

Services and Sustainable Development:

A Conceptual Approach



ICTSD



International Centre for Trade
and Sustainable Development

Framework Paper

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Published by

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Acknowledgements

This paper was produced under ICTSD's Programme on Development and Least Developed Countries (LDCs) as part of a project focused on leveraging services to drive sustainable and inclusive economic growth.

ICTSD gratefully acknowledges the essential and innovative contributions of Professor Bernard Hoekman and Dr Matteo Fiorini of the European University Institute who developed the conceptual elements of this paper. ICTSD would also like to thank Marta Soprana for her original work on criteria and indicators and Niki Cattaneo, Rhodes University, for her valuable comments and feedback.

ICTSD is grateful for the generous support from its core and thematic donors including the UK Department for International Development (DFID); the Swedish International Development Cooperation Agency (SIDA); the Ministry of Foreign Affairs of Denmark (Danida); the Netherlands Directorate-General of Development Cooperation (DGIS); the Ministry for Foreign Affairs of Finland; the Ministry of Foreign Affairs of Norway; and the Australian Department of Foreign Affairs and Trade.

ICTSD welcomes feedback on this publication. These can be sent to Fabrice Lehmann, ICTSD Executive Editor (flehmann@ictsd.ch).

Citation: ICTSD. 2016. *Services and Sustainable Development: A Conceptual Approach*. Geneva: International Centre for Trade and Sustainable Development (ICTSD).

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The views expressed in this publication are those of the authors and do not necessarily reflect the views of ICTSD or the funding institutions.

ISSN 1995-6932

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LIST OF ABBREVIATIONS

GATS	General Agreement on Trade in Services
GDP	gross domestic product
ICT	information and communications technology
IT	information technology
LDC	least developed country
LIC	low income country
MDG	Millennium Development Goal
OECD	Organisation for Economic Co-operation and Development
Rio+20	United National Conference on Sustainable Development (Brazil 2012)
SDG	Sustainable Development Goal
SME	small and medium-sized enterprise
TiVA	Trade in Value Added
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
WTO	World Trade Organization

FOREWORD

The adoption of the 2030 Agenda for Sustainable Development by the United Nations in September 2015 established an extensive and ambitious international framework for the achievement of sustainable development objectives. The 2030 Agenda, which includes the 17 Sustainable Development Goals (SDGs) and is buttressed by the Addis Ababa Agenda for Action on Financing for Development, makes explicit and frequent reference to the importance of trade and trade policy in driving sustainable development outcomes.

Advances in information and communication technologies have fundamentally changed the structure of global trade and production patterns. Services have emerged as the most dynamic sector in the global economy and now account for two-thirds of world employment and approximately half of world trade when measured on a value-added basis. At the same time, the production of both goods and services, as well as investment flows, has increasingly taken place within global value chains. This trend towards fragmentation has been facilitated by access to efficient and low cost producer services. By the same token, integration into value chains, whether regional or global, is dependent upon access to vital intermediation services.

While least developed countries (LDCs) have expanded their trade in services over the last decade—albeit from a low base—there is significant scope for further growth. The 2015 World Trade Organization Nairobi Declaration resulted in an extension of preferential market access for service suppliers from LDCs. However, research conducted by the International Centre for Trade and Sustainable Development (ICTSD) in support of the LDC Services Waiver indicates that many of the barriers to enhanced service exports are the result of supply-side constraints rather than market access issues.

This paper provides a conceptual framework, developed by Professor Bernard Hoekman and Dr Matteo Fiorini from the European University Institute, which identifies the primary channels through which services effect the SDGs. Complementing this conceptual framework is a set of criteria, designed to guide policymakers in prioritising competitiveness-enhancing policy change in particular service sectors, and a series of illustrative indicators, geared towards identifying the impact of services on the SDGs. These were advanced by Marta Soprana, trade policy consultant specialised in services trade.

The paper, the first in a series of services and SDG-related publications, aims to not only provide the basis for further work in this area, but also to encourage and support positive service sector policy change in the world's poorest countries. We hope you will find it useful.



Ricardo Meléndez-Ortiz
Chief Executive, ICTSD

EXECUTIVE SUMMARY

For the vast majority of countries, regardless of developmental status, services make a critical contribution to Gross Domestic Product (GDP), are an important source of employment, and serve as vital inputs into production processes. Services are crucial for the development of economies and provide a significant contribution towards the achievement of the Sustainable Development Goals (SDGs) identified in the United Nation's 2030 Agenda (UN 2015).

The nature of the relationship between services and the attainment of sustainable and inclusive economic growth is complex and multifaceted. Services can drive sustainable development outcomes through both growth and non-growth channels.

The growth channel includes impacts from domestic production and services trade performance as both affect the productivity and efficiency of the domestic economy. In contrast to the relationship between economic growth and services, which has been well documented in numerous studies, less research has been devoted to the non-growth dimensions of services.

The non-growth dimension of the contribution of services to sustainable development can be differentiated into three components: direct effects, income effects, and other indirect effects. The direct non-growth effect involves cases where a SDG is associated with access to a specific services sector or activity. Improving access to educational services and improvements in educational outcomes is an example of this dynamic.

In contrast, the income effect works through the income channel to help achieve SDGs that are closely linked to—if not premised on—higher incomes. Improved services sector performance can result in higher levels of economic growth which, in turn, can produce higher levels of per capita income needed to reduce poverty rates.

So-called “other” indirect effects involve cases where a given services sector contributes to a SDG in a way that is not linked to either the direct or income effect. For example, increasing access to educational services can have positive impacts on environmental outcomes.

However, understanding the multidimensional relationship that exists between services and sustainable development objectives is just the first step in taking advantage of the developmental potential offered by services. Establishing a set of flexible, accessible, and widely applicable criteria to identify priority services sectors is necessary.

The approach adopted in this paper is to utilise the SDGs themselves as the starting point for criteria from which to build a list of priority sectors. Broadly, these criteria can be broken down as follows: (i) an explicit reference is made to a services sector in a given SDG goal or target; (ii) a given services sector is considered/not considered to be a key backbone service (such as financial, information and communication technologies, and transport services); and (iii) the nature of the contribution of a services sector to a given SDG is identified as either direct or indirect.

However, establishing the direct or indirect link that services provide in their contribution to various aspects of sustainable development may not be sufficient to establish which services sectors policymakers should prioritise. It is necessary to complement the criteria identified with an assessment of the extent to which a services sector contributes to achieving a SDG. By examining the number of SDG targets a services sector contributes to, it is possible to classify the contribution of services to sustainable development objectives as strong, moderate, weak, or negligible.

The application of this classification approach reveals an interesting picture. In the majority of cases where a service provides a direct contribution to the achievement of a SDG, this contribution can be classified as strong. Exceptions to this include environmental services and tourism services whose contribution to gender equality, consumption and production patterns, and protection of marine and terrestrial ecosystems is indeed direct but with moderate impact.

In cases where a service makes an indirect contribution to a SDG, the contribution can also be strong. For example, health services may make a strong and indirect contribution to economic growth and employment objectives, as they improve worker productivity and are positively linked to increases in aggregate output.

Key infrastructure-related backbone services contribute strongly to a number of the SDGs, both directly and indirectly. In a similar vein, services that improve labour productivity, namely health and educational services, provide a strong direct and indirect contribution to a large number of the SDGs.

Overall, the analysis indicates that the contribution of services to the achievement of sustainable development objectives varies widely; however, key backbone services, such as transport, finance, and telecommunications, have the potential to make the largest impact. Intuitively this makes sense as—for least developed countries (LDCs) and low-income countries (LICs)—many services sectors of export interest, such as tourism services, are constrained by a lack of access to critical backbone services which limits their export potential. That said, it is important also to recognise the importance of services which, either directly or indirectly, enhance labour productivity and overall competitiveness, such as health and education services.

1. INTRODUCTION

In a world that is increasingly characterised by interconnectedness and technological advancements, the importance of services for economic growth and development cannot be overstated. Services make up roughly 75 per cent of gross domestic product (GDP) in high-income economies and approximately 45 per cent of GDP in low-income countries (LICs) and least developed countries (LDCs); they now account for around 50 per cent of global trade when measured on a value-added basis.

Services have a catalytic role in sustainable social and economic development and serve as a means of addressing poverty, upgrading welfare, and improving universal availability of and access to basic amenities. It can be argued that pursuing a sustainable development strategy is predicated on both the development and nurturing of domestic services sectors as well as engagement in international trade in services.

Many LDCs and LICs are expanding their trade in services, but have the potential to do much more. While services make up large proportions of some of these economies, the scope to promote and expand trade in services has not yet been fully realised. The services sector the role it plays in national economies, in trade and investment flows, and the opportunities it presents for supporting sustainable development objectives, are underappreciated in many developing countries. Services are often not coherently incorporated nor mainstreamed in national development strategies. As a consequence, policies adopted towards a developmental strategy for the services sector have not been as forthcoming or as effective as they could be

in order to promote necessary enhanced social and economic development.

This paper focuses on services and the links that exist between domestic services industries, trade in services, and sustainable development objectives. It aims to show that well-functioning and properly regulated services can make a significant contribution to the achievement of sustainable development goals (SDGs) in many different ways. It does so by developing a conceptual framework that builds upon a set of criteria and indicators for the identification of a priority list of services sectors that can act as drivers of sustainable development. It should be noted that this paper does not intend to analyse the impacts of policy on services sector performance.

