The Economisation of Climate Change

How the G20, the OECD and the IMF Address Fossil Fuel Subsidies and Climate Finance

Jakob Skovgaard

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THE ECONOMISATION OF CLIMATE CHANGE

The effort to address climate change cuts across a wide range of non-environmental actors and policy areas, including international economic institutions such as the Group of 20 (G20), International Monetary Fund (IMF), and the Organisation for Economic Co-operation and Development (OECD). These institutions tend to address climate change not so much as an environmental issue, but as an economic one, a dynamic referred to as 'economisation'. Such economisation can have profound consequences for how environmental problems are addressed. This book explores how the G20, IMF and OECD have addressed climate finance and fossil fuel subsidies, what factors have shaped their specific approaches and the consequences of this economisation of climate change. Focusing on the international level, it is a valuable resource for graduate students, researchers and policymakers in the fields of politics, political economy and environmental policy. This title is also available as Open Access on Cambridge Core at doi.org/10.1017/9781108688048.

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For Liv and Franka

Contents

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Figures and Tables

Figure

Tables

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Preface

> Climate change is no longer an environmental issue but an issue of resource allocation. Therefore, it is a topic not for environment ministries but for finance ministries and their international institutions.
>
> – Senior official of Nordic finance ministry, February *2009*

Economic institutions addressing climate issues. This is not the most common topic in the climate politics literature, although its importance has been steadily growing over the past couple of decades. Yet, it is a topic which I have been watching from the sidelines since 2007, when I started working at the Danish Ministry of Finance. My job was in the division for international political cooperation. I was part of the team preparing the ill-fated 2009 Fifteenth Conference of the Parties to the United Nations Framework Conference on Climate Change (COP15) in Copenhagen. My work was not restricted to the COP preparations but covered all sorts of international climate issues of interest to a finance ministry, from the EU Emissions Trading System over climate finance to fossil fuel subsidies, the latter explicitly not being a topic for United Nations Framework Convention on Climate Change (UNFCCC) negotiations. The emphasis was less on saving expenditure (which nonetheless was an important objective too) but rather on promoting what was seen as economically rational solutions to climate change. Notably, my work also covered interaction with other economic institutions, both finance ministries in other countries and international economic institutions including the Group of 20 (G20), the Organisation for Economic Co-operation and Development (OECD) and the International Monetary Fund (IMF). It was at a meeting arranged by the Danish Ministry of Finance that a colleague from another Nordic country made the statement quoted at the beginning. The experience of being a finance ministry official ignited my interest in how economic institutions address climate issues as economic issues. Whereas the role of finance ministries has been covered elsewhere (Skovgaard, 2012, 2013, 2014, 2015, 2017a, 2017b), in this book the focus is on the role of international economic institutions. Here, the economisation of climate issues is

'purer' in the sense of not being tangled up with fiscal concerns, party politics, special interests and other factors salient in domestic politics.

My desire to approach climate politics from an academic angle led me to leave the Ministry of Finance for the Department of Political Science of Lund University in 2011. Here, I drew on the experiences in my research, especially the project 'International Economic Institutions and Domestic Actors in the Climate Regime Complex – the Cases of Climate Financing and Fossil Fuel Subsidies' (EconClim). The project lasted from 2013 to 2018 and was jointly funded by the Swedish Research Council (Vetenskapsrådet), the Bank of Sweden Tercentenary Foundation (Riksbankens Jubileumsfond) and the Swedish Research Council Formas (Forskningsrådet Formas). It allowed me to approach the theme of economic institutions and actors addressing climate issues from an academic angle. After the EconClim project was completed, final parts of the work on this book were undertaken in the context of the project 'Pathways to Breaking the Fossil Fuel Lock-In', funded by the Swedish Energy Agency.

While the book is indebted to only one main source of funding (the EconClim project), it is indebted to a vast group of people. Without them this book would not have been possible. I have had the invaluable benefit of working with a greatly inspiring and supportive group of people at the Department of Political Science, both within the Environmental Politics Research Group and outside of it. I am greatly indebted to Karin Bäckstrand (now at the University of Stockholm), who in the first place helped me get a postdoc at the Department, then helped me with the EconClim application and has continued to serve as an example. Among the current members of the Research Group, Fari Zelli deserves special recognition and thanks for contributing from start to end, from providing suggestions to the project proposal to commenting on book chapters in their near-final stage and for being a great colleague. Åsa Knaggård has been a continuous source of inspiration through numerous theoretical discussions and through commenting on book chapters. Roger Hildingsson has also been the source of inspiring discussions, especially regarding the relationship between economic and environmental objectives and policymaking. I would also like to thank my former colleague Annica Kronsell (now at the University of Gothenburg) for taking time to explain exactly why writing a monograph would be worth it. Also within the Environmental Politics Research Group, Johannes Stripple, Tobias Nielsen, Jacob Hasselbalch, Mark Cooper and Ina Möller have provided great academic inspiration and company.

Beyond those working on environmental politics, my research has also benefitted greatly from the fresh eyes of people such as Magdalena Bexell and Jens Bartelson, who have helped me understand how the research could be relevant to people from other parts of political science. I have also benefitted from having two highly

supportive heads of department, first Tomas Bergström, who at an early stage alerted me to the call from the three funders and continued to be extremely helpful. At the later stages of the process of writing this book, his successor Björn Badersten has provided crucial support for the final efforts and for my career in general. I am also very thankful to the administrative staff of the Department, especially Stefan Alenius, Kristina Gröndahl Nilsson and Åsa Hansson, for being highly organised in a world of academic chaos, and for being patient when my lack of organisation became too evident.

