partnerships that bring together actors that are not strongly motivated to cooperate with each other?
- Develop typologies and mapping exercises that can provide a global overview of different types of partnerships and how their constellations and purposes vary.

Expert recommendations beyond the review's four key themes

- Work on fostering of learning for the achievement of the SDGs. This work should look both at what perceived leaders in developed countries, like Sweden, could contribute and in what ways developing countries could help Sweden and other developed countries.
- Work on how to foster more learning across municipalities in Sweden and between municipalities in different countries.
- Examine how to ensure the quality of education around Agenda 2030 and assess what forms of education provide long-term effects.
- Research the conditions for achieving ownership of the SDG agenda among different actors. For example, how can we get the private sector to internalise the SDG agenda in business practices?
- Conduct more research on how to bring about transformative change as opposed to gradual change. This includes mapping the financing for SDG achievement (where it is coming from and going to), identifying financing gaps, and addressing choices about what to finance.
- There is a need for some deeper thinking on the underlying assumptions of SDG 17, in particular with respect to development objectives and perspectives from Western and Southern regions. How do these assumptions impact on our capacity to advance the SDGs?

1 Introduction

This literature review forms part of the project Formas Agenda 2030, which aims to identify research needs related to the 17 Sustainable Development Goals (SDGs) and to explore options for making structural changes in research policy and funding to foster progress on the SDGs. The project involves literature reviews and exploratory workshops focusing on three SDGs as examples: SDG 12 (Responsible consumption and production), SDG 14 (Life below water) and SDG 17 (Partnerships for the goals).

This review presents preliminary findings on research needs for SDG 17: Partnerships for the goals, drawing on a subset of its 19 targets, as well as relevant targets under SDG 16 and 9. It focuses on four key themes identified based on the targets: improvements in public administration and the quality of government; policy coherence; access to technology; and multi-stakeholder partnerships. Furthermore, interactions with other SDGs are considered throughout the review since SDG 17 is critical to the achievement of so many other goals and targets.

In the context of the SDGs, three distinct roles for science, technology and innovation have been defined by Nilsson (2017):

- characterise the challenges
- provide the solutions
- strengthen public institutions and society.

In this review, we focus primarily on research needs in relation to the first and second roles, whereas the main report elaborates on the third role as well.

An extension of this review could be an analysis of the comparative potential of Swedish research to fill knowledge gaps at regional and global levels. Furthermore, good examples of Swedish research projects and collaborations could be identified. However, such analysis goes beyond the current scope of the review.

1.1 Overview of goals and targets

For this review, our point of departure has been the goal and its 19 targets. Table 1 lists the targets under SDG 17.

Table 2. Overview of SDG 17. Targets in focus in this review are in bold.

SDG 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development	
17.1	**Strengthen domestic resource mobilisation, including through international support to developing countries, to improve domestic capacity for tax and other revenue collection**

17.2	Developed countries to implement fully their official development assistance commitments, including the commitment by many developed countries to achieve the target of 0.7 per cent of ODA/GNI to developing countries and 0.15 to 0.20 per cent of ODA/GNI to least developed countries; ODA providers are encouraged to consider setting a target to provide at least 0.20 per cent of ODA/GNI to least developed countries
17.3	**Mobilize additional financial resources for developing countries from multiple sources**
17.4	Assist developing countries in attaining long-term debt sustainability through coordinated policies aimed at fostering debt financing, debt relief and debt restructuring, as appropriate, and address the external debt of highly indebted poor countries to reduce debt distress
17.5	Adopt and implement investment promotion regimes for least developed countries
17.6	**Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism**
17.7	**Promote the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favourable terms, including on concessional and preferential terms, as mutually agreed**
17.8	Fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology
17.9	**Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the sustainable development goals, including through North-South, South-South and triangular cooperation**
17.10	Promote a universal, rules-based, open, non-discriminatory and equitable multilateral trading system under the World Trade Organization, including through the conclusion of negotiations under its Doha Development Agenda
17.11	Significantly increase the exports of developing countries, in particular with a view to doubling the least developed countries' share of global exports by 2020
17.12	Realize timely implementation of duty-free and quota-free market access on a lasting basis for all least developed countries, consistent with World Trade Organization decisions, including by ensuring that preferential rules of origin applicable to imports from least developed countries are transparent and simple, and contribute to facilitating market access
17.13	**Enhance global macroeconomic stability, including through policy coordination and policy coherence**
17.14	**Enhance policy coherence for sustainable development**

17.15	Respect each country's policy space and leadership to establish and implement policies for poverty eradication and sustainable development
17.16	**Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries**
17.17	**Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships**
17.18	By 2020, enhance capacity-building support to developing countries, including for least developed countries and small island developing States, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts
17.19	By 2030, build on existing initiatives to develop measurements of progress on sustainable development that complement gross domestic product, and support statistical capacity-building in developing countries

We also include in our review a number of targets from SDG 16 on peace, justice and strong institutions, and from SDG 9 on industry, innovation and infrastructure. These are:

- 16.3: Promote the rule of law at the national and international levels and ensure equal access to justice for all
- 16.5: Substantially reduce corruption and bribery in all their forms
- 16.6: Develop effective, accountable and transparent institutions at all levels
- 9.5: Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending
- 9.A: Facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support to African countries, least developed countries, landlocked developing countries and small island developing States
- 9.B: Support domestic technology development, research and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities

1.2 Method and approach

SDG 17 was selected as one of three SDGs for which we test this review approach. This review should therefore be seen as a first attempt to identify research needs. The scope of this study did not allow for an exhaustive or in-depth assessment of the state of knowledge.

The first step was to **identify key themes** among the SDG 17 targets, in order to reduce the number of targets and to find broader knowledge areas that relate to several targets. The criteria and approach for selecting these key themes are described below.

The second step was to conduct a **literature review**, to identify research needs explicitly or implicitly defined in existing literature. A key challenge – given the breadth of the SDG and its targets – is that there is a very wide scope of scientific and grey literature to cover. For this reason, the review initially searched for secondary sources, in the sense of existing scientific assessments and synthesis reports. Based on these more general assessments and syntheses, more in-depth knowledge and analysis was gathered through searches for more specific peer-reviewed journal articles.

The third step was to organise an **expert workshop**, held on 7 May 2018 in Stockholm. The workshop included experts from both science and policy/practice. The task of the workshop was to identify high-priority research needs, based on, but not limited to, preliminary findings of the literature review. Results from the workshop are incorporated in this review at the end of each section addressing the four themes of the report. All the topics raised by experts that do not fit into our four themes are summarised in Section 7 at the end of the report.

Reflecting on the method and approach, a number of **challenges and limitations** should be noted. First, as mentioned, the SDG targets are very broad in nature and cover vast areas of potentially relevant knowledge, and exhaustive reviews are inevitably difficult. Second, the SDG targets are a result of international negotiation, and as such may not reflect local or national sustainable development priorities and problems. While the SDGs and targets are considerably broad, there may thus still be gaps from local and national perspectives.

A third challenge was to ensure that the resulting report is relevant and accessible to diverse target groups. This required a balance between avoiding technical terms to make the analysis accessible to policy-makers, and ensuring enough scientific substance for the analysis to be of interest for researchers in the field. Finally, a fourth challenge is the high plausibility that a systematic literature review in relation to SDG 17 could be subject to publication bias, data availability bias and reviewer selection bias. While we do not claim to provide a systematic literature review, these common types of bias remind us that an initial literature review like this one must emphasise two key limitations: (i) only a limited part of the relevant literature has been reviewed; and (ii) when considering research gaps, we report on “known unknowns” rather than “unknown unknowns”.