The relationship between services and sustainable development, with an introduction to the internationally agreed Sustainable Development Goals, the connection between the development of a domestic services industry and trade in services, and the link between services and the SDGs will be briefly discussed. Next, a conceptual framework to guide thinking about the linkages between services and sustainable development objectives will be presented. Then a set of prospective criteria that could be used by policymakers to identify those services sectors that would need to be prioritised with a view to maximising their input into the attainment of the SDGs is given. This part of the paper is complemented by the following section which sets out a number of indicators that policymakers can utilise to assess the impact of the potential contribution that different services sectors can make to the SDGs. The final section offers some concluding remarks.

2. SERVICES AND SUSTAINABLE DEVELOPMENT

2.1. Why Services Matter

Efficient services are critical for achieving economic development. Many services are inputs into the production of other services and goods. As a result, their cost and quality impact on the growth performance of the economy (François and Hoekman 2010).

An efficient, competitive financial sector is critical in ensuring that capital is deployed where it has the highest returns. Telecommunications are key intermediate inputs and a “transport” mechanism for information services and other products that can be digitised. Similarly, transport services contribute to the efficient distribution of goods within and between countries and are the means through which providers of services, as well as goods, move to where clients are located (and vice versa). Business services such as accounting and legal services reduce transaction costs associated with the operation of financial markets and the enforcement of contracts. Retail and wholesale distribution services are a vital link between producers and consumers, with the margins that apply in the provision of such services influencing the competitiveness of firms on both the local and international market.

Recent improvements in services statistics, such as the OECD-WTO Trade in Value Added (TiVA) database, document that services account for about half of global trade on a value-added basis. This high share reflects the fact that a large variety of services are inputs into all traded products and other services. Indeed, many firms in manufacturing increasingly engage in so-called “servicification” (also termed servification or servitisation), a shift into or expanding the production, sale, and consumption of services. This is often part of a strategy to increase productivity and “move up the value chain” in response to competition from imports and decisions to offshore tasks that can be done more

cheaply elsewhere, which has been the focus of much recent analysis (e.g. Baines et al. 2009; Breinlich and Criscuolo 2011; Swedish National Board of Trade 2013; Breinlich, Soderbery, and Wright 2014; Crozet and Milet 2014; Lodefalk 2014). Upgrading along a value chain often implies (or indeed requires) servicification in the sense that activities that generate a higher share of the total value of a product tend to be services, ranging from design, research and development to retail distribution and brand management.

In addition to their crucial intermediation role, services are also a major source of employment. According to the World Bank’s Open Data, services accounted for 51 per cent of total employment worldwide in 2010; since the early 2000s, the share of services employment in total employment has grown by roughly 6 per cent. With around 74 per cent in services in 2010, high-income countries account for a greater share of services employment than the average, while low-income countries, although lagging behind, still saw their shares of services employment to total employment increase from 30 to 37 per cent in the period from 2000 to 2010.¹ Importantly, services can play a significant role in providing employment for the most vulnerable groups of society, which are at greater risks of being marginalised. For example, women account for 60 to 70 per cent of the labour force in tourism services, and over half of the workers employed in this sector are aged 25 or younger (UNCTAD 2013, 6).

However, it should be noted that the nature of employment within the services sector is heterogeneous. Sectors such as information and communications technology (ICT), finance, insurance, and business services are characterised by high levels of productivity and, consequently, higher wages (Rodrik 2014). On the other hand, as Ghani and O’Connell (2014) have noted, traditional services have experienced much

¹ As no aggregate data on services in employment are available on least developed countries, the assessment of employment in the services sector was based on country income.

lower rates of productivity growth. That said, manufacturing has become increasingly capital-intensive, and many developing economies have experienced deindustrialisation at a much earlier stage of the development process than their developed country peers; therefore the services sector remains a vital source of both jobs and economy-wide productivity gains.

2.2. Defining Sustainable Development

Although no universal definition of sustainable development exists, the World Commission on Environment and Development, also known as the Brundtland Commission, (1987) provided what is now considered a landmark illustration of the concept:

“Sustainable development is development that meets the needs of the present without compromising the ability of the future generations to meet their own needs. It contains within it two key concepts: (i) the concept of needs, in particular the essential needs of the world’s poor, to which overriding priority should be given; (ii) the idea of limitations imposed by the state of technology and social organization on the environment’s ability to meet present and future needs”.

In the course of the 2002 World Summit on Sustainable Development in South Africa, the concept of sustainable development underwent further elaboration. Point 5 of the Johannesburg Declaration, adopted at the end of the Summit (UN 2002), refers to three interdependent and mutually reinforcing pillars of sustainable development: economic development, social development, and environmental protection.

Services can contribute to a significant degree to each pillar. They can be instrumental in promoting economic development because efficient services can stimulate economic growth through their role as inputs in manufacturing, agriculture, mining, and in other services sectors. The improvement of basic services, such as education and health-related services, allows women and other vulnerable people the opportunity to be more

actively engaged in the domestic economy, while the development of ICT services can lead to greater social inclusion. Finally, the development of environment-related services can contribute to reducing the impact of negative environmental externalities linked to enhanced production and consumption.

A closer look at the sustainable development agenda in 2016 allows us to see how, in practice, services can contribute in different ways to the achievement of sustainable development goals, which were agreed upon with a view to covering all three pillars of sustainable development mentioned.

2.3. Sustainable Development: From the MDGs to the SDGs

Advancing and implementing the sustainable development agenda is a core activity of the United Nations (UN) and its specialised agencies. The Millennium Development Goals (MDGs), agreed by governments in 2000 with a target date of 2015, are the blueprint upon which the UN founded its efforts to promote and support sustainable development. In 2012 the United National Conference on Sustainable Development, also known as Rio+20, took place in Brazil with the explicit purpose of renewing the commitment of its participants and the UN membership at large to sustainable development and the promotion of an economically, socially, and environmentally sustainable future for the planet (Ford 2015).

Setting the tone for the UN post-2015 development agenda and building upon the work already done under the MDGs, the Rio+20 generated the Sustainable Development Goals (SDGs), which were adopted during the United Nations summit in New York in September 2015. In an effort to learn from past mistakes, the SDGs originated from an Open Working Group of the UN General Assembly, which allowed for the consultation process to include a larger number of stakeholders than those involved in the proposal of the MDGs. The resulting SDGs that came into effect on 1 January 2016 dramatically expanded upon the eight MDGs, which had been criticised for being too limited

in scope. By contrast, the SDGs comprise 17 wide-ranging objectives and 169 targets with 2030 as their target completion date.

In their quest to complete the Millennium Goals' unfinished business, the SDGs are designed to tackle the most prominent challenges to the peace and prosperity of our planet. With a view to ensuring that future generations will be left with a world where all

countries can enjoy sustainable and inclusive growth, the objectives of the SDGs go beyond poverty eradication, health, and education, to include a wide range of social, economic, and environmental goals, such as gender equality and empowerment of women; reduction of inequality; inclusive, sustainable, and safe human settlements; and sustainable use of marine and terrestrial ecosystems (see UN 2015).

3. SERVICES AND THE SDGs: COMPLEX LINKAGES AND MULTIDIMENSIONAL IMPACTS

What is the nature of the relationship between services and the attainment of sustainable and inclusive economic growth? This section will provide a conceptual framework to guide thinking about the ways in which services can advance sustainable development objectives. For the purposes of this discussion, the SDGs will be used as a proxy for sustainable development objectives more generally.

3.1. Developing a Conceptual Framework

Various types of linkages can be proposed between services and the realisation of the SDGs. These linkages are both direct and indirect. One of the most important channels through which the services sector can drive sustainable and inclusive development is through its impact on economic growth. A direct relationship exists between services sector-enabled economic growth and the achievement of specific SDGs—most obviously for SDG 8 (inclusive/sustainable growth and employment), but also (for example) for SDG 1 (ending poverty), which depends on economic growth to a significant extent. In such cases what matters is the effect of services on growth, which—for the purposes of this paper—is termed the growth effect. That said, while economic growth, spearheaded by services sector productivity and efficiency gains, may be a necessary condition for the achievement of sustainable development ambitions, it is not sufficient on its own (Mckay and Sumner 2008).