Far from all of the academic work that has gone into this book has taken place at Lund University. I have had the great pleasure of two visiting fellowships. First, in the autumn of 2013 I stayed at the Institute for Environmental Studies at Vrije Universiteit Amsterdam, where I benefitted from the hospitality, academic guidance and new perspectives of people like Philipp Pattberg, Dave Huitema and Oscar Widerberg. I am grateful to Frank Biermann for hosting me at the Institute and for giving me sage advice that has proven highly useful over the years. The spring of 2014 was spent at the Climate and Development Lab at Brown University, which provided me all sorts of inspiration for research and teaching. Again, I am grateful to Timmons Roberts for hosting me and for being a source of continuous collaboration and inspiration, including when it comes to commenting on chapters for this book. At Brown, I was fortunate to share an office with fellow newcomer Guy Edwards and could benefit from his company and that of the other members of the Lab. Since even academic life is not just about the time spent in offices, libraries and conference rooms, the experience of living in Amsterdam and Providence and of interacting with the people I met there is something that is reflected not only in this book but also in my memory.

Beyond those two stays, the research that has gone into this book has also benefitted from conferences, workshops and chats over coffee, beer or Skype. I cannot thank each and every individual who has been helpful or motivating in this respect. However, the highly useful comments of people like Sebastian Oberthür, Thijs Van de Graaf, Mark Buntaine and Matthew Paterson deserve special mentioning.

While this book has only one name on the cover, collaborating with others has been crucial in shaping the thinking that went into it. Without these people, this book would probably not have come into being and would definitely have looked very different. When it comes to climate finance, I have benefitted greatly from collaborating particularly with Jonathan Pickering, Carola Klöck (née Betzold), Timmons Roberts (again), Jackie Gallant and Lauri Peterson on output including a workshop, special issue and articles. Regarding fossil fuel subsidies, I have benefitted greatly from collaborating with Harro van Asselt on a workshop, edited

volume and articles and book chapters. Harro has also been a continuous source of inspiration, theoretically, conceptually and empirically with regard to fossil fuel subsidies and in terms of how to work with others in a pleasant, respectful and well-organised way. He also commented on the fossil fuel section of this book. I have also had the pleasure of working with a range of highly skilled research assistants in the context of this research, including Moa Forstop, Jasmiini Pylkkänen, Jana Canavan, Klara Fredriksson and Lise Lerche Paulsen. Benni Yusriza also deserves thanks for taking part in my collection of Indonesian data. Besides those already mentioned, I would also like to thank Romain Weikmans and Matthias Kranke for providing highly insightful feedback on chapters in this book.

Conducting research based on elite interviews among international institutions and diverse countries is not an easy task. Essentially such interviews involve asking highly busy people to give up a slice of their time to help you with your research, and for this I am extremely thankful. Most of them preferred to remain anonymous. However, people such as Shruti Sharma, Ivetta Gerasimchuk and Lucky Lontoh of the International Institute for Sustainable Development have been greatly supportive in helping me locate such people and provide me with background for my research.

When it comes to the later stages of working on this book, Matt Lloyd and Sarah Lambert at Cambridge University Press have been great in guiding me through the intricacies of writing and publishing a monograph. Louise Ratford has been highly helpful in turning my manuscript into an acceptable level of English.

Last but not least, I would like to dedicate this book to two very special people. The first is my wife Liv, who has been highly supportive of this endeavour even at times when it took up large shares of my time, and has provided invaluable feedback, not least in the initial stages of developing economisation as a concept. Without her love, support and intellectual rigour, this book would not have been possible. The second is our daughter Franka, who was born in Amsterdam when I was a guest researcher there. The consequences (or lack thereof) of the dynamics described in this book will play out in her lifetime.

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Abbreviations

APEC	Asia-Pacific Economic Cooperation
CBDR	Common but Differentiated Responsibilities and Respective Capabilities
CDM	Clean Development Mechanism
CO_2	carbon dioxide
COP	Conference of the Parties to the United Nations Framework Convention on Climate Change
CPI	Climate Policy Initiative
DAC	Development Assistance Committee
DKK	Danish kroner
ESMAP	Energy Sector Management Assistance Program
EU	European Union
G7	Group of 7
G8	Group of 8
G20	Group of 20
GBP	British pound
GCF	Green Climate Fund
GDP	gross domestic product
GEF	Global Environment Facility
GSI	Global Subsidies Initiative
IDR	Indonesian rupiah
IEA	International Energy Agency
IISD	International Institute for Sustainable Development
IMF	International Monetary Fund
INDC	Intended Nationally Determined Contribution
INR	Indian rupee
IO	International Organisation
LPG	liquefied petroleum gas

MDB	multilateral development bank
NGO	non-governmental organisation
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
OPEC	Organization of Petroleum Exporting Countries
SCF	Standing Committee on Finance
SDG	Sustainable Development Goal
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
VAT	value-added tax
WTO	World Trade Organization

Part I

Introduction

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1

Introduction

The Economisation of Climate Change and Why It Matters in the Case of International Economic Institutions

The year 2019 saw the emergence of an unlikely duo consisting of the managing director of the IMF Christine Lagarde[1] and broadcaster and environmentalist Sir David Attenborough. They discussed the relationship between nature and the economy in a panel session, a podcast and an article (Attenborough and Lagarde, 2019a, 2019b). In the latter, they stated 'We must treat the natural world as we would the economic world . . . This is something economists can appreciate – the importance of minimizing waste, taking advantage of efficiencies, and accurately reflecting costs in prices, including costs imposed on our entire shared resource, the environment'. Elsewhere the same year, Lagarde also stated the importance of nature and of the existential threat of climate change and called for carbon pricing and fossil fuel subsidy reform as solutions to the climate crisis (Lagarde and Gaspar, 2019). This was notable coming from the managing director of an international institution focused on economic issues and criticised for ignoring other issues than economic growth and stability. The statement highlighted a wider trend of climate change being addressed within institutions concerned with economic issues. Other cases in point are the increasing attention that other economic institutions such as the G20 and the OECD have paid to issues including fossil fuel subsidy reform and climate finance.