Identifying key themes

For each of the three SDGs reviewed in this project, the same set of criteria were applied for identification of key themes among targets:

- Targets where lack of knowledge or research is not a critical barrier were excluded (e.g., targets for implementing an international political agreement);
- Targets which address similar issues and share a knowledge domain were clustered together;
- In some cases, our identified themes interpret or expand on the stated targets, namely to i) adapt targets to a Swedish context, and ii) look at the more general

sustainability issues implied by the goal but not necessarily reflected by the targets;
- In some cases, a smaller selection of targets was prioritised due to the limited scope and resources of our study.

This particular literature review of SDG 17 focuses on a sub-selection of the 19 targets, concentrating on those targets that point clearly to research areas that can make important contributions to the achievement of the SDGs. The review identifies areas of research interest within both developing and developed country contexts and research areas that could contribute to improving international partnerships for the achievement of SDGs.

Four themes have been identified covering a selection of the targets from SDG 17 and in some cases targets from other related SDGs. The first theme is on improvements in **public administration and the quality of government**, including improvements in government revenue collection. This theme addresses SDGs 17.1 and 17.9, and also targets 16.3, 16.5 and 16.6 with their focus on effective, accountable and inclusive institutions (SDG 16 addresses peace, justice, and strong institutions). The second theme is on **policy coherence** in the implementation of SDG goals and targets, and addresses targets 17.13 and 17.14. The third theme addresses **access to technology** and covers SDGs 17.6 and 17.7 and targets 9.5, 9.a and 9.b from SDG 9, which covers industry, innovation, and infrastructure. The fourth and final theme is **multi-stakeholder partnerships** and is relevant for the global partnership for achieving the SDGs in general. In particular, theme four touches on SDG targets 17.3, 17.6, 17.9, 17.16 and 17.17.

Some targets from SDG 17 are not covered in this review because they are more oriented towards securing political will or are expressions of political principles necessary for a successful global partnership. For example, target 17.2 calls for developed countries to meet or beat annual official development assistance (ODA) budgets of 0.7% of gross national incomes (GNI), and SDG 17.15 calls for "respecting each country's policy space". Other SDG 17 targets are focused on fully implementing policies and agreements for supporting development in poorer regions, such as operationalising the technology bank and the science, technology and innovation capacity-building mechanism by 2017; implementing duty-free and quota-free market access for least developed countries; and concluding the Doha Development Agenda WTO negotiations (17.8 and 17.10). Targets addressing support for data collection and analysis (17.18 and 17.19) do raise research questions about what types of data and analysis are needed going forward. However, the data targets under SDG 17 are framed largely in terms of implementation and financing rather than in terms of specific knowledge gaps. Importantly, each target under SDG 17 can be associated with research directions with the potential to contribute to the achievement of Agenda 2030. As such, this review should be viewed as providing suggestions on fruitful research avenues, and it does not attempt to prioritise among the wide variety of issues mentioned within SDG 17.

Table 3. Targets included under each identified key theme

Public administration and the quality of government	Policy coherence	Technology	Multi-stakeholder partnerships

17.1	17.13	17.6	17.3
17.9	17.14	17.7	17.6
16.3		9.5	17.9
16.5		9a	17.16
16.6		9b	17.7

2 General research challenges

SDG 17 calls for strengthening the means of implementing the SDGs and investing in the global partnership for realising sustainable development all over the world. Achieving the ambitions of Agenda 2030 will require mobilising political will and deepening partnerships between government, the private sector and civil society. It will also require increasing international cooperation and improving coherence between policies and initiatives both domestically and internationally. SDG 17 addresses these needs and calls for actions to increase capacity for implementing the SDGs at all levels. In particular, SDG 17 calls for a revitalisation of the global partnership for sustainable development. As such, meeting the targets and ambitions of SDG 17 is absolutely essential for successfully advancing the entire SDG agenda.

The targets of SDG 17 address the need for wealthy regions to increase financial support to poorer regions. Here Sweden is a leading country, with total ODA at 1.4% of GNI in 2015. The amount of ODA directed towards least developed countries in 2015 was 0.17% of GNI, or 12% of total ODA (SCB 2017). The total level of ODA exceeds the SDG target 17.2, while the LDC figures meet the target. However, what is clear from SDG 17 is that the broader goal is to accelerate capacity building and establish an international economic and policy context that is conducive to accelerating sustainable development in all regions.

For example, SDG 17.1 calls for supporting developing countries in strengthening domestic resource mobilisation. This is an important target, given estimates that achieving the SDGs will require annual increases in domestic government spending of 12.5% in low-income countries and 11.4% in lower and middle-income countries (LMICs) through to 2030 (Schmidt-Traub 2016). Encompassed within SDG 17 are technology transfer, foreign direct investment, domestic financial conditions, trade and geopolitical conditions, improved data and monitoring capacity, and effective public, private and civil society partnerships. Given this focus, SDG 17 connects largely to research in the social sciences, particularly political science and economics – but also sociology, psychology and law. In addition, SDG 17 raises normative issues that can be approached by researchers in both the humanities and social sciences.

3 Key theme 1: Public administration and the quality of government

17.1 and 17.9 (16.3, 16.5 and 16.6)

3.1 Quality of government

SDG 17.9 calls for governments to "enhance international support for implementing effective and targeted capacity-building in developing countries". In order to offer support in an effective way, there has to be a clear understanding of 1) what capacities are most in need of improvement and will have the biggest impact on SDG achievement, and 2) the ways international efforts can support capacity-building. These assessments should help to both set the goals for cooperative support and possibly help actors to see where the limits are for added value from international support.

There is far-reaching evidence that quality of government is central to development and poverty reduction (Acemoglu and Robinson 2013; Aidt 2009; Bentzen 2012; Keefer and Knack 1997; Rodrik et al. 2004). Factors of importance include inclusive political institutions, accountability (both political and for public institutions), effective rule of law, property rights, low levels of corruption, an impartial use of political authority, and merit-based bureaucracy (Rothstein 2011). There is, of course, significant scientific debate on the ultimate sources of broad phenomena like development (including failure to develop). The direction of causality between the quality of institutions and economic growth is continually debated. Other factors argued to be significant include geography (Diamond 1998), culture (Nunn 2012) and geopolitics (Sachs 2012). Despite these debates, existing research strongly suggests that improvements in the quality of government are *one of* the most important ways to achieve large positive improvements in the economic and social conditions of a state.

Importantly, the relationship between quality of government and development is not automatic. For example, there is evidence that improvements in state capacity in developing countries only leads to better protection of labour rights when it is combined with improvements in the representation of worker's interests in political systems (Berliner et al. 2015). Given this background of research in the social sciences, ***a research agenda that looks at the relationship between quality of government and the broad range of environmental, social, and economic SDG targets appears to be particularly important when assessing the significance of institutional capacity for effective implementation of Agenda 2030***. This is because we can expect there to be important variations in how different types of SDG targets, different sectors, and different country contexts are influenced by the quality of government. Research on environmental policy and management is one good example from the existing literature that supports this proposed research agenda.

There is evidence that corruption leads to more energy-intensive production and less stringent environmental regulation (Cole 2007; Fredriksson and Svensson 2003; Fredriksson et al. 2004). At the same time, Cole (2007) finds that the indirect negative impact of corruption on economic growth means that corruption actually has a net negative impact on SO_2 and CO_2 emissions. ***This research suggests a need to better understand the potential for trade-offs between gains in the quality of government and environmentally oriented SDG targets, and***

how to mitigate any potential conflicts. For more socially oriented SDG targets, one might assume that such trade-offs are absent, could they exist in some contexts? Understanding how interventions designed to improve the quality of government impacts across the three pillars of sustainability will provide use with a deeper understanding of the governance challenges of Agenda 2030 implementation.