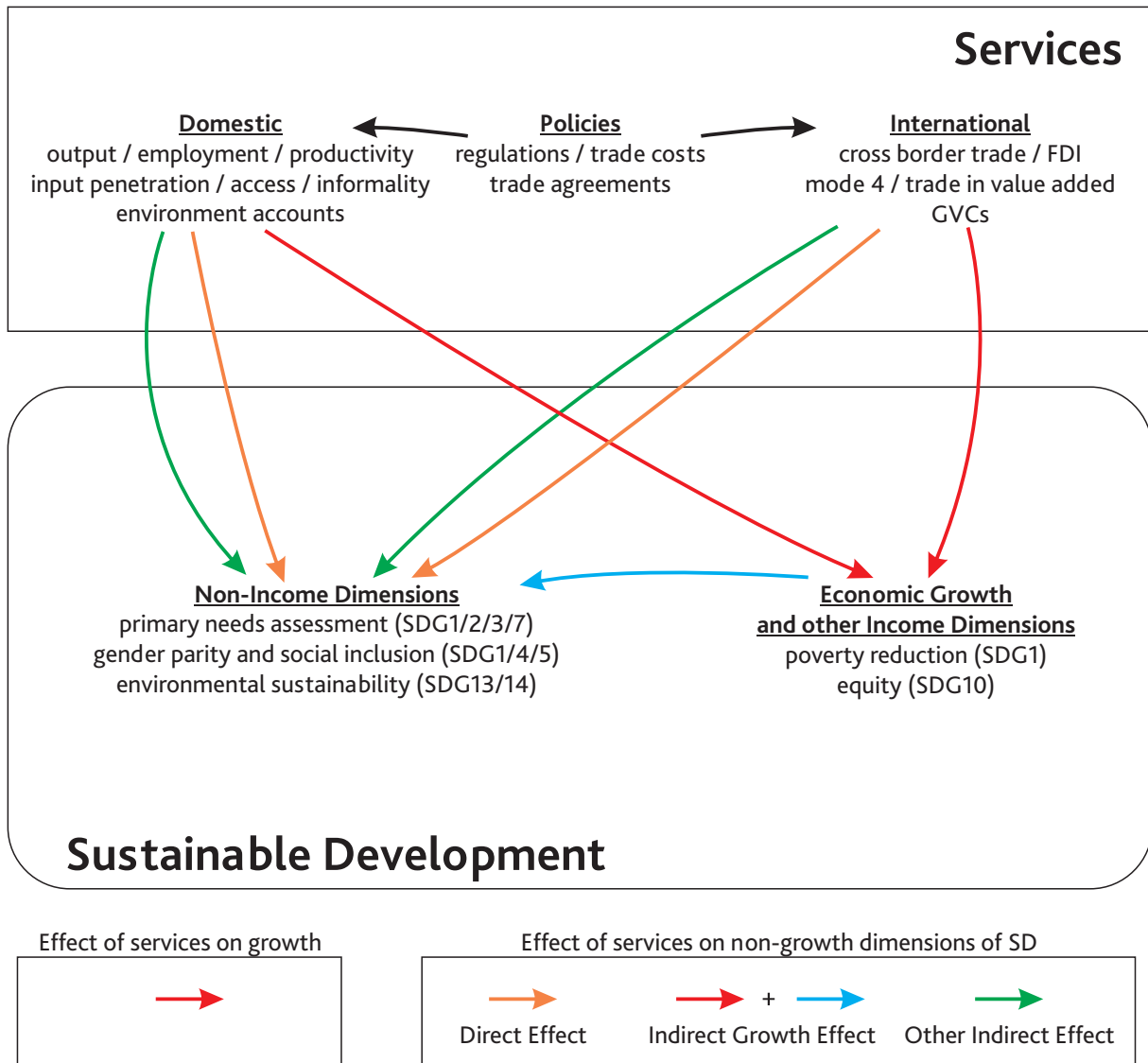
In addition to this growth effect, services play a crucial role in the achievement of the SDGs in other ways. Some of the SDGs map directly onto (or coincide with) the performance of specific services (e.g. health services in SDG 3, education in SDG 4). For other SDGs a particular service sub-sector or activity will be particularly

important, for example access to micro-finance instruments may be a channel through which to support greater gender equality (SDG 5), even though this goal does not directly coincide with the development of a more efficient financial industry. Furthermore, the growth channel is also relevant indirectly for other dimensions of sustainable development insofar as growth generates additional resources that can be used to pursue specific SDGs. In short, both direct and indirect mechanisms exist that connect the role of services to particular dimensions of sustainable development.

The conceptual framework used to characterise the links between services and sustainable development is summarised in Figure 1. This shows that the term “services” covers both domestic service industry variables and trade in services, since either or both can impact on sustainable development. A key distinction made in the framework is between two basic channels through which services can impact on sustainable development: (i) the relationship between services performance and economic growth, and then sustainable development; and (ii) the role of services in attaining dimensions of sustainable development that are more specific to a given SDG (the non-growth channels).

It is important to note that both domestic services and international trade performance will be affected by trade and industrial policies, as well as the overall domestic and macroeconomic environment. While this paper will not analyse the impacts of policy on services performance, this is clearly a critical dimension of any effort to increase the contribution that services can make to sustainable development. The role of public policies is captured by the dotted black arrows in Figure 1.

Figure 1: Conceptual Framework for Impact of Services on Sustainable Development



Source: ICTSD (developed by Hoekman and Fiorini)

3.2. Services and Sustainable Development: The Growth Effect

The first channel through which services can contribute to the attainment of sustainable development objectives (i.e. the SDGs) is through direct effects on improving the overall economic growth performance of a country; this channel is represented by the red arrows in Figure 1. It includes impacts from both domestic production and services trade performance as both affect the productivity and efficiency of the domestic economy. However, it should be noted that impacts will not be homogenous and that wide variation exists between services sectors in terms of productivity, output, and employment.

Low-cost and high-quality telecommunications will generate economy-wide benefits, as the communications network is a transport mechanism for information services and other products that can be digitised. Telecommunications are crucial to the dissemination and diffusion of knowledge—the spread of the Internet and the dynamism that it has lent to economies around the world is proof of their importance. Similarly, transport services affect the cost of shipping goods and the movement of workers within and between countries. Business services such as accounting, engineering, consulting, and legal services reduce transaction costs associated with the operation of financial markets and the enforcement of contracts; they are a channel through which

business process innovations are transmitted across firms in an industry or across industries. Retail and wholesale distribution services are a vital link between producers and consumers, with the margins that apply in the provision of such services influencing the competitiveness of firms in both the local and international markets. Health and education services are key inputs into—and determinants of—the stock and growth of human capital.

François (1990) notes that the growth of intermediation services is an important determinant of overall economic growth and development because they allow specialisation to occur.² As firm size increases and labour specialises, more activity needs to be devoted to coordinating and organising the core businesses of companies. This additional activity is partly outsourced to external service providers. The “producer services” (such as information and communications services, business services including accounting and logistics) that are demanded and supplied as part of this process are not just differentiated inputs into production. They play an important and distinct role in coordinating the production processes needed to generate ever more differentiated goods and to realise scale economies. The associated organisational innovations and expansion of “logistics” (network) services yield productivity gains that in turn should affect economy-wide growth performance.

3.3. Services and Sustainable Development: Non-Growth Dimensions

The second component of the conceptual framework comprises the links between services and the non-growth dimensions of sustainable development. Within this non-growth dimension, it is possible to distinguish three types of impacts that services may have on sustainable development outcomes:

- **Direct Effects:** where a SDG is associated with the performance of, or access to, a specific services sector or activity. This effect

may operate through domestic production or supply of a service, or through the trade channel (represented by the orange arrows in Figure 1). Examples of the former include the effect of improved productivity and efficiency in the medical sector on health outcomes and access to international telecommunication services as a mechanism to enhance the ability of small firms to engage in trade. Trade in services can play a role through this channel where it promotes domestic access to services, increases the quality of domestic services industries, and lowers their environmental footprint.

- **Income Effect (indirect):** where progress towards achieving a SDG is associated with, or facilitated by, economic growth that is driven by the performance of services in an indirect way that differs from the growth linkage between services performance and economic growth captured in the first component of the conceptual framework. This type of effect can be active at the level of all services variables, with the impact on non-income dimensions of sustainable development (i.e. specific SDGs) represented by the combination of the red and the blue arrows in Figure 1. As an indirect effect it works through the income channel to help achieve SDGs that are closely linked to—if not premised on—higher incomes. An example is the poverty reduction target (SDG1), in that improved services sector performance can result in higher levels of economic growth which, in turn, can produce higher levels of per capita income.
- **Other Indirect Effects:** where services contribute to the SDG’s achievement independently of the level of economic growth, for example, increasing access to educational services will have a positive effect on environmental outcomes (SDG 4). This mechanism can be active at the level of all services variables (represented by the green arrows in Figure 1).

² See also Burgess and Venables (2004) on the importance of a variety of services “inputs” that support specialisation, creation and diffusion of knowledge, and exchange.

4. PRIORITISING SERVICES SECTORS: A CALL FOR CRITERIA

The relationship between services, cross-border trade (mode 1), investment in services (mode 3 as defined in the General Agreement on Trade in Services, or GATS), and movement of natural persons (mode 4), and sustainable development is complex and multidimensional. This relationship touches upon a wide variety of diverse areas (e.g. social, political, economic, and regulatory). To fully understand these complex interactions therefore requires specific technical competences across a range of subject areas. This section aims at providing a basic foundation for the assessment of the contribution that services can make to sustainable development objectives, in the form of criteria and indicators that should be:

- Accessible to any policymaker, irrespective of the field of expertise;
- Simple to explain, grasp, and apply;
- General enough to be applied by any country but also flexible enough to be adapted to specific domestic contexts.

4.1. Why Criteria Are Needed

The Open Working Group of the UN General Assembly proposed a number of SDGs with the aim of addressing the most pressing issues faced by the international community at large in promoting sustainable development. While all countries, regardless of their income, have pledged to pursue these objectives, their attainment is particularly important for LDCs which tend to face more challenges in their quest to achieve sustainable development than their higher-income counterparts. Insufficient logistics, lack of adequate skills within the workforce, limited infrastructure, and poor business environments are only a handful of the obstacles that LDCs must overcome in the services sector.

Services can significantly contribute to reaching SDGs by the target date of 2030 as long as they are

sufficiently developed to help yield the desired results. Hence, it is of paramount importance for LDCs to make use of a number of tools to estimate the current status and importance of their services sectors, both at the domestic and international level, to gauge the potential need for policy changes in various services sectors so as to improve performance, and to determine a plausible order of priority for such changes to be carried out. An assessment of this nature should not take place in a vacuum, or occur as a stand-alone exercise, but should rather take place within the framework of each country's national development strategy.