This book focuses on three international economic institutions that have been important in addressing climate change: the G20, the OECD and the IMF. Economic institutions are crucial for targeting climate change – and sustainability more broadly speaking – because of their power and central role in the decisions that shape how societies mitigate and adapt to climate change. As David Victor has pointed out, the key decisions that determine future emissions, for example, regarding transportation, growth and the composition of the economy are mainly reached outside the realm of environmental policymaking (Victor, 2011). Economic institutions – be they international or domestic – are,

[1] Lagarde was managing director of the IMF until November 2019.

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on the other hand, central to these decisions but also involved in environmental policymaking. An important aspect of the central role of economic institutions is their ability to address 'anti-climate policies' such as fossil fuel subsidies that increase emissions and generally belong outside the realm of environmental policy (on anti-climate policies, see Compston and Bailey, 2013; specifically on fossil fuel subsidies, see Skovgaard and van Asselt, 2019). At the international level, economic governance is together with security governance the most powerful policy realm, and international institutions within this realm are as important to environmental issues as environmental institutions (Hurrell, 2007). This is partly because of the power of the international economic institutions (Pop-Eleches, 2009), but also because economic and environmental policymaking are increasingly intertwined (witness the debates about green recoveries after the Corona pandemic, Barbier, 2020). All things considered, it is difficult to imagine a transition to a low-carbon, climate-resilient world in which the international economic institutions maintain their current power and central roles *and* do not give serious consideration to climate change. In other words, they are either part of the solution (if they take climate change seriously) or they are part of the problem (if they do not). Yet, the role of these institutions cannot be reduced solely to a question of whether they promote or hinder climate action; it must also include *how* they address climate issues.

How these institutions address climate issues involves whether and in what way they treat them as economic issues. While economic objectives of maximising economic welfare have often been perceived as competing with environmental protection (Hoffman and Ventresca, 1999; Newell, 2019), and economic actors as being sceptical of environmental policy, addressing climate change and related (sub)issues as economic issues induces economic actors to take it seriously. The phenomenon of economic institutions addressing climate change issues as economic issues is particularly pronounced in the cases of two policy issues that – even before the involvement of the economic institutions – have considerable economic dimensions: fossil fuel subsidies and (international) climate finance. Fossil fuel subsidies consist of subsidies for the production and consumption of fossil fuels (oil, gas and coal). According to relatively conservative estimates, they amount to USD 300–600 billion annually or twice the amount provided as renewable energy subsidies (IEA, 2016; OECD and IEA, 2019) and reforming them could deliver a quarter of the emissions reductions pledged under the Paris Agreement (Jewell et al., 2018). Climate finance refers, in the context of this book, to financial flows to developing countries 'whose expected effect is to reduce net greenhouse gas emissions and/or to enhance resilience to the impacts of climate variability and the projected climate change' (Gupta et al., 2014). Developed countries have

pledged to *mobilise* USD 100 billion in climate finance annually by 2020 (UNFCCC, 2009a), and the delivery of climate finance is considered crucial for a global response to climate change (Pickering et al., 2017). The definitions of both issues are essentially contested, and these contestations constitute important aspects of how they have been addressed as more or less economic issues (see Chapters 4 and 9).

This book claims that it is useful to understand the three institutions addressing fossil fuel subsidies and climate finance as instances of the 'economisation' of (environmental) problems: being addressed by economic actors *and* framed as economic problems. The book uses the concept of economisation to understand the three institutions' respective *output* regarding fossil fuel subsidies and climate finance respectively, as well as *the factors that shaped this output* and *the consequences of the output* at the international and domestic levels. (see Section 1.1.2 for the discussion of how this definition of economisation relates to other uses of the term, e.g. Çalışkan and Callon, 2009, 2010). Economisation entails framing an issue in a particular way (as an economic issue) as well as – to paraphrase Michael Zürn (2014) – transport it into the field of economics, thus enabling particular (economic) actors to address the issue within their own routines. In terms of temporality, the framing does not necessarily precede economic actors addressing the issue.

I argue that such economisation may have profound consequences for how environmental problems are addressed. The existing literature has found that the roles of economic institutions have mainly been negative in terms of limiting effective action and downplaying justice objectives (Bernstein, 2001; Schalatek, 2012; Storm, 2017; see also Section 1.3). Yet, applying the concept of economisation to the institutions' handling of the two issues provides a different set of insights into the consequences as well as causes of economisation. In this book, economisation is used as a lens to understand the output of the three institutions (i.e. their way of addressing the issues).

One example of economisation is the manner in which the IMF treated the issue of fossil fuel subsidies. Rather than just adopting the default approach (OECD, 2018b; Skovgaard, 2017a) and focusing on direct government support aimed at production (e.g. mining, oil fields) and consumption (e.g. lowering the price of petrol and diesel), the IMF argued that any fossil fuel with a price that did not fully include its externalities (climate change, local air pollution) was in fact subsidised (Clements et al., 2013; Coady et al., 2015, 2019). This definition not only led to an estimate of global fossil fuel subsidies of USD 4,700 trillion in 2015 (Coady et al., 2019); compared to the International Energy Agency estimate of USD 325 billion in 2015 (IEA, 2016), but it also led to the conclusion that virtually all countries in

the world subsidise fossil fuels. This conclusion made the IMF the unlikely hero of environmental non-governmental organisations (NGOs) around the world (Thunberg et al., 2020).