Importantly, research indicates that low quality of government is associated with lower comparative commitment to sustainability. Thus, improvements in institutional performance are expected to lead to both growth and more stringent environmental policies (Pellegrini and Gerlagh 2006). Leitao (2010) finds that the higher the degree of corruption in a country, the higher per-capita income will be at the turning point of an inverted-U environmental Kuznets curve.[1] There appear to be important direct and indirect impacts to consider, such as those associated with the size of government (Halkos and Paizanos 2013). ***Disentangling these relationships may contribute to strategic thinking on reform priorities.*** For example, Tamazian and Bhaskara Rao (2010) find that financial liberalisation and increased trade openness may be harmful for environmental quality if not proceeded by the strengthening of public institutions. ***Thus, identifying which institutional capacities are most important can make an important contribution to green growth in transition economies.***

More developed countries

Although targets under SDG 17 are often framed in terms of assistance developed countries can provide to developing countries, the SDGs are a framework that applies to both less and more developed regions. Quality of governance is clearly relevant to the achievement of SDGs in developed states, and research on the institutional conditions for an SDG within a developed state will often be highly relevant to developing country contexts as well. Moreover, quality of government in both more developed and less developed countries will impact the prospects for improving the global partnership for implementing Agenda 2030.

Friedman et al. (2000) find that states are only able to maintain high levels of taxation where levels of corruption are kept low. Gyorffy (2012) argues that high levels of trust in public institutions allow for longer-term planning and long-term investment by various agents. There is empirical evidence of this time horizon effect in a European context. For example, Nistotskaya et al. (2015) find that where residents report that governments have low levels of corruption and high levels of impartiality, there are significantly more small- and medium-term enterprises (SMEs). The willingness to start SMEs is treated here as a proxy for long-termism. Variability in regions within single EU states has also been found (Charron et al. 2014).

If the SDGs are moving both developed and developing states into a period that requires increasing public investment in, for example, low-carbon infrastructure, then ensuring that there are low levels of corruption and high levels of trust in public regulation and state expenditures are key factors for SDG achievement. ***Thus, one important research area involves 1) assessing where achievement of SDGs requires longer-term investments from governments (i.e. investments where returns and benefits arrive over the longer term), and***

[11] It should be noted that a recent literature finds that there remains no consensus on the EKC hypothesis (Tiba et al. 2016).

2) identifying the conditions for sustained public support for making these investments in SDG achievement.

International development organisations, practitioners and researchers often argue that the financial demands for achieving the SDG targets will require new models for public-private partnerships so as to significantly scale up private investment in the transition to sustainability (Bielenberg et al. 2016; Business and Sustainable Development Commission 2017). This appears especially important with respect to infrastructure investment, which is capital intensive, has longer-term pay-off horizons and focuses on public-oriented goods. When public resources are used to reduce risks for private investors and/or to create better upside incentives, ***this raises questions about how public-private financing models should be designed to maximise trust between partners and support from the public***. In addition to this empirical question***, there exists very little work on what a fair distribution of financial risk is between public and private actors in the transition to sustainability. Thus, more work on both the normative and governance dimensions of these challenges – in addition to work on the best financial structures for different sectors in different regions – will contribute to the development of robust social contracts for SDG implementation.***

The body of literature on the conditions under which the public will support environmental regulations and public investment in environmental management is of course highly relevant in both developed and developing regions. Ideology, norms, policy type, knowledge and information, quality of government, and political and interpersonal trust are among the relevant variables assessed in the literature (Drews and van den Bergh 2016; Harring and Jagers 2013). Recent research highlights that variations in types of trust (e.g. variation depending on actors) and variations in types of government interventions to achieve sustainability objectives can combine in ways that have different prospects for garnering public support (Harring 2018). ***Investigating these more nuanced relationships across a fuller range of relevant causal variables and different SDG objectives also looks like a fruitful area of research. In other words, how do key determinants of public support interact with the very different economic, social, and environmental sustainable development objectives encompassed within the SDGs***? Comparative analysis of public support for taxes and welfare state policies appears to have received the most attention overall in the Quality of government literature (Svallfors 2013). ***This research can be extended, paying special attention to any new obstacles that arise because of Agenda 2030.***

Another key area of research that speaks directly to the global partnership for implementing the SDGs is the attempt to explain variations of support for development aid among donor country publics. Researchers tend to focus on issues such as ideology, material wealth, perceptions about and knowledge of global development issues, and trust in people and institutions as relevant explanatory factors (Milner and Tingley 2013; Paxton and Knack 2012). But a recent study (Bayram 2017) finds that the existing literature has failed to capture how domestic perceptions of trust affect public support for development aid, and finds that countries with higher comparative levels of "generalised trusters" are more likely to support foreign aid. ***A worthwhile area of research is assessing how local conditions – with respect to information, culture and trust – and local public administration capacity impact the global partnership for realising Agenda 2030. Also, how do perceptions of the Quality of government in receiving countries affect support for foreign aid in donor countries*** (Heinrich and Kobayashi 2017)***? Are there significant feedback loops between levels of domestic***

institutional capacity and investment in international support for SDG achievement that can either be exploited or need to be mitigated?

3.2 Revenue collection capacity

SDG 17.1 calls for "strengthening domestic resource mobilization, including through international support to developing countries, to improve domestic capacity for tax and other revenue collection". This is not surprising given that the UN Sustainable Development Solutions Network estimates that to meet the SDG goals, low-income countries will have to increase their government spending on SDGs by 12.5% annually (i.e. compound growth) through to 2030; together, low- and middle-income countries need increased government spending of 11.4% per year (Schmidt-Traub 2016). Thus, the goal of supporting capacity for tax revenue collection has direct relevance to achievement of all the SDGs.

The importance of improving revenue collection for development is often highlighted because there is evidence of a "governance dividend" that accompanies increased revenue collection capacity; this is strongly associated with the importance of Quality of government described earlier (OECD-DAC 2012). Research in sub-Saharan Africa suggests that improvement in the state's ability to tax leads to less corrupt governments and more democratic institutions (Baskaran and Bigsten 2013). Asongu (2015) provides empirical evidence confirming the hypothesis that dependence on local tax revenue (as opposed to foreign aid) improves the quality of governance. Moore (2008) suggests three main causal mechanisms: bargaining between the state and citizens leads to improvements in accountability; governments dependant on tax revenue have stronger incentives to promote economic growth; and tax collection requires investment in an effective bureaucracy, which can have positive effects on public administration more broadly.

Increased revenue allows governments to spend more on public goods and should improve SDG achievement in those sectors that tend to be dependent on public expenditure. Makuta and O'Hare (2015) find that increased public spending on health in sub-Saharan Africa leads, as expected, to significant improvements in health; however, their results also show that these benefits are greater when overall Quality of government is higher and lower when Quality of government is lower. A recent literature review on government fiscal capacity and development (Addison et al. 2018), highlights several key questions in need of further study***. Why do developing countries at similar levels of economic development vary so significantly in fiscal capacity? Which policies have worked to improve public revenue generation capacity and redistribution in developing countries? What are the political economy conditions that have allowed some states to increase tax revenues? Evidence on the links between fiscal capacity and Quality of government also suggests that identifying other ways to simultaneously increase government revenue and the Quality of government could unlock self-reinforcing drivers for SDG achievement.***

As in the case of quality of government generally, there are also interactions between environmental conditions and tax capacity that deserve attention from researchers. Galinato and Galinato (2016) find that increases in government spending in developing countries can increase CO_2 emissions in the short run. The claim is that direct agricultural subsidies – along with irrigation and other input subsidies designed to increase agricultural productivity – leads to increased deforestation in the shorter-term. However, they find no long-term effect on the

rate of forest clearing. ***The authors suggest the need for more research on the impacts of increases in spending on infrastructure on land-use change.*** This looks to be particularly important in developing country contexts, where land-use change may make up a large share of total GHG emissions impacts. In general, these types of results point to the importance for researchers to assess interactions between SDG goals and targets and to assess how to promote positive interactions and mitigate negative ones, a theme that will be addressed in the following section (Nilsson et al. 2016).