Although desirable it is rather improbable that each and every country could pursue all 17 SDGs with the same determination, vigour, and effectiveness. Policymakers in each country will choose those SDGs and targets that, in their view, warrant greater effort, given constraints of time, resources, natural endowments, level of development, political interests, strategic needs, and national development goals.

In order to take full advantage of the potential contribution that services can make to the attainment of the SDGs, policymakers, especially from LDCs, should identify a priority list of services that may be in need of development and can provide the greatest contribution to sustainable development, which is consistent and coherent with their country's national development strategy. This can best be done by applying criteria that have been designed to serve a two-fold purpose: (i) provide some guidance on how to look at services from a sustainable development perspective; and (ii) offer practical and objective tools for analysis.

Any criteria identified should allow for both the definition of a general priority list applicable to all the countries that are determined to pursue the SDGs proposed at Rio20+, as well as a certain margin of flexibility to incorporate a country's specific needs in determining its services development agenda.

4.2. Criterion A: Explicit Reference

Where should policymakers start? How can they build a priority list? As this paper seeks to provide a deeper understanding of the relationship between services and the SDGs adopted as part of the post-2015 UN development agenda, one reasonable option is to approach the SDGs themselves as the starting point for building a list of the services sectors that should be prioritised in the journey towards 2030.

Policymakers could begin by verifying whether any SDG, including its targets, explicitly refers to the development of one or more services sectors either as a means to an end or as the purpose itself. The application of this criterion (termed here “A—explicit reference”) can result in three different outcomes, which may be used to determine a preliminary priority classification of the relationship between services in the domestic economy, trade in services, and SDGs:

- Category A.i.: the SDG in question makes an explicit reference to one or more services sectors in the title of the goal;
- Category A.ii.: one or more targets of the SDG in question explicitly mention one or more services sectors;
- Category A.iii.: neither the title nor the targets of the SDG in question make any express reference to any services sector.

Based on this first criterion of “explicit reference”, the 17 SDGs could be roughly classified as set out in Table 1, which shows that almost all services sectors are of significant relevance to the successful attainment of many of the SDGs and their targets. Indeed, of the 11 sectors identified under the services sectoral classification list used by WTO Members to schedule their commitments under the GATS (i.e.

business services; communication services, construction and related engineering services; distribution services; educational services; financial services; health-related and social services; tourism and travel related services; recreational, cultural, and sporting services; transport services), only two—distribution services and recreational, cultural, and sporting services—are not explicitly mentioned in some form in the SDGs.

The titles of four goals make unambiguous reference to health, educational, and environmental services, thus explicitly linking SDGs 3, 4, 6 and 13—and their relevant targets—to the performance of these services sectors. Regarding the remaining SDGs, services are mentioned in at least one target for each of them, with the possible exception of SDG 16, although trade-related institutions such as the World Trade Organization, which governs (inter alia) rules on trade in services, could fall under the category of “inclusive institutions”.

Still, this picture can be misleading; for example, the absence of any explicit reference to distribution services does not mean that they do not contribute to SDGs either directly or indirectly. As a matter of fact, by connecting suppliers with consumers, distribution services can be instrumental in ensuring sustainable consumption and production patterns, i.e. SDG 12. Recreational, cultural, and sporting services, on the other hand, may play a strong indirect role in supporting the functioning of tourism services, which in turn foster employment and economic growth, thus contributing to the attainment of SDG 8.

In conclusion, the application of the “explicit reference” criterion to the 17 goals and 169 targets shows that services are indeed relevant to all SDGs and that additional criteria are necessary to establish a priority list for a developmental services strategy.

Table 1: Criterion A - Explicit Reference to Services in the SDGs

Category	SD Goal/Target	Reference	Services sector
A.i.	Goal 3	Ensure healthy lives and promote well-being for all at all ages	Health services
A.i.	Goal 4	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	Educational services
A.i.	Goal 6	Ensure availability and sustainable management of water and sanitation for all	Environmental services
A.i.	Goal 13	Take urgent action to combat climate change and its impacts	Environmental services (protection of ambient air and climate; nature and landscape protection services)
A.ii.	Target 1.4	Ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance	All basic services Financial services
A.ii.	Target 2.3	Double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment	Financial services
A.ii.	Target 5.6	Ensure universal access to sexual and reproductive health and reproductive rights [...]	Health services
A.ii.	Target 5.7	Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws	Financial services
A.ii.	Target 5.8	Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women	Communication services Computer services
A.ii.	Target 7.b	Expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programmes of support	Other business services (services incidental to energy distribution) Construction services (installation and assembly work)
A.ii.	Target 8.3	Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services	Financial services
A.ii.	Target 8.9	Devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products	Tourism services
A.ii.	Target 8.10	Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all	Financial services
A.ii.	Target 9.1	Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all	Construction services
A.ii.	Target 9.3	Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets	Financial services

Table 1: Continued

Category	SD Goal/Target	Reference	Services sector
A.ii.	Target 9.c	Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020	Communication services Computer services
A.ii	Target 9.4	Upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities	Environmental services
A.ii.	Target 10.5	Improve the regulation and monitoring of global financial markets and institutions and strengthen the implementation of such regulations	Financial services
A.ii.	Target 11.1	Ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums	All basic services Construction services
A.ii.	Target 11.2	Provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons	Transport services
A.ii	Target 11.6	Reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management	Environmental services
A.ii.	Target 12.b	Develop and implement tools to monitor sustainable development impacts for sustainable tourism that creates jobs and promotes local culture and products	Tourism services
A.ii	Target 12.4	Achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment	Environmental services
A.ii.	Target 14.7	Increase the economic benefits to Small Island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism	Tourism services
A.ii.	Target 15.b	Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation	Other Business services (services incidental to forestry; Advisory and consulting services relating to forestry)
A.ii.	Target 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	Communication services Computer services
A.iii	Goal 16	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	NO explicit mention of services either in the Goal title itself or its targets, though trade-related organization such as WTO could fall under the 'inclusive institutions' category

4.3. Criterion B: Backbone Services

The second criterion relates to the nature of the services sectors identified under criterion A; it is based on the idea that certain sectors constitute the “backbone” of an economy, by virtue of the role they play in productive activities and how they respond to basic needs, and therefore deserve to be at the forefront of a prioritised list and development agenda.

But what exactly does the notion of being the “backbone of the economy” entail? Although it has not been universally defined, this concept is usually associated with those services that traditionally were provided by the government in the form of state monopolies, since the costs for entering the market (i.e. high capital requirements and significant sunk costs) were usually too high for the emergence of other competitors, and were likely to respond to public policy goals (as the economy and society could not properly function efficiently and independently without them). Backbone services can also be viewed as those services indispensable as inputs into all other productive, as well as socially-oriented, activities in the economy, without which an economy could not function.

Transport Services and telecommunications exemplify the concept of backbone services in the domestic economy as they are: (i) typically provided by the state because they rely on infrastructure (e.g. railroads, roads, cables) that is costly to build and maintain; and (ii) instrumental and even critical to the functioning of all other industries. For instance, a country with excellent accommodation services, outstanding consumer service skills, and world-famous historical and cultural sites, and thus with a potentially profitable tourism sector, would not be able to fully benefit from this competitive advantage if transport services were lacking, making it almost impossible for tourists to reach these attractions or their hotels.

In an increasing number of cases, governments have allowed a partial or full privatisation of services that were previously monopolies of

the state. The role that these services play in the economy is not necessarily diminished as a consequence, as they still serve public policy-relevant purposes for the economy: i.e. communication services ensure the diffusion of knowledge), increase productivity of labour, foster research and innovation; transport services ensure geographical connectivity across the national territory and internationally; and financial services support entrepreneurship through access to credit and financial resources.

Once the concept of “backbone” of the economy has been established and clarified, the application of the second criterion to the services sectors identified under criteria A.i. and A.ii. can yield two different results:

- Category B.i.: the services sector can be considered to be a backbone of the economy;
- Category B.ii.: the services sector at issue does not belong into the backbone of the economy category.

In summarising the results of the application of criterion B to the SDGs, Table 2 includes communication services, transport services, distribution services, financial services, as backbone services, whereas business services, tourism services, construction services, educational services, health services, and environmental services are not considered as such.

Table 2 also displays a residual category that includes distribution and recreational services which, as previously explained, contribute to different degrees to sustainable development, even though they are not explicitly mentioned in any SDG. As distribution services serve a critical function in facilitating cross-border transactions and the flow of resources they can be considered to form part of the backbone of the economy. On the other hand, recreational services, while an important source of growth, foreign exchange, and employment, do not fulfil this same critical facilitating function as other

backbone services and, as such, should be considered as non-backbone services.

The combination of criteria A and B allows policymakers to draw an outline of the relative importance that SDGs attach to certain services sectors. As illustrated in Table 2, the UN Open Working Group seems to have recognised the central role of financial services for economic development, as their proper functioning is deemed necessary for the pursuit of a notable set of targets (seven) across a considerable number of goals (six), ranging from the eradication of poverty and the reduction of inequality to the achievement of gender equality. Likewise and unsurprisingly, environmental services are considered a key feature for the attainment of five different sustainable development objectives, for a total of sixteen targets.