Another example of economisation is how the G20 finance ministers and central bank governors in the run-up to the fifteenth Conference of the Parties to the United Nations Framework Convention on Climate Change (COP15) in 2009 reached a preliminary compromise on financial support from developed countries for climate mitigation and adaptation measures in developing countries (so-called climate finance). Constituting a settlement on the target and the conditions attached to it, the G20 compromise established the basis for the Copenhagen Accord's[2] target of USD 100 billion for such finance (Kim and Chung, 2012). The agreement was made possible by the G20 bringing representatives of the powerful finance ministries together to develop a common understanding of climate finance based on their shared economic worldview.

A third example is how the OECD has addressed climate finance, including remarks by OECD Secretary-General Angel Gurría to the G7 finance ministers and central bank governors, in which he highlighted the annual investment gap in climate infrastructure amounting to USD 3 trillion, as well as the OECD's efforts to address this gap by inter alia promoting green budgeting (Gurría, 2019).

These examples underscore how economisation is becoming more and more politically and academically salient as climate policies involve economic actors, institutions and policy arenas to a greater degree. Economisation is also increasingly politically relevant, as climate politics globally is entering a stage where the radical transformation of societies is necessary to avoid a global climate catastrophe.

Beyond studying economisation itself, it is also important to study the causes and consequences of economisation. Studying the *causes* provides knowledge about the factors that stimulate economic institutions to address climate issues and that shape economisation (which does not provide a fixed set of policy responses, as discussed in Section 1.1). It describes what is needed to promote, hinder and shape economisation. Studying the *consequences* of economisation contributes crucial knowledge about the actual effects of economisation and consequently to what degree it is worth pursuing.

Studying the three institutions addressing fossil fuel subsidy reform and climate finance shows they can take climate issues seriously, mainly as economic instruments for addressing an environmental problem framed in economic terms. Furthermore, institutional worldview, entrepreneurs within the institutions and interaction with other institutions induced the institutions to address the issues

[2] Although not formally adopted by the COP, the Copenhagen Accord constitutes the output of COP15.

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and shaped how they addressed them, and the autonomy of the IMF and OECD bureaucracies was a scope condition for the institutional worldview and the entrepreneurs. The consequences of these economisations had a more discernible effect on the international level than on the domestic, inter alia in influencing how other institutions from the Asia-Pacific Economic Cooperation (APEC) to the United Nations Framework Convention on Climate Change (UNFCCC) addressed fossil fuel subsidies and climate finance.

This chapter proceeds with defining key concepts, first, the concept of economisation and second, the distinction between international institutions and organisations. Subsequently, it outlines the relevant literature on climate governance and international institutions/organisations (particularly economic institutions) and identifies the contribution of the book to these bodies of literature. Next, the chapter explains why it makes sense to select the two cases of climate finance and fossil fuel subsidies, which are both characterised by economic institution involvement, while the relationship between their impact on state budgets and on the environment pulls in opposite directions. The section proceeds with an account of why the selection of the G20, OECD and IMF is academically relevant. The following section outlines the use of data sources and methods in the analysis. The last section outlines the remainder of the book.

1.1 The Concept of Economisation

1.1.1 Dimensions of Economisation

Economisation as defined here entails both an issue that is addressed by economic actors (including *institutions* in the sense discussed in Section 1.2) and framed as an economic issue. I refer to the former as the first aspect of economisation and the latter as the second aspect, although this does not imply that the first aspect necessarily takes place before the second. Framing climate change in (mainstream) economic terms usually centres on defining the policy problem as an externality. An externality is the cost or benefit of an activity undertaken by one actor that affects another actor not involved in the activity, thus creating a suboptimal situation, since the cost of the activity does not reflect the true costs or benefits to society (Pigou, 1932). Since the concept of an externality belongs to the wider class of concepts of 'market failures', climate change has been referred to as the 'world's biggest market failure' (Stern, 2006). Consequently, the understanding of climate change as a market failure or an externality (in this book the term externality will be used) has been influential among economic institutions, including finance ministries (Skovgaard, 2012, 2017b). Such a framing has implications for the policy solutions that are proposed (Schön and Rein, 1994). The framing consists of characterising

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a given situation or policy issue as well as defining what one ought to do in light of this characterisation, thus having a cognitive as well as a normative dimension (see Chapter 2 for a discussion of the distinction between cognitive and normative ideas and frames). Frames, in this case economic frames, are grounded in the institutions and actors that sponsor them (Schön and Rein, 1994). Hence, economic actors will not only be more likely to address issues framed in an economic way, but once they have adopted such a framing, they may promote this frame and address the issue in ways that differ from and may conflict with other ways of addressing it. Importantly, economisation entails economic actors defining an issue as economic and hence belonging to their portfolio, unlike issues they may address although they still recognise the issues as belonging to the portfolios of other actors. As an example, finance ministries are constantly involved in budgetary allocations in policy areas belonging to the portfolios of other ministries, while never disputing that these policy areas belong to the other ministries.

In mainstream economics, pricing the externality of climate change in the shape of carbon taxes and emissions trading is defined as the logical solution (Grubb et al., 2014; Rabe, 2018; Stern et al., 2013), while other economic instruments (fossil fuel subsidy reform, redirecting investment, market-based instruments generally speaking) are treated as second-best solutions when carbon pricing is not possible. Inherent to the framing is not only a way of defining the problem and how it should be addressed, but also a particular way of attributing value to outcomes, namely in monetary terms (Pearce, 1993). Costs and benefits are all measured in terms of economic impact, including so-called 'non-market' losses such as the loss of human lives and species becoming extinct (for criticisms of this approach, see Getzner et al., 2004; Spash, 2007; Storm, 2017). Such measurements allow for comparisons – in monetary terms – between the consequences of climate change and of different policy options put into place to mitigate it. The costs of climate change are also referred to as the social cost of carbon and measured in the costs to society of one ton of CO_2.