Another key link between revenue collection and social and environmental sustainability has to do with the sources of government revenue. There is a significant body of literature that suggests there is a political resource curse when governments have high reliance on non-tax revenue, especially from natural resource exports. This evidence suggests that resource-rich countries have worse public administration performance and weakened democracy (Andersen and Ross 2014; Aslaksen 2010; Ross 2001). At the same time, extractive industries are associated with challenging environmental and social impacts (Yakovleva 2017).

Recent evidence based on improved data on the composition of government revenue supports the hypothesis that the cause of the so called "political resource curse" has to do with the composition of government revenue. High non-tax-based revenue is thought to lead to weakened accountability of government, negatively impacting Quality of government and democracy (Prichard et al. 2014). Bhattacharyya and Hodler (2014) find that it is the combination of weak institutions and resource revenue that generates this problem, which suggests that the sustainable development agendas should focus heavily on the quality of institutions early on.

Research addressing how to better manage non-tax-based revenue in developing country contexts looks important. A recent review of the literature finds little systematic knowledge that can be used for policy advice (Ross 2015)***.*** Within the context of the SDGs, research should not be limited to assessing the impacts of resource revenues on governance and development. ***Researchers should aim to identify strategies for how to manage governance challenges in poorer regions where important sources of revenue will not be shunned. Possibly equally important are questions about how the global partnership for SDG achievement should address the "political resource curse" given that countries importing oil, for example, from countries with low Quality of government are directly implicated in obstacles to SDG achievement*** (Wenar 2015)***.***

The need for more work on how to improve state performance in relation to non-tax-based revenues also applies to tax-based revenues. Keen (2012) argues that recognition of the links between taxation and state building have not been accompanied by comparable advances in our understanding of how to improve taxation capacity in developing countries. ***Prichard et al.*** (2014) ***suggest a number of focus areas to address this knowledge gap, including: examination of how to support local leadership for reform, more systematic political economy analyses, identification of reform programmes that better link taxation to state-building and governance objectives, an understanding of the complexities in the relationships between aid and building taxation capacity, and a better understanding of the impacts of the international policy context.*** Fjeldstad (2014) argues that improving the ability of governments in low-income countries to collect taxes will require significant investment in increasing the perceived legitimacy of tax systems. ***This raises the question about how***

perceptions of the legitimacy of the tax system in developing country contexts can be improved in conjunction with governance improvements (i.e. where such improvements occur).

Another area that has received extensive research attention is the question of whether or not foreign aid undermines incentives to collect taxes locally. Several studies have confirmed this hypothesis (Benedek et al. 2014; Bräutigam and Knack 2004; Remmer 2004; Thornton 2014). Other studies have found no relation (Clist and Morrissey 2011), or found that the effect was dependent on the quality of government in receiving countries (2011). However, Prichard (2016) argues that much of this debate is due to poor or inconsistent datasets. Using new data sets, researchers claim to find no significant impacts of aid on revenue collection (Morrissey 2015; Morrissey et al. 2014; Morrissey and Torrance 2015). ***This work highlights that even in areas where there is a significant body of research, we should also be assessing gaps in data access and especially gaps in data quality. This type of assessment requires inputs from those experts collecting and using data in their respective fields.***

3.3 Expert recommendations (workshop outputs)

A number of additional research directions related to public administration and the Quality of government were identified by the experts participating in the SDG 17 workshop. Participants suggested there are multiple scales – beyond the national level -- at which Quality of government could be used as a lens of analysis for SDG implementation, including at the city, sub-regional and even NGO level. Another issue brought up was that assessment of Quality of government for the SDGs requires advancements on how we should measure the quality of SDG implementation and achievement. In a similar vein, some participants called for more reflection on what should count as progress on the SDGs in different contexts given the highly ambitious nature of Agenda 2030 (i.e. what are realistic expectations).

Some workshop participants suggested a call for research that would help us better understand existing action gaps for SDG achievement. One dimension of this research involves understanding and developing strategies to address low levels of general public engagement in the SDG agenda. In general, participants called for more strategic-oriented work on how to actually bring about better Quality of government and minimise corruption. On the specific issue of increasing taxation capacity, participants called for basic research on strategies for broadening the tax base in contexts where public services have been poor and trust in broad payment low (i.e. as an issue that exists prior to broadening the tax base for SDG achievement). It was also argued that there is a need to better understand how international support and international cooperation can actually contribute to domestic Quality of government improvements in different regions.

Many participants worried that SDG 17 reflects underlying assumptions about achieving high quality of government in developed countries and low Quality of government achievement in developing countries. This assumption leaves a number of research gaps such as a better understanding of Sweden's own challenges with Quality of government and where it can best be viewed as a role model, understanding the problem of a retreat in Quality of government in more developed countries, and the identification of strategies to prevent Quality of government deterioration.

Another set of suggestions addresses broadening the theoretical points of departure from those covered in the review. For example, more sociological work on culture and how it relates to Quality of government should be prioritised for the achievement of a societally transformative sustainability agenda (e.g. Geert Hofstedes' work on the dimensions of culture). There should also be efforts made to distinguish between the different dimensions of Quality of government that researchers from different disciplinary and theoretical perspectives see as important. For example, economists tend to emphasise property rights, while political scientists emphasise public administration and rule of law. Work on the SDGs that engages with this broader body of work on Quality of government could reflect on, for example, what types of property rights contribute to SDG achievement. Also, some reflection on how different dimensions of Quality of government are related to the question of power seems important given the transformative nature of Agenda 2030.

4 Key theme 2: Policy coherence

17.13 and 17.14

Target 17.14 calls for enhancing policy coherence for sustainable development. Research that can inform system-wide policy planning is crucial in the context of Agenda 2030, for which implementation strategies that overlook interdependencies between the indivisible 17 goals will not be fit for purpose. Long-term initiatives for enhancing policy coherence in relation to development and foreign policy have been led by OECD and others. Policy coherence for development has been a topic in development circles for decades, reflected in both EU policy and the Millennium Development Goals (the SDG predecessor). In this context, policy coherence generally refers to representing the interests of the poorest in policy processes that affect them; in a wider sense, policy coherence relates to ensuring that a policy in one area does not undermine policy objectives in another. Assessments of the outcomes and impacts of PCD have been limited in the academic discourse, which has largely focused on theoretical and exploratory – rather than empirical – analysis (Koch 2017). Research has been focused on horizontal analysis between policies, the side effects of non-aid policy on aid policy, and the trade-offs between objectives. It has further addressed coherence at different levels, including internal coherence within aid programmes, consistency between aid agencies in different countries, consistency between aid and non-aid policies, and consistency between aid donors and recipients (Koch 2017).

The SDGs have expanded the scope of policy coherence to include all countries and all dimensions of sustainability. This has led to a discussion about broadening the concept to "policy coherence for sustainable development" (Koch 2017). The broadening of policy coherence raises both substantive and procedural issues (Anon n.d.), as it implies that policy coherence needs to address not just those dimensions previously in focus, but also the consistency between global goals and national contexts; among international agendas and processes; between economic, social and environmental policies; between different sources of finance and other means of implementation; and between the actions of different actors (ECOSOC 2016). ***In general, there is a need to better understand interactions between SDG goals and targets and how policy can promote positive interactions and mitigate negative***

ones. Part of the challenge is to improve or develop new analytical tools for characterising and quantifying interactions.