However, the significance of the contribution that other services sectors could make to

economic growth and development should not be underestimated, nor minimised simply because the proposal put forward by the UN Open Working Group links the performance of such sectors to achieving only a limited number of sustainable development objectives. For example, well-functioning health and educational services, although explicitly mentioned in only in one or two SDGs each, are fundamental to the achievement of the wide variety of targets identified under each of these development objectives. In the absence of adequate health services, a country is highly unlikely to be able to ensure healthy lives and promote the well-being for all its citizens. Similarly, a lack of suitable educational services is highly likely to compromise the pursuit of inclusive and equitable quality education. Furthermore, educational services are critical in ensuring that people have the ability to acquire necessary skills to work in the predominantly skills-intensive services area.

Table 2: Criterion B - Backbone Services and the SDGs

B.i. - BACKBONE SERVICES			
Services sector	Total SDGs	Total targets	Detail
Financial services	6	7	Target 1.4
			Target 2.3
			Target 5.7
			Target 8.3
			Target 8.10
			Target 9.3
			Target 10.5
Communication services	4	4	Target 1.4
			Target 5.8
			Target 9.c
			Target 17.8
Transport services	1	1	Target 11.2
Distribution services			Not explicitly mentioned

Table 2: *Continued*

B.ii. NON BACKBONE SERVICES			
Environmental services	5	16	Target 6.1
			Target 6.2
			Target 6.3
			Target 6.4
			Target 6.5
			Target 6.6
			Target 6.a
			Target 6.b
			Target 9.4
			Target 11.6
			Target 12.4
			Target 13.1
			Target 13.2
			Target 13.3
			Target 13.a
Target 13.b			
Business services	4	4	Target 1.4
			Target 5.8
			Target 9.c
			Target 17.8
Tourism services	3	3	Target 8.9
			Target 12.b
			Target 14.7
Construction services	3	3	Target 7.b
			Target 9.1
			Target 11.1
Business services (other business services)	2	2	Target 7.b
			Target 15.b
Health services	2	14	Target 3.1
			Target 3.2
			Target 3.3
			Target 3.4
			Target 3.5
			Target 3.6
			Target 3.7
			Target 3.8
			Target 3.9
			Target 3.a
			Target 3.b
			Target 3.c
			Target 3.d
Target 5.6			
Educational services	1	10	Target 4.1
			Target 4.2
			Target 4.3
			Target 4.4
			Target 4.5
			Target 4.6
			Target 4.7
			Target 4.a
			Target 4.b
Target 4.c			
Recreational services	Not explicitly mentioned		

4.4. Criterion C: Nature of Contribution

Looking at the links between backbone and non-backbone services to SDGs and their targets falls short of explaining what the actual impact of each services sector might be on sustainable development. As previously noted, services that have not been explicitly highlighted by the UN Open Working Group, such as distribution services, cannot be labelled as irrelevant to the pursuit of the sustainable development objectives adopted under the post-2015 Agenda, even if they are not explicitly mentioned (as shown in Table 2).

Also, the contribution that a services sector provides to sustainable development may extend beyond those SDG(s) whose targets specifically and explicitly rely on the performance of that service industry. As a case in point, tourism, which is not mentioned under SDG 1, can be key to the eradication of poverty for many developing and least-developed countries, as it provides a valuable source of employment and contributes to promoting economic growth. However, the development of a viable tourism sector is tied to the presence of efficient enabling services such as transport, telecommunications, and financial services.

In order to determine which services sectors offer the greatest contribution to SDGs and how they should be prioritised for reform, it is necessary to establish additional criteria, which should address the following issues:

- The level of direct connection between the functioning of a service and the SDG it relates to;
- The potential indirect contribution that certain services may have on goals and target that do not explicitly refer to these services;
- The strength of the link between services sectors and SDGs.

In order to understand how domestic services sectors and trade in services actually contribute to sustainable development and what factors may influence the form and degree of such a contribution, it is necessary to introduce another criterion that aims at distinguishing services sectors, based on how directly their implementation and performance affects the attainment of SDGs.

The application of criterion C allows for the categorisation of all services sectors into two categories:

- Category C.i.: direct contributor, i.e. the attainment of a SDG is closely dependent or associated with the implementation and performance of the services sector in question;
- Category C.ii.: indirect contributor, i.e. a services sector that is not explicitly mentioned in the SDG in question but whose performance plays a role in the attainment of the goal in question.

Table 3: Criterion C - Nature of Direct / Indirect Contribution of Services to the SDGs

	GOAL 1	GOAL 2	GOAL 3	GOAL 4	GOAL 5	GOAL 6
SERVICES SECTORS	Poverty	Hunger, achieve food security, nutrition, sustainable agriculture	Healthy lives, well-being	Education, learning	Gender equality	Water and sanitation
Business services	DIRECT			INDIRECT	DIRECT	
Communication services	DIRECT			INDIRECT	DIRECT	
Construction and related engineering services			INDIRECT	INDIRECT		
Distribution services		DIRECT	DIRECT			
Educational services	DIRECT		INDIRECT	DIRECT	INDIRECT	INDIRECT
Environmental services		INDIRECT				DIRECT
Financial services	INDIRECT	DIRECT			DIRECT	
Health-related and social services	DIRECT	DIRECT	DIRECT		DIRECT	INDIRECT
Tourism and travel related services	INDIRECT				INDIRECT	
Recreational, cultural and sporting services						
Transport services		INDIRECT	INDIRECT	INDIRECT		
	GOAL 7	GOAL 8	GOAL 9	GOAL 10	GOAL 11	GOAL 12
SERVICES SECTORS	Energy for all	Economic growth, employment	Infrastructure, industrialization, innovation	Inequality	Cities and human settlements	Consumption and production patterns
Business services	DIRECT	INDIRECT	DIRECT			
Communication services		INDIRECT	DIRECT			
Construction and related engineering services	DIRECT	INDIRECT	DIRECT		DIRECT	
Distribution services		DIRECT				DIRECT
Educational services		INDIRECT	INDIRECT	INDIRECT		
Environmental services			DIRECT		DIRECT	DIRECT
Financial services		DIRECT	DIRECT	DIRECT		
Health-related and social services		INDIRECT			INDIRECT	
Tourism and travel related services		DIRECT				DIRECT
Recreational, cultural and sporting services		INDIRECT				
Transport services		INDIRECT			DIRECT	

Table 3: Continued

	GOAL 13	GOAL 14	GOAL 15	GOAL 16	GOAL 17
SERVICES SECTORS	Climate change	Oceans, seas, marine resources	Terrestrial ecosystems, forests, desertification, land degradation, biodiversity loss	Peaceful and inclusive societies, justice	Global partnership
Business services			DIRECT		DIRECT
Communication services					DIRECT
Construction and related engineering services					
Distribution services					
Educational services	INDIRECT	INDIRECT	INDIRECT	INDIRECT	
Environmental services	DIRECT				
Financial services					
Health-related and social services					
Tourism and travel related services		DIRECT			
Recreational, cultural and sporting services					
Transport services					

Table 3 summarises the results of the application of criterion C to all 11 services sectors in relation to the 17 SDGs adopted at Rio+20. At a quick glance, it appears to support the idea that services contribute to all goals, albeit with different degrees of significance. The table also shows that some services sectors are of great relevance to a greater number of SDGs than others, and some tend to play a more direct role in the attainment of certain development objectives.

In order to better understand Table 3 and the reasoning behind its construction, a few clarifications will be provided in the following section as to the nature and type of contribution that each services sector is understood to make to sustainable development objectives, in the order in which they appear in Table 3.

4.4.1. *Business services*

Based on the GATS services sectoral classification list (WTO 1991), business services comprise a broad group of services including professional services (such as legal and accounting); computer and related services; research and development services; real estate services; rental/leasing services without operators; and other business services, which include services incidental to agriculture, forestry, fishing, mining, manufacturing, and energy distribution. Table 3 indicates that business services directly contribute to six different development objectives, namely SDGs 1, 5, 7, 15 and 17.

Business services can also directly impact the access to affordable, reliable, sustainable, and modern energy for all (SDG 7) in the form of services incidental to energy distribution, which include transport and distribution of electricity and gas operated by an independent service supplier (WTO 1998, 3-4). Moreover, business services can also be instrumental in promoting innovation (SDG 9), forest management (SDG 15), and in revitalising the global partnership for

sustainable development (SDG 17), primarily by means of granting access to new and advanced technology and advisory and consulting services relating to forestry.

But business services may also indirectly contribute to promoting inclusive education (SDG 4), economic growth and productive employment (SDG 8), as information technology (IT) can enable the provision of educational services through new and diverse platforms (e.g. online teaching), which can reach communities and students that would otherwise be left out; promote the development of new types of services; or make proximity irrelevant for the supply of other services, thus potentially creating new employment opportunities.

4.4.2. *Communication services*

According to the GATS services sectoral classification list (WTO 1991), communication services include postal services, courier services, telecommunication services, and audiovisuals. The role these services play in advancing sustainable development objectives is akin to that of business, including IT, services. Indeed, Table 3 shows that there is a striking similarity between the SDGs that business and communication services affect both directly and indirectly. This is mainly due to the fact that technology and technological processes is tightly linked to the availability of computer services and telecommunications. Therefore, the direct contribution that communication services provide to SDGs 1, 5, 9 and 17—as well as the indirect impact they have on SDGs 4 and 8—can be explained using much the same reasoning that was previously given for business services.