In terms of objectives, (mainstream) environmental economics serves as an expression of neoclassical economics (and more fundamentally neoliberal ideology) that seeks to maximise economic growth (Katz-Rosene and Paterson, 2018). Environmental protection is important because it avoids the (long-term and societal) costs to economic growth resulting from environmental degradation, even if such protection may cause short-term economic loss to those subject to the protection measures (Nordhaus, 2008, 2019; Solow, 1974). Importantly, according to this approach, it is undesirable to adopt environmental protection if the (present value) costs of the protection exceeds the (present value) benefits of avoiding environmental degradation. Within mainstream environmental economics, much debate

has hinged on how much the future costs of climate change should be discounted, a high discount rate leading to a lower social cost of carbon and hence recommendations of lower carbon prices (see the discussion among Nordhaus [2007], Weitzman [2007] and Stern [2006] for an example of such a debate regarding discount rates and their implications for current action).

Economisation can take place at the international or domestic level. Economisation at the domestic level involves finance ministries, central banks, economic think tanks and university departments and other actors addressing economic policy with the aim of maximising economic welfare. At the international level, it involves economic institutions such as the ones involved here as well as individuals (e.g. Nobel Memorial Prize laureates in Economics). Importantly, private companies and associations of such companies are not seen as economic institutions in this respect, since their objective is to maximise their profits rather than the economic welfare of society (national or global). Importantly, the focus here is on economic *policy* broadly speaking, rather than on all economic activities. Thus, this book focuses on actors, which are political in nature and address economic issues, rather than on market actors and other actors engaged in economic activity in order to obtain economic gains.

Two qualifications are important to bear in mind. First, the story of economisation is not necessarily a story of paradigmatic change to the output of economic institutions and actors. While the economisation of climate change may have increased in scope and political importance, how far it has become central to the activities of economic institutions and actors remains an open question.

Second and on a more complex note, since the discipline of economics is not monolithic in its treatment of environmental issues, economisation does not entail one distinct way of framing climate change. Yet, including heterodox economic approaches to environmental issues such as ecological economics, evolutionary economics and limits to growth approaches (see e.g. Berr, 2017; Meadows et al., 1972; Mulder and Van Den Bergh, 2001) under the concept of economisation would broaden it to a degree that would severely reduce its usefulness and academic relevance. Rather, the focus here is on mainstream economic approaches to environmental problems, since they – despite internal differences – share central tenets (including a focus on prices and equilibria) which have dominated the discipline of economics and economic policymaking. Moreover, most of the key tenets of mainstream economics are unique to economics (e.g. the focus on markets and prices), whereas much of the heterodox environmental economics share key tenets (e.g. power inequalities or ecological boundaries) with other disciplines. Specifically, I define mainstream approaches as being distinguished by an emphasis

on efficiency (understood as maximum utility) while leaving questions of equity to other disciplines (Storm, 2017).

While it is difficult to exactly delineate mainstream economics, the core of mainstream economics has for the last century consisted of neoclassical economics and the theoretical strands and schools drawing on it. Neoclassical economics is broadly understood as economic approaches based on markets and equilibria between opposing forces (e.g. supply and demand as reflected in the market price) being central concepts and on methodological individualism (Vroey and Pensieroso, 2016). A range of (mainstream) economic strands have drawn on neoclassical approaches, including the so-called neoclassical synthesis, monetarism, classical economics, new Keynesian and the so-called 'New Synthesis', in some cases without being considered as belonging to the neoclassical economics approaches (Hibben, 2016; Vroey and Pensieroso, 2016). These approaches can be placed along a continuum based on how they conceive the role of the state vis-à-vis the market, with neoclassical approaches arguing for minimal state intervention and Keynesian approaches for direct state interventions in the market (Storm, 2017). I include all these approaches under the term of economisation, while arguing that it is important to identify the degree to which the economisation draws on purely neoclassical approaches or more Keynesian approaches. Given the predominant role of neoclassical economics within the discipline of economics, I argue neoclassical economisation is a more ideal-typical kind of economisation.

The theoretical fragmentation characterising economics on a general theoretical level is mirrored on the level of mainstream environmental economics (and even more so if one moves beyond the mainstream). Mainstream environmental economics includes differing approaches (Stern et al., 2013), most importantly regarding the role of government. While adherents of Arthur C. Pigou (1932) argue in favour of a carbon tax enforced by government and imposing the full costs of climate change on the polluter, adherents of Ronald A. Coase (1960) argue in favour of distributing tradable rights to pollute. Thus, Pigouvian carbon markets are based on a greater belief in government regulation than Coasean emissions trading systems, with Coase's criticism of Pigou centred on the transaction costs of government intervention. This is not surprising, considering that Pigou was inspired inter alia by the Keynesian efforts to address market failures, and Coase was a member of the Chicago School (Katz-Rosene and Paterson, 2018). Yet, both approaches share a significant number of premises, including the key emphasis on addressing externalities, the objective of maximising economic welfare in society (Pigou is considered to be the 'father of welfare economics') and the belief in leaving the key decisions to the market (Aslanbeigui and Medema, 1998). Hence, Pigou and Pigouvian environmental economics are best understood as neoclassical

economists, although envisioning a slightly larger role for the state than Coase and his adherents.

Importantly, the belief in leaving key decisions to the market sets Pigou and Coase's carbon pricing approaches apart from so-called regulatory approaches which impose non-tradable obligations on companies or subsidise green technologies. Hence regulatory approaches leave the decisions of how to reduce pollution or who should do it to the government rather than the market, an approach at odds with neoclassical economics but inspired by traditional Keynesianism (Lauber and Schenner, 2011). Regulatory approaches in the shape of Keynesian (or Schumpeterian) green growth or green deal policies aimed at mitigating climate change and stimulating growth have become increasingly popular following the 2008–9 economic and financial crisis (Meckling and Allan, 2020; Skovgaard, 2013). While regulatory and green growth policies are not necessarily identical (it is possible to promote regulatory policies without adhering to green growth and vice versa), they share a belief in industrial policy in which a range of decisions are left to policymakers rather than the market, and that such policies can enhance growth (Jacobs, 2012). Yet, promotion of regulatory approaches will be treated as instances of economisation only if they involve other economic framings – such as a Keynesian focus on green growth. This is because while regulatory approaches may be promoted for economic (mainly Keynesian) reasons, they may also be promoted for other reasons (e.g. to address an environmental problem for non-economic reasons, as discussed later in this section).