Another way of thinking about PCSD is along three dimensions (O'Connor et al. 2016):

- Here and now, focusing on domestic polices and their balancing of social, economic and environmental objectives
- Elsewhere, focusing on the impact of domestic policy on other countries and the global commons
- Later, focusing on the impact of today's policies on tomorrow's generations

Further, policy coherence for sustainable development should not just seek to do no harm but should also actively pursue positive contributions to development from different policy areas. This broader perspective is increasingly taken into account in research on policy coherence (Koch 2017). ***A number of challenges are thus present, including that coherence is multidirectional, that there are no universal solutions, and that there are additional risks associated with added complexity. Measuring policy coherence is another challenge, and data is currently lacking to assess the indicator proposed for target 17.14, which is "mechanisms in place to enhance policy coherence of sustainable development".*** Actual research investment on PCD has been minimal (UNCTAD 2015), which means that the importance of PCSD largely rests on an assumption that there is added value to alignment. ***As a result, there is a need for more quantitative research, especially comparative research, on policy coherence strategies and tools, to determine which work in different contexts and why. Also, there should be more longitudinal studies examining the effects of policy coherence.***

Research has pointed to four important dimensions of the barriers and enabling factors for policy integration and coherence within the government apparatus (Nilsson and Persson, 2017; Runhaar et al, 2018). First, political will is required to send strong normative signals to downstream policy processes, both on the imperative to ensure coherence and on how to resolve potential goal conflicts. Second, supporting organisational frameworks are needed, where policy-makers are appropriately incentivised and resourced to seek cross-sectoral solutions. Third, procedures, such as policy impact assessments, can help ensure opportunities to control and steer policy coherence. Finally, there is an important cognitive dimension, in that analytical skills and continuous learning is needed to tackle complex problems system-wide. Analyses of contexts characterised by governance rather than government (i.e., multiple actors steering themselves and each other) suggest that leadership is important (Karlsson-Vinkhuyzen et al., 2018). ***Overall, this line of research suggest that more comparative research is needed on successful strategies and tools for ensuring policy coherence. This includes organisational models which incentivise the pursuit of policy coherence.*** The OECD (2017) has stressed that enhancing policy coherence in SDG implementation requires: political commitment and leadership; integrated approaches to implementation; an intergenerational timeframe; analyses and assessment of potential policy effects; policy and institutional coordination; local and regional involvement; stakeholder participation; and monitoring and reporting. Challenges include balancing an integrated approach with the need to prioritise action, avoiding unintended consequences (such as global impacts of internal action), and ensuring the effective involvement and long-term commitment of stakeholders (OECD 2016)

Regarding the cognitive dimension, a number of analytical tools and models have been launched to understand interactions between SDGs, in order to provide a diagnosis for future efforts for policy coherence and system-wide policy planning (e.g. (Weitz, Carlsen, et al. 2017) Collste, Pedercini, and Cornell 2017). ***These tools emphasise a number of limitations, and, as noted above, further research on methods and assumptions is needed.***

A number of related theoretical perspectives address issues of policy coherence or integrated governance more broadly. These include environmental policy integration, inter-organisational relations, institutional interaction and management, policy mixes and smart regulation, groups of regimes, and meta-governance and orchestration (Visseren-Hamakers 2015). These perspectives shed light on: horizontal, vertical and policy-to-implementation coherence; relationships between different organisations and what they mean for policy; how institutional effectiveness is influenced by its relation to other institutions and various interactions; whether policy instruments are complementary or counterproductive; and potential costs of coherence and policy integration (Weitz, Strambo, et al. 2017). Some of these perspectives highlight that policy coherence is not void of politics and negotiations between multiple interests, which may partly explain the lack of progress in policy coherence for development. ***This highlights the need for researchers to also investigate cases of policy incoherence, to identify sources of resistance to policy coherence.*** Additional traditions of integrated policy-making besides PCD include issue-based mainstreaming, multi-sectoral approaches, and collective responsibility approaches (Anon n.d.).

Policy coherence as a tool to enhance global macroeconomic stability is addressed under SDG 17.13. Global macroeconomic instability has increased in recent decades due to weak stabilising factors like regulation, public investment and sustained increase in labour incomes. The global economy lacks tools to address these factors and their effects. For developing countries, two important sources of macroeconomic instability are volatile international capital flows and international commodity prices. In line with this, the Addis Agenda notes that “regulatory gaps and misaligned incentives continue to pose risks to financial stability, including spillover effects of financial crises to developing countries.” (UN 2015). For the EU, the Maastricht Treaty defines macroeconomic stability as comprising four criteria: low and stable inflation; low long-term interest rates; low national debt relative to GDP; and currency stability. Price inflation, GDP growth, unemployment, account volatility, health of government finance, interest rate volatility, and exchange rate stability are often considered to identify macroeconomic imbalances at the national level. The EU has further adopted a scoreboard that includes a number of indicators related to market share, private sector debt, housing prices and unemployment, foreign direct investment (FDI) flows and stocks, and labour productivity. This broadened macroeconomic imbalance procedure highlights the connectedness between the economy and society and thus the need for policy coherence. The investment policy framework of the United Nations Conference on Trade and Development (UNCTAD) includes policy coherence as a core principle. It states that investment policies should be grounded in a country’s overall development strategy and that policies that impact investment should be coherent and synergetic at both the national and international level (UNCTAD 2015). The International Monetary Fund (IMF) has stressed that efforts related to macroeconomic stability and the SDGs should focus on building strong institutions to strengthen investor confidence, on strengthening public finance to ensure debt sustainability and efficient public spending, on investing in infrastructure, on deepening financial markets while safeguarding financial stability, and on promoting both social and

environmental sustainability. Given the globalised economy and the risk of spillovers, macroeconomic resilience is needed to handle external shocks. At the international level, countries need to cooperate to ensure macroeconomic policies are mutually consistent, and to ensure a strong global financial safety net (International Monetary Fund 2018).

4.1 Expert recommendations (workshop outputs)

Workshop participants addressed a number of issues related to policy coherence, often through the lens of interactions between SDG targets. Participants called for studies addressing how existing institutional arrangements for governance – such as the WTO and the Paris Agreement – interact with the SDG agenda. In particular, some participants wondered how the fact that many international regimes are based in legal commitments – such as the human rights regime – affects the advancement of the voluntary Agenda 2030. It was also argued that the SDGs involve "methodological nationalism", when there is a clear need to understand policy coherence and SDG interactions at different scales, especially at the global level and sub-national level. Other participants highlighted the need to understand how civil society and, especially, local government can cooperate for the advancement of the SDGs. Another specific issue identified as a research avenue was the impacts of successfully broadening the tax base in developing countries on FDI, tech transfer and remittances.

Workshop participants identified the development of models and tools for achieving policy coherence as an important research task. How can coherence between government agencies and between countries, with potentially different ideologies, be achieved? Current models were viewed as insufficient. In this vein, some participants highlighted the need to go beyond characterising SDG interactions to understand causality between SDG targets (i.e. which targets cause improvement in other targets), and identified it as a key input for achieving policy coherence.

Another set of questions brought up by participants challenged the idea that all SDG goals can be achieved simultaneously and called for deeper thinking about trade-offs. Can we really address poverty and achieve sustainable consumption at the same time? Can we really accelerate global trade and achieve environmental goals? In a similar vein, some participants called for cases studies assessing trade-offs between effectiveness in achieving SDG targets versus perceptions of legitimacy in the means of achievement. This was viewed as particularly important for SDG targets that are quantified in monetary terms.