According to the UN Open Working Group, in order to eradicate poverty by 2030 (SDG 1), countries must strive to ensure that all men and women, in particular the poor and vulnerable, have access to appropriate new technology, which would enable them—including those in remote areas—to connect

with markets and suppliers to reach consumers. As computer and related services are a fundamental component of technology, they can directly contribute to support the fight against poverty. By the same token, granting access to IT services can help promote a more active participation of women and other more vulnerable members of society in economic and social activities, thus providing a direct contribution to achieving gender equality and empowerment of women (SDG 5).

4.4.3. *Construction services*

Construction and related engineering services refer to all those services that are required in the creation of buildings and facilities, which the GATS services sectoral classification list (WTO 1991) identifies as general construction work for buildings and for civil engineering, installation and assembly work as well as building completion and finishing work. Unsurprisingly, the contribution of these services to sustainable development focuses primarily on the direct role that infrastructure plays in ensuring access to affordable and sustainable energy for all, sustainable industrialisation, and inclusive and safe human settlements.

Adequately developed construction services can be instrumental in the creation of a properly functioning energy system that is readily accessible to all individuals, including those in the most remote areas, at affordable prices, which is key to ensuring reliable and sustainable energy for all (SDG 7). It is also evident that, in order to build resilient infrastructure (SDG 9) and make cities and human settlements safe and sustainable (SDG 11), access to sound and well-performing construction services is essential. For example, access to consulting services provided by experts on earthquake engineering can be crucial to all those earthquake-prone countries, such as a number of Pacific Islands that would greatly benefit from the construction of earthquake-resistant structures in their quest to make infrastructure more resilient.

The efficient functioning of construction services can also play a role in ensuring healthy lives (SDG 3) and promoting inclusive education (SDG 4), a role that, albeit indirect, should by no means be underestimated. Indeed, by ensuring that road infrastructure and school buildings are safe, governments would be able to reduce potential risk of deadly accidents (target 3.6), on the one hand, and to facilitate access to learning environments where students can concentrate and fulfil their potential without worrying about the suitability of the facilities they use, on the other.

4.4.4. *Distribution services*

The GATS services sectoral classification list (WTO 1991) considers distribution services to include commission agents' services, wholesale trade services, retailing services, franchising, and other residual types of distribution services. As previously pointed out, although not explicitly mentioned in any of the 17 SDGs, distribution services can still provide a valuable and significant contribution to a number of them in the form of direct intervention. Indeed, as they provide the necessary link between producers and consumers, access to affordable and reliable distribution services can be instrumental in ensuring the efficiency of the cold chain, consequently limiting food waste, and hence guaranteeing access for the consumer to greater food supplies, which can be crucial in achieving food security (SDG 2). For this very same reason, distribution services are directly involved in promoting the sustainability of consumption and production patterns (SDG 12); target 12.3 calls for a reduction in half of per capita global food waste at the retail and consumer levels and the contraction of food losses along production and supply chains, including post-harvest losses.

Moreover, well-functioning distribution services can be crucial to the achievement of sustainable economic growth (SDG 8). Indeed, a potential approach to the promotion of global resource efficiency in production and

consumption (target 8.4) involves enabling distribution services to operate in a manner that maximises their efficiency whilst minimising their impact on environmental degradation.

In addition, distribution services can work as a contributing factor in the promotion of healthy lives and well-being for all (SDG 3). In order to ensure access to safe, effective, quality, and affordable essential medicines and vaccines for all (target 3.8), the length, efficiency, and complexity of distribution channels can be as relevant to the supply of pharmaceutical products to consumers as the enforcement of adequate intellectual property rights.

4.4.5. *Educational services*

Unsurprisingly, educational services, which comprise primary, secondary, and higher education services, as well as adult education and other education services (WTO 1991), offer the most significant contribution to sustainable development in terms of the number of goals that they impact, whether directly or indirectly. Educational services are the key contributor to the attainment of SDG 4, as greater access to primary, secondary, tertiary education, and improved participation of adults in lifelong education are instrumental in ensuring that education is inclusive, equitable, and offers opportunities for all to fulfil their potential.

Education can also be a powerful tool to use in the pursuit of other SDGs, as education allows the transfer of knowledge, which drives economic growth, empowerment, innovation, and understanding. By ensuring access to better education for a larger proportion of their communities, governments can foster entrepreneurship, promote women's participation to the economy, increase the supply of skilled labour, and reduce inequality—all of which are critical for economies seeking to tap into and move up within global value chains. Thus, educational services provide an important contribution to the fight to eradicate poverty (SDG1); the promotion of

gender quality (SDG 5); the promotion of inclusive and sustainable economic growth as well as full and productive employment (SDG 8); the fostering of innovation (SDG 9); and the efforts towards the reduction of inequality within and among countries (SDG 10).

Education means providing people with tools and skills to learn about, understand, and address specific issues. For example, policymakers can use educational services to promote health and wellness for all, as educating people on health issues related to sexuality and reproduction, as well as fitness and nutrition can, on the one hand, help reduce the risk of exposure to sexually transmitted diseases and, on the other, encourage a healthier lifestyle, thus contributing to the fight against malnutrition. Healthier people resort less often to hospital treatments and other public health services, thus contributing to alleviating the costs of such services.

In the same vein, environment-related development objectives could greatly benefit from the provision of educational services that target specific issues such as water treatment and sanitation (SDG 6), the sustainable use of marine and terrestrial resources (SDGs 14 and 15), as well as the perils of climate change (SDG 13). Education can also be a vehicle for peace (SDG 16), when teaching focuses on the importance of mutual understanding and cooperation and allows people to integrate better in their local, national, and international communities.

4.4.6. *Environmental services*

Environmental services include sewage, refuse disposal, sanitation, and similar services as well as many other related environmental services. It is not surprising, therefore, that they are particularly relevant to all those SDGs that involve the environment. For instance, the attainment of SDG 6, which promotes sustainable management of water and sanitation, is reliant on, among other factors, the provision of access to adequate

water management services. Environmental services can also help to respond to the negative effects of climate change on water resources (SDG 13). They can also make a direct contribution to those SDGs that require environmentally-friendly production or technology such as SDG 11 (i.e. make cities and human settlements inclusive, safe, resilient, and sustainable), which calls for the creation of cities that implement policies to mitigate and adapt to climate change and develop resource efficiency, including water, or SDG 12 (i.e. ensure sustainable consumption and production patterns).

4.4.7. *Financial services*

As financial services include insurance services as well as all banking services that can grant access to credit, financial support, and incentives, they are particularly relevant to all those SDGs that rely on economic growth and entrepreneurship as an essential contributing factor for their achievement. As pointed out by Ellis, Lemma, and Rub (2001), among others, access to financial services enables households to invest in activities that may contribute to improving future earnings prospects and consequently to foster economic growth, which, if sustainable and inclusive, can be a powerful instrument for reducing poverty (SDG 1). But financial services can also provide a valuable source of employment as an economic sector in its own right, thus contributing to promoting full and productive employment, as well as inclusive and sustainable economic growth (SDG 8).

Together with economic growth, one of the most important contributions offered by providing access to well-functioning financial services is in relation to entrepreneurship development. For instance, financial services can play a crucial role in promoting sustainable agriculture (SDG 2), because farmers who are able to access loans to start a new agricultural business may rely on online payment systems to sell their produce, or utilise insurance services to mitigate risk resulting from climate variation (Graf and Dalla Valle 2014, 34).

Similarly, the ability of women to access loans or other forms of financial support encourages their greater autonomy and participation in the domestic economy. Thus, access to credit may be beneficial to the empowerment of women (SDG 5). Innovation (SDG 9) also relies on the availability of well-functioning financial services, as demonstrated by the extensive use that highly technological and innovative start-ups have made of different forms of financial support. Similarly, as pointed out by Demirgüç-Kunt, Beck and Honohan (2008, 138–9), financial development and access to financial services is a contributing factor in reducing income inequality (SDG 10).

4.4.8. *Health services*

Health services, which include hospital, other human health, and social services, can be considered somewhat akin to educational services in that they play a particularly significant role in one specific development objective, i.e. ensuring healthy lives and promoting the well-being for all at all ages (SDG 3). However, they are also indirectly involved in the attainment of a number of other SDGs.

Granting access to better health services means improving the living conditions of people, including workers, hence indirectly contributing to their greater productivity and thus to economic growth (SDG 8), which plays a key role in the fight against poverty (SDG 1) and hunger (SDG 2), as well as in promoting employment (SDG 8). Health services also indirectly contribute to the safety and sustainability of human settlements (SDG 11), insofar as prevention and disease control ensure a good standard of living and reduced exposure to health risks that may accompany urbanisation and proximity. The fight to ensure availability and sustainability of water and sanitation for all (SDG 6) may benefit from the presence of adequate health services, in the form of information, consultation, and other related services provided by hospitals or other health facilities aimed at assisting individuals in learning about proper hygiene and sanitation.

4.4.9. *Tourism services*

For many LDCs, tourism services are particularly important, as they are often the most important sector in the economy in terms of employment and share of GDP. The tourism sector is the first or second most important source of export revenue for 20 of the world's LDCs (UNCTAD 2013). With respect to SDGs, tourism plays a significant role in the attainment of three objectives which explicitly refer to tourism as a means to create jobs (SDG 8), to promote the production of local goods (SDG 12), and to support the sustainable use of marine resources (SDG 14). For example, these services may create ties with local artisans and small manufacturers, who often sell their products in locations inside or close to hotels, resorts, or restaurants (although this is dependent on the type of tourism involved).