In practice, Pigouvian carbon taxes have generally been promoted by economic actors together with Coasean emissions trading (Katz-Rosene and Paterson, 2018), increasingly under the heading of carbon pricing (Skovgaard and Canavan, 2020). Generally speaking, the mainstream approaches to climate change and climate policy studied here always favour policies that work through providing economic incentives and leaving as many decisions as possible to the market (Grubb et al., 2014, chapters 6–8). For instance, Nordhaus (2008) argues that for a problem such as climate change characterised by non-linear costs and linear benefits, taxes are preferable in economic terms, while the trading of allowances is preferable as regards linear costs and non-linear benefits. Yet, given the political obstacles to carbon taxes, he argues that a hybrid system of emissions trading with auctioning may be the best solution when considering both theoretical economic and concrete political factors (Nordhaus, 2008).

Another, increasingly important, strand of mainstream economics addressing environmental issues consists of the literature addressing green, climate and sustainable private finance and investment (Barnett et al., 2020; Campiglio et al., 2018). This literature focuses less on the nature of climate change as an environmental problem and more on directing finance and investment to ensure the transition to a climate-friendly

low-carbon society, especially the role of risk and uncertainty in affecting such investments. Such (perceived and real) risks are relevant both to investment in green technologies and in fossil fuels (thus concerning mitigation) and to investments that may be affected by climate change and other environmental degradation (Campiglio et al., 2018). This literature is rooted in the study of finance and institutional economics rather than environmental economics and economic theory (Grubb et al., 2014; Hong et al., 2020). The focus is on overcoming barriers to climate friendly and sustainable investment, and while carbon pricing is defined as an important factor in this, other instruments such as green bonds, certificates and carbon disclosure requirements may be as important or more so.

Beyond economisation in the shape of framing climate issues in terms of environmental economics and other subdisciplines of mainstream economics, there are also other, less ideal-typical kinds of economisation based on other economic but non-academic framings. For instance, it is possible to focus on the fiscal consequences of fossil fuel subsidies or climate finance and define them as belonging to the portfolio of economic institutions (Skovgaard, 2012, 2015, 2017a, 2017b) without drawing on environmental economics. Thus, these less ideal-typical cases of economisation define a climate issue as belonging to the portfolios of economic institutions because of the economic features ascribed to it, but are not necessarily predicated on the understanding of environmental problems constituting economic problems, and do not necessarily take environmental damage into concern. Beyond the economic framings, climate change may also be framed in purely non-economic terms, that is, without defining the damage caused in economic terms, but rather in terms of impact on social justice or on the intrinsic value of environmental diversity (Clapp and Dauvergne, 2011).

1.1.2 Economisation and Other 'Ations': A Question of Framing and the Actors Involved

The emphasis on agency in the shape of economic actors and institutions addressing the issue, rather than solely on how the issue is addressed, distinguishes economisation from previous uses of the term economisation (see e.g. Bina, 2013; Çalışkan and Callon, 2009, 2010; Schimank and Volkmann, 2012; Wenzlaff, 2019). These previous studies of economisation have focused on processes that constitute particular 'behaviours, organizations, institutions and, more generally, the objects in a particular society . . . as "economic"' (Çalışkan and Callon, 2009). Scholars studying economisation in this sense mainly come from sociology, and have drawn on the description of how economic logics colonise non-economic spheres of social life going back to Karl Marx and Manfred Weber (Jessop, 2012; Wenzlaff, 2019). In spite of the historical roots of the concept, it is often used to

describe contemporary processes tied to the spread of neoliberalism (Bina, 2013; Mavelli, 2018). Furthermore, the concept is often used in terms almost synonymous with marketisation, in the sense of the adoption of market logics within non-market social spheres. Marketisation – a concept originating in the political economy and business administration literature – takes place inter alia through creating markets for pollution and ecosystem services (McCormack, 2017). While economisation (in the sense used in this book) may lead to marketisation, it differs from marketisation in that it also encompasses ways of addressing issues that do not involve the creation of markets, for example, through taxes, investment, subsidies, and so forth.

Studies on economisation have focused on the economisation of fields or spheres such as education, health and science (Schimank and Volkmann, 2012), with relatively few studies using the term economisation when studying the employment of economic logics within the spheres of energy or environmental protection (but see Alvial-Palavicino and Ureta, 2017; Bina, 2013; Wilshusen and MacDonald, 2017).

Economisation in this, more purely discursive and structural, understanding describes developments towards treating issues in economic terms, a treatment that in the case of environmental politics has also been described in terms of the paradigms or norm complexes of 'market liberalism' (Clapp and Dauvergne, 2011) and 'liberal environmentalism' (Bernstein, 2001). Both market liberalism and liberal environmentalism describe ways of reconciling economic and environmental objectives in a way that is predicated on economic core tenets (see also Newell, 2012; Newell and Paterson, 2010), similarly to the economisation of climate change. Yet, they focus mainly on such reconciliation within environmental institutions and actors (e.g. the 1992 Earth Summit; see Bernstein, 2001), unlike economisation in the sense used here, in which the involvement of economic actors and institutions is inherent to the concept of economisation. Furthermore, both market liberalism and liberal environmentalism are paradigms or norm complexes, while economisation describes a dynamic including the involvement of a particular set of actors and is more specific in terms of relying on approaches from (environmental) economics. Thus, there are a range of studies of how sustainable development and environmental protection have been addressed in economic ways, which have focused on the discursive and framing-oriented aspects of economisation, and not treated the involvement of economic actors as an equally important aspect of economisation.