5 Key theme 3: Technology access and capacity

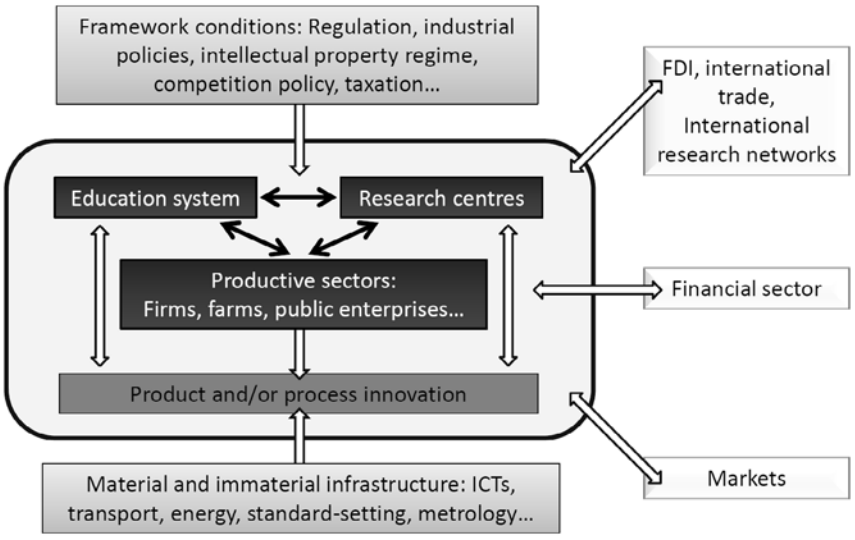
17.6, 17.7, 9.5, 9.a and 9.b

International technology transfer is clearly extensive and increasing as economies become more globally integrated. At the same time, accelerating the rate of technology transfer is essential to the achievement of the SDGs for three key reasons. First, technology transfer provides developing countries the opportunities to absorb the most productive technological advancements in our economies and to accelerate the convergence to welfare levels currently

enjoyed in more developed countries. Second, access to technology is critical for supporting local innovation systems and fully realising local competitive advantages. Third, environmental conditions, particularly climate change, require that developing countries adopt a different development path than today's wealthiest economies followed. Meeting the ambitions of both the SDGs and the Pairs Agreement requires not only that poorer regions grow economically, but also that they move rapidly to clean technology at the same time as they become highly productive.

As we will see below, the effects of intellectual property rights regimes on technology transfer to developing countries is a highly contentious research question. However, to begin we will put IPR issues to the side and instead focus on the overall technology challenges typically faced by developing countries. A recent review of the literature found that developing countries (especially LDCs) characteristically face three general barriers to effective technology transfer (Suzuki 2015). First, lack of technological capacity including insufficient technology to support adoption of new technologies, lack of knowledge on operation and management of new technologies, lack of skilled personnel and training facilities, and lack of technology standards, codes and certifications. Second, gaps in financial capacity including lack of access to financing, weak commercial viability, and weak domestic financial institutions. Financing can be particularly important for technologies that deliver high efficiency gains but also require high initial investments compared to existing technologies, which is often characteristic of new clean technological innovations. The third barrier is institutional including lack of supporting government policies or uncertain governmental policies; low government capacity to integrate new technologies into policies and planning; red tape; insufficient infrastructure; low awareness about technology options; and low acceptance of new technologies (Suzuki 2015).

Figure 1. **National innovation system**



Source: (UNCTAD 2014)

The above barriers look particularly important in the clean energy sector but should be understood as affecting access to technology generally. These barriers are highly relevant wherever advancement of the SDGs has a clear technological component. One key message in

the literature is that effective technological transfer is dependent on having the knowledge and capacity to use the technology and on developing economic models that fit local contexts (UNCTAD 2017). Again, local absorptive capacity is particularly important in the energy sector given the high level of technical complexity, combined with the clear need to adapt technology to existing energy infrastructures and local conditions (UNCTAD 2017). LCDs are typically characterised by weaker national innovation systems (see **Error! Reference source not found.**).

Domestic innovation capacity is important not only for creating new technologies but also for the adaptation of technologies to local contexts. ***Thus, there is a need for research on the type of local innovation capacity LDCs would most benefit from*** (Ockwell and Mallett 2013)***. For example, more work should be done on understanding how to better match levels of technological complexity with local capacity to absorb technology, in order to accelerate productive technological transfer*** (Blohmke 2014)***. Likewise, more general research should focus on how to improve absorptive capacity in LDCs and, not least, on the development of technological, financing, and business solutions that are well suited to uptake in LDC contexts.***

LDCs will need external financial support from more developed states if they are to gain sufficient access to the technologies needed to achieve the SDGs and to move onto development pathways consistent with the goals of the Paris Agreement. Research has shown that there are large challenges for LDCs in terms of capacity to access multilateral funding sources (Adenle et al. 2017). As the funds for climate action are ramped up, this issue will be an increasingly important area for study. ***One valuable way forward is descriptive empirical evidence on the "where" and "what" of existing climate financing flows, combined with a better understanding of contex- specific challenges in individual LDCs*** (Atteridge et al. 2017)***. Research should investigate how significant technological transfer is within existing official international climate and SDG finance, and ask if there is any need to improve the ability of official international finances to catalyse technological transfer.***

For infrastructure development related to SDG achievement, there are increasing calls for so-called blended finance models where public money is used to crowd in private capital (OECD 2018). Public funds – via development banks or national aid agencies, for example – are used to offer various types of guarantees to de-risk investments in developing countries and crowd in private capital, hopefully at several multiples above the available public funds. This not only catalyses increased funding, but it also creates investment track records and helps to improve local finance sectors and market conditions. ***A recent report by the OECD calls for a better understanding of private investor perspectives on blended finance schemes, in particular on expectations of the risk and return and the information needed to assess track records. There is also more research needed on the performance of blended finance schemes; what instruments work in what contexts and why*** (OECD 2018)***?***

In the context of SDGs, environmental regulation is one clear area where policy helps to create demand for technology transfer. Emissions standards and carbon prices are crucial for the diffusion of low-carbon technologies (Glachant and Dechezleprêtre 2017). Domestic environmental policy, carbon prices in other countries, and international carbon markets that generate the demand for technology diffusion are all important policy spheres. With respect to international carbon markets, researchers note significant problems of "loopholes"

associated with emissions accounting methods and international emission crediting mechanisms that risk negating countries' emissions pledges (Kartha and Erickson 2011). Going forward, there is a debate as to whether and how climate markets should be linked internationally. ***Because rapid diffusion of technologies is heavily dependent on effective policy incentives, more research is needed on how to design emissions markets so that we avoid previous shortfalls and effectively coordinate policies across jurisdictions.***

As noted above, IPRs are a highly contentious political and research issue. Developing countries have argued that the international IPR regime (TRIPS) and the pressure to adopt strong IPR regimes domestically – for example, through bilateral trade agreements – limits their access to knowledge and technology and hinders development. The EU, together with the US, Japan and other highly developed countries, support strong IPRs as necessary for incentivising innovation, technological advancement, and ultimately productivity gains and growth. At the same time, it is clear that promoting technology transfer is a key aim of EU development policy. The European Commission has highlighted the importance of creating the enabling conditions for technology diffusion and supporting local development of innovation capacity in aiding the global partnership for sustainable development (SDG 17)(EC 2015). Likewise, the recent European Parliament resolution on the EU-Africa Strategy calls for lowering the barriers to technology transfer (European Parliament 2017).