Tourism can also play a significant role in combating poverty (SDG1), because of its role in generating economic growth, which in turn can lead to additional opportunities in other areas such as increased access to education for children or entrepreneurial opportunities for women, thus also potentially contributing to their empowerment (SDG 5).

4.4.10. *Recreational, Cultural, and Sporting services*

Recreational, cultural, and sporting services, which include entertainment services, news agency services, archives, museums, and other cultural services, as well as sporting and other recreational services, are not referred to by any SDG goal or target. It could be argued that entertainment and sports could be used to promote tourism and, consequently, employment and economic growth (SDG 8). However, unless a particularly compelling argument can be made for the prioritisation of recreational, cultural, and sporting services, policymakers should not consider the development of these services as a priority in their quest to fulfil the SDGs.

4.4.11. *Transport services*

Although the proponents of the SDGs explicitly acknowledged the direct role that safe, affordable, accessible, and sustainable transport systems play in making cities and human settlements inclusive, safe, resilient, and sustainable (SDG 11), the contribution of transport services is not limited to this SDG only. Indeed, transport services, which include maritime transport services, internal waterways transport, air transport services, space transport, rail transport services, road transport services, pipeline transport, and services auxiliary to all modes of transport, indirectly contribute to SDGs 2, 3, 4 and 8. Proper, efficient, and sustainable road, rail, and air transport services are instrumental in ensuring the efficiency of the cold chain, thus indirectly operating to support improving people's access to food (SDG 2). Access to newer and better-equipped vehicles can help reduce the risks of road accidents, thus indirectly contributing to saving lives (SDG 3). In the same vein, transport services can boost the effects of educational services as increased access to safe, sustainable, and affordable transport can help increase the number of students enrolled in primary, secondary, and tertiary education (SDG 4).

Transport can also contribute indirectly to the promotion of inclusive and sustainable growth (SDG 8), as it is critical in connecting workers to their workplace and in ensuring the timely movement of goods domestically and internationally. A reliable and multimodal transport system may help reduce commuting time and the stress that it generates, thus potentially increasing a worker's employability and productivity, with positive repercussions on economic growth. Furthermore, transport services are critical for the development of sectors of export interest to LDCs such as tourism.

5. THE ROLE OF INDICATORS: MEASURING IMPACT AND ASSESSING THE CONTRIBUTION OF SERVICES

Establishing the direct or indirect link that services provide in their contribution to various aspects of sustainable development may not be sufficient to establish which services sectors policymakers should prioritise.

In light of this, it would be useful to complement the above analysis through the application of a number of indicators that will help to identify the effective impact of services on SDGs. Identifying what makes an indicator appropriate for the purpose at issue is not an easy task, as several conditions apply.

5.1. Issues With Indicators

First of all, indicators that allow for a quantitative assessment are generally to be preferred. Quantitative indicators, such as indexes, ratios, numbers, and percentages, are able to provide a clearer, more objective, and readily accessible measure than qualitative assessments. If designed correctly, quantitative indicators yield the same expected results when applied to an event or activity, irrespective of who measures them. The same cannot be said for qualitative indicators, which are based on descriptions rather than numbers, so tend to be more subjective as they depend on who carries out the measurement. Quantitative indicators lend themselves better to comparing performances over time and also across countries or sectors.

Yet recognising that a purely quantitative assessment of performance may not suffice to capture all nuances and that qualitative indicators can sometimes be better equipped to identify effects or constraints that are not immediately apparent through quantitative indicators, the use of qualitative indicators

to measure the contribution of services to sustainable development should not be rejected out of hand. However, in order to overcome some of the issues related to their reliability, verifiability, and subjectivity, qualitative assessments will be linked as much as possible to the use of numerical indicators. For example, the quality of hospital services could be assessed by a comparison between the number of people treated in the facilities and the number of deaths resulting from these treatments.

Secondly, it is advisable to use indicators that are directly relatable to the targets listed under each sustainable development goal. This would make it easier for policymakers to identify the extent and significance of the contribution that services offer to development objectives more effectively and readily. Although a number of targets are phrased in such a way that it is hard to understand exactly what is promised and how the targets should be implemented, monitored, or evaluated (e.g. target 1.5),³ others refer to specific parameters that should be met by the target year 2030 (e.g. targets 2.3 and 3.1).⁴ Therefore, it would be useful to identify indicators that measure, for instance, how services contribute to doubling the agricultural productivity and incomes of small-scale food producers (target 2.3) or reducing the global maternal mortality ratio (target 3.1).

Moreover, in order to assess the effective impact of the contribution that services offer to sustainable development, it is necessary to make use of both economic and non-economic indicators. Non-economic indicators may be related, for example, to the quality or the social impact of the service provided. They can be especially important for measuring the

3 Target 1.5 is to build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social, and environmental shocks and disasters.

4 Target 2.3 states that by 2030, the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, should be doubled, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets, and opportunities for value addition and non-farm employment. Target 3.1 calls for the reduction of the global maternal mortality ratio to less than 70 per 100,000 live births.

impact of a services sector on certain aspects of sustainable development that are specific to a given SDG. Overall, it is advisable to identify a set of indicators that cover three fundamental features of the impact of services, through the non-growth channels of action, on sustainable development: access, utilisation, and quality.

- Indicators for access measure the extent to which specific groups of individuals are able to make use of a certain service: the number of women with access to home-banking services or the number of children enrolled in primary schools constitute examples of this type of indicator;
- Indicators of utilisation, on the other hand, serve to assess how much a service is actually used: an example of this would be the number of tourists accommodated in four or five star hotels per year in a specific country;
- Indicators of quality measure the degree or level of excellence of the service provided: the connection speed of internet services would be an example of this type of indicator.

Indicators that measure the effect of services on income growth, economic growth, employment, or productivity would fall within the first category. As previously explained, a services sector may indirectly impact a sustainable development objective by means of promoting economic growth, which in turn can be instrumental in the attainment of that specific SDG. Therefore, economic indicators can help understand how significant an indirect contribution by a services sector can be to a particular development objective. As regards the second category,

Last but not least, indicators should allow policymakers to measure how strongly services contribute to SDGs, irrespective of the direct or indirect nature of the contribution itself. Economic indicators seem particularly useful for this purpose. For example, although tourism provides an indirect contribution to poverty reduction through the generation of economic growth and employment, which in turn may produce virtuous circles of prosperity and opportunity, this contribution may be strong,

moderate, or weak, depending on the level of economic growth generated. Unsurprisingly, the picture that would emerge from this type of approach would vary across time and economies. Indeed, this may be to such an extent as to render it difficult to provide a general picture of the potential strength of contribution that each services sector may offer to SDGs.

5.2. Strength of Contribution

A different approach, however, could serve this latter purpose better. By assessing the extent to which a services sector contributes to a development objective in terms of number of targets affected or by determining whether the sector plays a key, complementary, or accessory role in the performance of other activities with are, in turn, instrumental in attaining the SDG at issue, it would be possible to classify the contribution of services to SDGs according to the following scheme, which is portrayed in Table 6:

- Strong, which includes all instances when the operation of the services sector at issue affects half or more of the targets of a SDG or plays a key role in the performance of other activities which are in turn instrumental in the attainment of that specific goal;
- Moderate, which identifies all those cases where the contribution of a services sector is confined to less than half of the targets or the services sectors plays a complementary—but not essential—role in the performance of activities that are crucial to the pursuit of a particular SDG;
- Weak, which comprises all the instances when the performance of the services sector is only remotely related to an aspect of sustainable development or affects only a target of relatively marginal importance in the overall attainment of a SDG;
- Negligible, which usually describes all those instances where the contribution of services to sustainable development is imperceptible, trivial or inconsequential; by default it includes all those situations where a services sector provides no type of contribution, either direct or indirect, to a given SDG.

Table 4: Strength of Contribution of Services Sectors to Attainment of SDGs - A Potential Approach

	GOAL 1	GOAL 2	GOAL 3	GOAL 4	GOAL 5	GOAL 6
SERVICES SECTORS	Poverty	Hunger, achieve food security, nutrition, sustainable agriculture	Healthy lives, well-being	Education, learning	Gender equality	Water and sanitation
Business services	DIRECT / STRONG			INDIRECT / STRONG	DIRECT / MODERATE	
Communication services	DIRECT / STRONG			INDIRECT / STRONG	DIRECT / MODERATE	
Construction and related engineering services				INDIRECT / STRONG		
Distribution services		DIRECT / STRONG	DIRECT / STRONG			
Educational services	INDIRECT / STRONG	INDIRECT / STRONG	INDIRECT / STRONG	DIRECT / STRONG	INDIRECT / STRONG	INDIRECT / WEAK
Environmental services		INDIRECT / MODERATE				DIRECT / STRONG
Financial services	INDIRECT / STRONG	DIRECT / STRONG			DIRECT / STRONG	
Health-related and social services	INDIRECT / STRONG	INDIRECT / STRONG	DIRECT / STRONG		DIRECT / MODERATE	INDIRECT / MODERATE
Tourism and travel related services	INDIRECT / STRONG				INDIRECT / STRONG	
Recreational, cultural, and sporting services						
Transport services		INDIRECT / STRONG	INDIRECT / STRONG	INDIRECT / STRONG		
	GOAL 7	GOAL 8	GOAL 9	GOAL 10	GOAL 11	GOAL 12
SERVICES SECTORS	Energy for all	Economic growth, employment	Infrastructure, industrialization, innovation	Inequality	Cities and human settlements	Consumption and production patterns
Business services	DIRECT / MODERATE	INDIRECT / STRONG	DIRECT / STRONG			
Communication services		INDIRECT / STRONG	DIRECT / STRONG			
Construction and related engineering services	DIRECT / STRONG		DIRECT / STRONG		DIRECT / STRONG	
Distribution services		DIRECT / MODERATE				DIRECT / STRONG
Educational services		INDIRECT / STRONG	INDIRECT / STRONG	INDIRECT / STRONG		
Environmental services			DIRECT / MODERATE		DIRECT / STRONG	DIRECT / MODERATE
Financial services		DIRECT / STRONG	DIRECT / STRONG	DIRECT / STRONG		
Health-related and social services		INDIRECT / STRONG			INDIRECT / MODERATE	
Tourism and travel related services		DIRECT / STRONG				DIRECT / WEAK
Recreational, cultural, and sporting services		INDIRECT / WEAK				
Transport services		INDIRECT / STRONG			DIRECT / STRONG	