The present approach to economisation also differs from the concepts of politicisation and depoliticisation, which focus on the processes and strategies moving issues into the field of politics (Zürn, 2014) or out of it (Burnham, 2001; Hay, 2007). Thus, politicisation and depoliticisation do not include particular framings of the issue in question (e.g. regarding its nature, how it should be addressed) beyond the

basic question of whether it constitutes a political issue or not. The political field is characterised by public communication about and contestation over collectively binding decisions concerning the common good (Zürn, 2014). Conversely, depoliticisation consists of moving issues away from such public contestation and communication, for example, by moving them from parliamentary or government bodies to technocratic ones, as has been the case with central banks which were freed from political control in the 1990s (Marcussen, 2009). While the depoliticisation literature has its roots in political economy and generally argues that we have witnessed a depoliticisation of (especially economic) policymaking in the past three decades, the politicisation literature has inter alia argued that we are witnessing an increasing politicisation of international institutions (Zürn, 2014). Arguably, economisation may constitute a type of (neoliberal) depoliticisation provided that the issue in question was previously politicised, but not framed as an economic issue (Madra and Adaman, 2014), as Romain Felli (2015) has argued emissions trading has done to environmental policymaking. However, moving an issue from one kind of depoliticised policymaking into the economic field does not amount to depoliticisation.

Economisation in the sense used in this book shares fewer similarities with (de) politicisation and economisation in a discursive sense than with concepts such as climatisation and securitisation, which all include framing issues in particular ways as well as them being addressed by particular actors or policy spheres. The focus on particular actors means there is a stronger emphasis on agency than in the purely discursive versions of economisation. Climatisation, as defined by Aykut and Castro (2017), consists of 'attempts to frame questions ... as issues of climate policy, and attempts to enable the climate regime to tackle those questions within its own organisational routines'. The opposite of climatisation is *declimatisation,* or the 'counter-strategies and institutional dynamics that conspire to maintain existing separations between climate governance and fossil fuel regulation' (Aykut and Castro, 2017). While economisation focuses on treating climate change as an economic issue and climatisation focuses on treating issues such as fossil fuel use as a climate issue, they share an attention on framing as well as on the procedures and policymaking spheres of actors. Climatisation and its framing of climate change as a global environmental problem shares similarities with economisation and its framing of climate change as a global externality, but differs in that the former leads to policy instruments *mitigating* rather than *pricing* emissions as their ultimate end, and particularly to addressing climate change within a *distinct climate regime* rather than economic institutions.

Securitisation, or treating an issue as an existential security threat (Buzan et al., 1998), also focuses on the framing of the issue as well as the consequences of the

framing in terms of policymaking. Securitisation entails that an issue constitutes a threat to the existence of an entity, and hence has to be addressed beyond the normal political logic of weighing priorities against each other (Buzan et al., 1998).[3] Furthermore, the concept of securitisation differs from economisation in that it focuses on the discursive elements of an issue being defined as a threat through a speech act and the subsequent acceptance of the claim by an audience, unlike the concept of economisation, which focuses on framing and the issue being brought into a policy field. While the possibilities for securitising climate change have earlier been the subject of speculation, especially in connection with the 2007 discussion of climate change in the UN Security Council in the past ten years the economic framing of climate change have been far more prominent (see Aykut, 2016; Katz-Rosene and Paterson, 2018).

Finally, financialisation refers to a development in which financial motives, markets, actors and institutions play an increasing role in the operation of domestic and international economies (Epstein, 2005). This process differs from economisation as described in this book in that it portrays a process within the economic sphere rather than within non-economic spheres.

To summarise, what I refer to as the first aspect of economisation involves moving an issue into the economic field, and thus allowing it to be addressed by institutions and actors dealing with economic policy issues at both the domestic and international levels. Hence, economic institutions treat climate change as an issue that belongs to their portfolio because of the economic features ascribed to it, rather than belonging to the portfolio of other institutions although it is still relevant to them because it also affects economic objectives. These economic institutions are characterised not only by their economic worldview rooted in mainstream economics (Chwieroth, 2008; Kingdon, 2003; Wildavsky, 1986; Woods, 2006) but also by their relative power compared to domestic (e.g. environment ministries) and international environmental institutions (e.g. the UNFCCC). Hence, economisation in terms of the involvement of economic institutions has significant transformational potential. Besides involving a preference for economic policy instruments as well as institutions more powerful than environmental ones, the activities of economic institutions cut across a wider range of policy areas than environmental policymaking. This is important, as action on climate change that is not siloed but involves the integration of climate policy objectives into wider policymaking can increase policy impact (Adelle and Russel, 2013; Jordan and Lenschow, 2010; Nilsson and Pallemaerts, 2009; Nilsson et al., 2012).

On the whole, the outcomes of economisation are not pregiven. Besides the fact outlined in this section that the economic framings of climate change may differ, the

[3] This 'normal, political' logic share similarities with politicisation as discussed in the preceding text.

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economic institutions also differ in terms of their worldview, relations with other actors and the role of individual entrepreneurs in the institutions studied (see also Chapter 2). These factors may shape how they frame climate change issues as economic problems. For instance, their worldview may influence the economic framing of climate change the institution adopts. Furthermore, different issues may be economised in differing ways, depending inter alia on their characteristics (particularly economic consequences). For instance, fossil fuel subsidy reform (which has a positive impact on fiscal balances) may be addressed in a different way than climate finance (which has a negative fiscal impact on the countries providing the finance), as discussed in Section 1.5. Rather, it is important to explore how the important dynamic of economisation unfolds in practice, including the causes and consequences of this dynamic.