The evidence seems to suggest that stronger and more expansive IPRs do contribute to stronger innovation and technological advancement, but that it is only more developed and emerging economies that secure gains from strong IPR regimes (Sweet and Maggio 2015). Likewise, Gentile (2017) finds that strengthening IPR protections in developing countries increases the licensing of foreign technologies but that there is no significant correlation between stronger IPRs and licensing in low-income countries (UNEP 2010). Local market and institutional conditions appear to be more important in LDC contexts. ***More research is needed to understand in what ways IPR regimes can best be designed to help moderate obstacles in LDCs.***

The impact of IPRs appears to differ across sectors. For example, the empirical evidence suggests that strong IPRs can be a barrier to access to medicines in developing countries and do not help to incentivise the development of medicines and treatments most needed in developing countries (Hassan et al. 2010). With respect to clean energy technologies, the impacts of IPRs do not appear to be as problematic (Abdel-Latif 2015; Rai et al. 2014). Competition between patented products in the same sector and the availability of several energy sources appear to help reduce the impact of IPRs on access. ***These results suggest the need for a mapping of the technology needs for achieving the SDGs by sector, followed by sector-specific analysis of the potential impacts of IPR on SDG achievement. In addition to being sector-specific, these analyses should also be disaggregated between levels of development.***

In a recent literature review, Abdel-Latif (2015) argues that empirical results on the impact of IPRs in developing countries should be treated with caution due to data gaps, the limited timeframes of existing studies, and insufficient indicators and proxies for measuring access to technology. ***More research is needed to address each of these weaknesses. As well, there is a research gap on the impacts of IPRs on access to adaptation-oriented technologies*** (Abdel-Latif 2015)***.***

Rai and Funkhouser (2015) point to evidence showing firm partnerships to be important for transferring both knowledge and technology. ***They argue that we need a better understanding of what motivates firms to enter into technology transfer partnerships.*** They also argue that there should be more research on the relationship between policy and low-carbon technology (LCT) transfer. ***For example, they ask: to what extent do supply-side incentives for LCTs in developing countries succeed in also broadening domestic productive and innovation capacity? The authors call for more sectoral and firm-level studies on absorptive capacity of developing country LCT industries*** (Rai and Funkhouser 2015)***.*** This is because existing knowledge is based on studies from a limited number of sectors and countries, while we know that adoptive capacity is very dependent on factors at the country, regional, and firm levels. ***Thus, what is needed is both the identification of the most important channels of technology transfer, as well as studies assessing these channels in a wide variety of contexts.***

5.1 Expert recommendations (workshop outputs)

Expert workshop participants identified a number of key research questions not covered in the review above. Participants highlighted that the existing IPR regime is too complex and centralised for developing countries and smaller private actors, which confers advantages to powerful states and companies. There is a role for researchers to identify ways of addressing these structural and capacity dynamics that shifts existing power balances. In the same vein, the participants noted that the WTO has lost momentum over the past 15 years, and it appears that bilateral and smaller multilateral regimes have increasingly taken over international trade regulation. This raises the question of what effects these developments are having on developing countries' access to technology.

There were calls for more focus on local technological innovation and development than is currently expressed within SDG 17. There is also a need for behaviour and choice research to better understand local adoption of technology. This work should move beyond questions of developing technologies that are location-appropriate and help to explain why technologies with good prospects for local adoption are not readily absorbed. There were also calls for more basic evaluative research that addresses the extent to which technology transfer advances SDG goals.

6 Key theme 4: Multi-stakeholder partnerships

17.3, 17.6, 17.9, 17.16 and 17.17

One way to define multi-stakeholder partnerships (MSPs) in the context of the SDGs is that they involve some form of institutionalised partnership between public, private and civil society actors with the aim of advancing the provision of some of the societal goods embodied in the SDGs (Schäferhoff et al. 2009). In the spirit of SDG-17, these partnerships can be expected to involve international cooperation and coordination. The importance attributed to MSPs is clearly evident in SDG 17's call for a global partnership to implement the SDGs, and MSPs have been extolled in international environmental, climate and sustainability agreements for many decades. The 1992 Earth Summit, the 2002 World Summit on Sustainable Development, and Rio+20 all called for enhancing MSPs.

The potential benefits of MSPs include: regulation and other forms of problem solving where governmental regulation or initiative is missing; filling gaps in effective implementation of policies and regulations; and widening participation in processes where powerful states and international organisations have traditionally dominated (Biermann et al. 2007). MSPs are also expected to have advantages in terms of their flexibility and adaptiveness and their ability to address problems that cut across regions, sectors and interest groups (Pattberg and Widerberg 2016). Ultimately, all these benefits aim to address gaps in the achievement of specific sustainability goals and objectives that appear particularly challenging for more traditional forms of governance and international cooperation (e.g. eliminating poverty or achieving reductions in GHG emissions consistent with international agreements).

Research on MSPs is extensive and has focused on a range of issues including the description of the various types of partnerships; theoretical and empirical explanations of the emergence of partnerships; case analyses of specific partnerships; and empirical and normative assessments of legitimacy (see Bäckstrand, Campe, Chan, Mert, and Schäferhoff, 2012). We do not attempt to give a full overview of this body of literature. Instead, some recent reviews of the literature point to three central knowledge gaps – and thus, research avenues – that stand out as particularly important if we want to better understand the role MSPs can play in *advancing* the SDGs.

6.1 Lack of a knowledge base for evaluating effectiveness

The first knowledge gap highlighted here is the apparent weak basis for empirically evaluating the effectiveness of MSPs. In the context of MSPs focused on climate change, Widerberg and Stripple (2016) find that MSPs are often praised as a means to closing the large "ambition gap" between states' commitments within the UNFCCC process and what is in fact needed to achieve the temperature targets in those commitments. Examining five databases on MSP performance, they find that there is very little data for assessing ex post performance. They find that qualitative studies looking at larger samples of MSPs tend to not assess performance, but rather focus on explaining emergence, diffusion, and the expanding scopes of partnerships, or on assessing governance structures within MSPs (e.g. accountability, legitimacy, and justice). Widerberg and Stripple (2016) also find that quantitative studies assessing the emissions impacts of MSPs analyse ex ante potential effectiveness given stated objectives, membership and organisational structure, rather than ex post effectiveness. ***The authors argue that as MSPs gain increasing legitimacy and face growing expectations on their potential benefits, there is a need for more work developing assessment methods for MSPs, collecting ex post data, and better linking this academic research to policy-oriented work*** (Widerberg and Stripple 2016).

6.2 What should the metrics for MSP success be?

To the extent that we do have a knowledge basis on the performance of MSPs, the evidence suggests fairly weak performance. For example, over 200 MSPs were launched at the 2002 World Summit on Sustainable Development (WSSD), with others following, but there appears to be little evidence of tangible results from much of this activity (Chan et al. 2015). Reviewing the literature on the effectiveness of MSPs, Pattberg and Widerberg (2016) find that there are some examples of MSPs clearly helping to solve sustainability problems, but that in general MSPs appear to have low effectiveness. From a sample of 340 WSSD partnerships, 211 are

either inactive, do not have outputs, or have activities that do not match their stated objectives (Pattberg and Widerberg 2016).

Chan et al. (2018) find somewhat better than expected performance from MSPs initiated at the 2014 UN Climate Summit. This summit was not part of the UNFCCC negotiation process; it was designed to facilitate the implementation of actions and initiatives by governments at all levels, business, investors, civil society and other non-state actors. The purpose was to generate momentum for a successful outcome from COP 21 in Paris. The authors find that one year on, nearly two thirds of the initiatives coming out of the 2014 summit produced outputs that partially or fully fit the MSPs' stated functions (Chan et al. 2018). This is judged to be a good performance compared to the WSSD MSPs ten years earlier, but it is not clear in the research how one should weigh the time difference in these evaluations. It is also important to note that the "function-output-fit" (FOF) metric Chan et al. (2018) uses is not assessing the achievement of mitigation or adaptation objectives. Instead, the metric of successful output is that an MSP's outcomes fit with its stated objectives.

The existing research suggests that a key question is what the metric for success should be for MSPs in the achievement of the SDGs. For example, quantifying success based on GHG reductions fails to capture the host of governance functions that can potentially contribute to improving mitigation and adaptation performance but are not easily directly associated with quantifiable physical outcomes (i.e. GHG reductions). The FOF metric is thus based on the view that if an MSP is actually performing the function it was created to perform (e.g. governance, capacity building, communication, etc…), then this contributes to the institutional context needed for advancing climate objectives over the long-term.