Table 4: Continued

	GOAL 13	GOAL 14	GOAL 15	GOAL 16	GOAL 17
SERVICES SECTORS	Climate change	Oceans, seas, marine resources	Terrestrial ecosystems, forests, desertification, land degradation, biodiversity loss	Peaceful and inclusive societies, justice	Global partnership
Business services			DIRECT / WEAK		DIRECT / STRONG
Communication services					DIRECT / STRONG
Construction and related engineering services					
Distribution services					
Educational services	INDIRECT / MODERATE	INDIRECT / MODERATE	INDIRECT / MODERATE	INDIRECT / MODERATE	
Environmental services	DIRECT / STRONG				
Financial services					
Health-related and social services					
Tourism and travel related services		DIRECT / MODERATE			
Recreational, cultural, and sporting services					
Transport services					

The picture that emerges from Table 4 is enlightening for three reasons. First of all, it highlights the existence of a potentially positive correlation between the directness of the contribution of certain services sectors to aspects of sustainable development and the strength of such a contribution. In almost all cases where a service provides a direct contribution to a SDG, this contribution can be classified as strong; the only exceptions are environmental, health, and tourism services, whose contribution to gender inequality, energy, and consumption and production patterns as well as marine and terrestrial ecosystems is direct but moderate, since their performance affects only a limited number of targets or plays a secondary role to the attainment of such goals with respect to other sectors.

Secondly, it becomes apparent that a number of services sectors can still provide a strong contribution to certain SDGs even when their contribution is an indirect one. For example, construction services can play a key role in promoting access for all to education, as the proximity of safe school buildings can be key to incentivising students to attend classes.

Last but not least, certain sectors, which tend to fall within the category of basic services (i.e. the backbone of the economy), contribute more strongly than others to the attainment of SDGs, both directly or indirectly. Indeed, as illustrated in Table 4, financial, transport, communication, and construction services strongly contribute to a variety of SDGs, thus making them the sectors that policymakers may want to prioritise in the quest to promote sustainable development. Similarly, services which improve the productivity of labour, such as education and health services, contribute both directly and indirectly, with varying degrees on impact, on the achievement of the SDGs.

5.3. Types of Indicators

Taking into account the elements presented in the previous section, it is possible to classify the indicators for the assessment of the impact of services on SDGs according to scope or purpose. As regards the former, indicators can be divided into three different categories: (i) development-specific, which groups all the indicators that refer specifically to a single SDG—they often coincide or are directly related to the indicators that SDGs explicitly mention in their targets; (ii) sector-specific, which includes all the indicators that are relevant to a particular services sector and cannot be applied to other sectors—they may coincide with or refer to specific targets, when the relationship between the goal and service is a particularly close one, such as health services and SDG 3, or educational services and SDG 4; and (iii) horizontal, which comprises all those indicators that can apply across sectors and goals—they tend to be indicators of indirect contribution of services to sustainable development. Table 5 across provides some examples for each category.

Indicators can also be classified according to their purpose, or rather the focus of their assessment. As previously mentioned, in order to fully understand the impact that a services sector may have on a particular aspect of sustainable development it is useful to look at three different aspects of the supply of that service: (i) access, which concerns the right of individuals to make use of a service; (ii) utilisation, which refers to the effective use of the service provided; and (iii) quality, which pertains to the level of excellence of the service provided. As the regulatory framework may affect both utilisation and quality, the indicators identified do take this issue into consideration. Table 6 offers selected examples of indicators for each of the three categories.

Table 5: Impact of Services Sectors on SDGs - Indicators by Scope

DEVELOPMENT-SPECIFIC	SECTOR-SPECIFIC	HORIZONTAL
SDG 3 (Health): <ul style="list-style-type: none"> ratio of hospitals per 100 inhabitants number of doctors and nurses per 100 inhabitants number of ambulances per 100 inhabitants mortality rates 	Financial services: <ul style="list-style-type: none"> proportion of people with access to credit number of banks per 100 inhabitants number of people with access to traditional banking number of people with access to mobile banking 	<ul style="list-style-type: none"> amount of revenue generated in each services sector
SDG 4 (Education): <ul style="list-style-type: none"> number of primary, secondary, and tertiary schools number of students per school number of enrolments in primary, secondary and tertiary education ratio of teachers to students 	Transport: <ul style="list-style-type: none"> number of vehicles owned by road transport companies age of vehicles owned by road transport companies share of paved road kilometres of railroads number of passengers traveling by rail number of passengers traveling by air 	<ul style="list-style-type: none"> amount of revenue generated and reinvested in other activities (e.g. infrastructure, SME-related support programmes, education)
SDG 5 (Gender): <ul style="list-style-type: none"> number of women employed in each services sector number of women who own a mobile phone number of women with Internet access 	ICT: <ul style="list-style-type: none"> share of population with access to Internet share of population with access to mobile phones number of people who own a computer 	<ul style="list-style-type: none"> amount of foreign direct investment in each services sector
SDG 7 (Energy): <ul style="list-style-type: none"> share of population with access to renewable energy 	Distribution: <ul style="list-style-type: none"> ratio of supermarkets per 100 inhabitants 	<ul style="list-style-type: none"> degree of international connectedness
SDG 8 (Growth): <ul style="list-style-type: none"> number of workers employed in each services sector 	Tourism: <ul style="list-style-type: none"> number of tourists in hotels number of local artisanship shops located in hotels or resorts 	

Table 6: Impact of Services Sectors on SDGs - Sample Indicators by Purpose or Focus of Assessment

ACCESS	UTILISATION	QUALITY
<ul style="list-style-type: none"> number of farmers with access to home-banking services 	<ul style="list-style-type: none"> ratio between transactions made by farmers through home banking and those made through traditional banking 	<ul style="list-style-type: none"> rate of stability of the broadband connection
<ul style="list-style-type: none"> density of public hospitals per 1,000 inhabitants 	<ul style="list-style-type: none"> number of hospitals per x inhabitants 	<ul style="list-style-type: none"> ratio between number of deaths in private hospitals and those in public hospitals
<ul style="list-style-type: none"> number of women with access to credit 	<ul style="list-style-type: none"> percentage of loans granted to female entrepreneurs 	<ul style="list-style-type: none"> number of patients per doctor
<ul style="list-style-type: none"> number of women with access to Internet 	<ul style="list-style-type: none"> percentage of enterprises or start-ups founded by women 	<ul style="list-style-type: none"> number of nurses per doctor
	<ul style="list-style-type: none"> days necessary to obtain a licence in every services sector 	<ul style="list-style-type: none"> amount of investment spend to repair roads
		<ul style="list-style-type: none"> amount of damage caused by natural disasters in urban settings

6. CONCLUSION

Services account for roughly 75 per cent of GDP or more in high-income countries. In low-income economies and the LDCs the share of services is substantially less, although services generally still account for upwards of 50 per cent of economic activity. Sustainable development is interlinked with the development of the services sector. In part this is simply because economic development is associated with structural change that results in a greater share of total output and employment being generated by services activities.

As discussed, the channels through which the performance of services sectors impacts on sustainable development are numerous. Domestic services production and trade in services can directly impact on sustainable development because the goal at stake—e.g. improving public health, education, or connectivity—is generated as an output of a specific service activity or set of service industries. Services also matter for the attainment of sustainable development goals because the efficiency and performance of many services sectors is a determinant of an economy's growth rate. Increasing aggregate and per capita incomes is an important channel for achieving the SDGs as this generates additional resources that can be used to fund the investment required for the pursuit of specific SDGs.

Assessing the role that services can play in attaining sustainable development goals is

complex. The operation of services sectors will impact on the SDGs through a mix of direct and indirect effects. The indirect channels are numerous, including not just the effect of services performance on growth and real incomes, but also a variety of spillover and interaction effects.

The impact of services' contribution to the achievement of the SDGs may vary according to sector and objective, with backbone services, such as transport, finance, telecommunications, and construction services, potentially making the largest contribution. Intuitively this makes sense, as the economies of LDCs, LICs, and other developing economies are, in many cases, constrained by a lack of key basic services which are critical to the functioning of other services sectors of key export and developmental interest such as tourism services and business services.

This is not to say that other non-backbone services sectors do not matter—they certainly do, but the functioning of many non-backbone services sectors is contingent on the ability of service producers to access the necessary services inputs in order to operate efficiently and productively. For example, the development of a competitive tourism sector, something of interest to many LDCs and LICs, requires, at a bare minimum, access to stable and reliable communications, transportation, and financial services, as well as access to non-backbone services such educational and health services.

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