Interestingly, van der Ven et al. (2016) argue that the FOF metric is itself overly narrow because it focuses too heavily on quantifiable metrics, namely measures of output fit. These authors propose a broader standard of assessment, which they describe as "the potential to contribute to transformative change". They specify this standard of success as engaging in activities that have the capacity to "scale up" and the potential to become entrenched in broader institutional frameworks (van der Ven et al. 2016). Their argument is that a focus on measures such as GHG emissions reductions or quantifiable FOF outputs fails to capture the political role MSPs can and should be playing in bringing about deep transformative change in political, economic and social systems.

What van der Ven et al. (2016) are suggesting is that when the goal is a deep transformation of how our political and economic systems work, the first steps are not likely to be easily quantifiable. They argue that MSPs can have complex system effects, non-linear effects, and unintentional indirect effects, and highlight in particular unintended "catalytic" long-term effects that are not quantifiable. Thus, van der Ven et al. (2016) suggest that MSPs should be evaluated on their potential to create entrenched "path dependencies" that can scale up well beyond the context of the MSP itself. These authors also emphasis that once we think of MSPs in these ways, we can also see how their systemic effects can be both positive or (unintentionally) negative in relation to the SDGs they aim to bring about.

This debate over metrics is at the forefront of research in this field and points to the need for more theoretical work on the ultimate aim of MSP performance evaluation. For example, it may be correct that existing performance indicators miss unintended, indirect and long-term

outputs. However, many of the suggestions from van der Ven et al.(2016) on how to evaluate MSPs appear more conducive to ex post explanations of the success or failure of various cases. They do not appear well suited to ex ante analyses with the objective of giving prescriptions on how limited resources should be used to bring about SDG achievement. How could we systematically identify ex ante, unintended-yet-positive system-disruptive path dependencies? ***Theoretical work is needed on both the appropriate role of and expectations from MSPs in sustainable development transitions and on the role of MSP evaluations and how best to execute them. This work should inform efforts to develop a better empirical base for MSP evaluation.***

6.3 Design principles for MSPs?

Given the apparent weak basis for assessing the effectiveness of MSPs and significant disagreement on the appropriate metrics of assessment, there are clear limits to the reliability of design principles for MSPs coming out of the academic literature. However, Pattberg and Widerberg (2016) do provide a very helpful review of this literature. They find nine key recommendations: (1) an optimal partner mix, (2) effective leadership, (3) stringent goal-setting, (4) sustained funding, (5) professional process management, (6) regular monitoring, reporting, and evaluation, (7) active meta-governance, (8) favourable political and social context, and (9) fit to problem-structure (Pattberg and Widerberg 2016, p.46).

One striking observation is that the standards of institutional capacity outlined above look more appropriate for major public authorities or major corporations. If the benefits of MSPs are supposed to be features such as flexibility and bringing together actors that do not or cannot normally cooperate in tight institutional organisations, then there also appear to be costs associated with the highly institutionalised structures implied by the nine design principles above. ***Given such high expectations on the operational capacities that need to be in place for MSPs to be effective, the existing literature raises questions about the realistic scope for MSPs in bringing about the SDGs. In other words, to what extent do gaps in governance point to a key role for MSPs and to what extent can gaps only be addressed by improving the capacity of traditional authorities? This question also points to the importance of more comparative research examining why some sustainable-development-oriented MSPs are successful in closing achievement gaps while others are less so.*** Such research can contribute to our understanding of the underlying conditions for effective MSPs by identifying why some mixes of sector activity, objectives and actor constellations are well placed to advance sustainable development objectives while others are not. This work has the potential to help facilitate more targeted MSP efforts for the achievement of SDGs.

6.4 Expert recommendations (workshop outputs)

The experts that participated in the workshop on SDG 17 had a number of recommendations for further research on MSPs. Broadly, the experts advanced a set of recommendations focused on 1) practice-oriented questions about how to design MSPs to achieved desired outcomes and 2) academic-oriented questions for better understanding of MSPs as a governance phenomenon.

Workshop participants identified a need to develop MSP platforms that could better facilitate involvement from different sectoral stakeholders (e.g. private and governmental) and to draw lessons learned from existing MSP platforms. Participants also saw a need to identify ways to

ensure that MSPs for SDG advancement are representative of all countries and give voice to less powerful groups. Another highlighted design issue focused on how MSPs address conflicts of interest within partnerships. How do such conflicts impact effectiveness and legitimacy and what are the best practices for managing conflicts?

Participants suggested more problematisation of the risks and potential of MSPs. Why do actors want them? Is there clarity among various actors on what they expect MSPs to achieve? What are the dynamics and outputs of partnerships that bring together actors that are not strongly motivated to cooperate with each other? Finally, the workshop participants called for the development of typologies and mapping exercises that can provide a global overview of different types of partnerships and how their constellations and purposes vary.

7 Expert recommendations beyond the review's four key themes

Given SDG 17's very wide scope, it is not surprising that our workshop participants identified a number of research avenues that are not directly categorised under the four themes identified for this review. One such area participants identified is the fostering of learning for the achievement of the SDGs. This includes spreading knowledge about how specific sustainable projects have been executed or how policy-making can be done in a systematic manner. Participants emphasised that one should look both at what perceived leaders in developed countries, like Sweden, could contribute and in what ways developing countries could help Sweden and other developed countries. In the Swedish context, some participants called for efforts to foster more learning across municipalities, and for interactions between municipalities in different countries. Finally, there were calls for examining how to ensure the quality of education around Agenda 2030 and for assessments of what forms of education result in long-term effects.

Workshop participants also identified promoting ownership of the SDG agenda as important in all spheres for effective implementation. Researchers could investigate the conditions for achieving such ownership. In a similar vein, participants viewed as important the question of how to get the private sector to internalise the SDG agenda in business practices. A question from a broad perspective that arose was how to bring about transformative change as opposed to gradual change or getting stuck in business-as-usual. Mapping the financing for SDG achievement (where it is coming from and going to), identifying financing gaps, and addressing choices about what to finance were viewed as areas where researchers could make contributions.

Finally, participants engaged in a debate about whether SDG 17 was chiefly a Western perspective on the challenges of implementing the SDGs or whether it chiefly reflected a typical Southern perspective on development. Participants did not agree, but the debate indicated the need for some deeper thinking on what the underlying assumptions of SDG 17 are in general and how these assumptions could impact on our capacity to advance the SDGs.

8 Conclusions

The aim of this report has been to identify a set of research avenues that could contribute to advancing SDG 17, which is focused on strengthening the means of implementing the full SDG agenda and deepening international cooperation. As such, the review has focused to a large extent on various governance, economic and sociological issues around four themes: the quality of government including government revenue collection (17.1, 17.9, 16.3, 16.5 and 16.6), policy coherence (17.13 and 17.14), access to technology (17.6, 17.7, 9.5, 9.a and 9.b), and multi-stakeholder partnerships (17.3, 17.6, 17.9, 17.16 and 17.17).

Social science questions about how to bring about improved and sustainable human welfare are some of the most difficult to address, due to the very high levels of complexity of the objects of study and the methodological challenges of empirically investigating human societies. As a result, there is no shortage of compelling research avenues identified in this report. However, we have only been able to address a portion of the topics encompassed by the 19 targets of SDG 17. The experts who participated in the workshop for SDG 17 confirmed the importance of the four themes selected for this study, but also identified other key research themes, such as how to foster learning among various actors for SDG achievement. Overall, this review demonstrates that investment in research on the determinants of sustainable development and in research on strategies for implementing this knowledge on the ground have a high potential to advance the SDG agenda.

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