1.2 On International Institutions and Organisations

Both 'international institutions' and 'International Organisations' (IOs) have long been key concepts in the literature on international relations, and are often used in ways that overlap (Barkin, 2013; Martin and Simmons, 2012). Robert Keohane (1989, p. 3) defined international institutions as 'persistent and connected sets of rules (formal and informal) that prescribe behaviour, constrain activities and shape expectations', and IOs as constituting one subset of these institutions. The three institutions studied here are not only formal institutions, but they also – drawing on Lisa L. Martin and Beth A. Simmons (2012) – belong to the subset of formal institutions that are entities rather than rules.[4] More precisely, Martin and Simmons (2012) define the formal entities as associations, mainly of states, with membership criteria that take positions in the name of their membership and thus constitute 'corporate actors' (2012). Yet, the IMF and the OECD are also IOs in the commonly used sense of being bureaucracies. For instance, Tallberg et al., (2016) define IOs as 'intergovernmental, multilateral and bureaucratic organisational structures established to further co-operation among states'. Thus, international bureaucracies constitute a necessary characteristic of an IO, and consequently the G20 is not an IO (for the argument that they do, see Rittberger et al., 2012; Roger, 2020).

I argue that while the question of whether an institution has a rotating secretariat[5] or a permanent international bureaucracy constitutes an important variable characterising that institution, it is not sufficiently important to rule out a comparison between the G20 and the other institutions. Rather, I argue that it makes sense to treat the international bureaucracies as actors within the institution; the concept of

[4] On a similar but more general note, North (1990) defined organizations as 'groups of individuals bound by some common purpose to achieve objectives', and institutions as 'underlying rules of the game'.
[5] The G20 secretariat rotates between the member states holding the Presidency.

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institution also including the ideational framework inherent to the institution as well as the member states of the institution (Biermann et al., 2009b). More specifically, this book will define the institutions as consisting of the decision-making organisational structures involving member state representatives and, in some cases, international bureaucracies, as well as the worldviews institutionalised (to varying degrees) within these structures. Thus, the role of the bureaucracies of the OECD and the IMF constitute important factors to explore when explaining the output of the three institutions (see Chapter 2).

Importantly, the book focuses on intergovernmental institutions, not private or hybrid institutions with non-state members from business or civil society. A third related concept, international regimes, are often defined as a subset of international institutions (Keohane, 1989), more specifically as 'set of implicit or explicit principles, norms, rules and decision-making procedures around which actors' expectations converge in a given area of international relations' (Krasner, 1983, p. 186). Here, the term regime will be used to refer to such sets of principles, norms, rules and decision-making procedures centred on specific multilateral agreements, such as the UNFCCC, which constitutes the core of the United Nations climate regime. Given the overlapping use of the terms institutions, regimes and IOs, and the close relationship between the empirical and theoretical inquiries into the three concepts, I draw on the literature on all three concepts.

1.3 Standing on the Shoulders of Giants: The Literature This Book Builds Upon

1.3.1 Global Climate Governance

The present volume is indebted to a range of different literatures. Starting with the broadest bodies of literature, the literature on global climate governance (Bernstein and Hoffmann, 2019; Biermann and Kim, 2020; Jordan et al., 2018; Keohane and Victor, 2016) provides important context for this book, namely studying how the three institutions have addressed climate issues and thus been part of global climate governance. As mentioned at the beginning of this chapter, David Victor (2011) has pointed out that most of the decisions affecting the climate are made outside the environmental policymaking domain, which is detrimental to the response to climate change. This book addresses this problematique by exploring it at the international level, where it plays out without the constraints of domestic politics and has potentially far-reaching consequences for a range of countries. In doing so, it also draws on the literature on the institutional complexity or polycentricity of global climate governance (for institutional complexity see Biermann et al., 2009a; Keohane and Victor, 2011; for polycentricity see Jordan et al., 2018; Ostrom, 2010). This literature

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has described the global governance of climate change in terms of a range of institutions addressing climate change while interacting in various ways. Although the UNFCCC occupies a central place within this complex, institutions such as the World Trade Organization, the Montreal Protocol, hybrid and non-state initiatives like the Forestry Stewardship Council also constitute elements of the system. Central to this literature is the notion that the role of individual institutions cannot be understood in isolation, but that studying their roles includes studying the effect of other institutions on them as well as their effect on other institutions. This book addresses an aspect of such complexity by studying three institutions that are part of this complex and inter alia studying their role within the complex and their interactions.

Much of the institutional complexity or polycentricity literature originates from studies of climate governance but is relevant to wider studies of international institutions. Thus, in yet more general terms, the book draws on literature on the factors influencing institutional output, as well as the output's influence on other international institutions and at the domestic level. Regarding the former, the analytical framework of the book (outlined in Chapter 2) draws – beyond the previously mentioned theories of institutional interaction and complexity – on theories explaining institutional output in terms of IO bureaucracies (e.g. Barnett and Finnemore, 2004) and relations with member states, including principal–agent theory (Nielson and Tierney, 2003). Furthermore, regarding the consequences of the institutional output, the framework distinguishes between the domestic and international consequences (see also Young, 2001). Concerning the domestic level, the framework draws on literature on how institutional output may affect ideational or incentive-based dynamics (e.g. Checkel, 2005; Kahler, 2000) as well as literature on the policy process (e.g. Kingdon, 2003; Sabatier and Weible, 2014). Regarding the international level, the framework draws on literature on the dyadic interaction between institutions (Oberthür and Stokke, 2011; Stokke, 2001, 2012) and IOs (Biermann, 2008; Kranke, 2020; Momani and Hibben, 2015), and on the previously mentioned polycentricity/institutional complex literature (Biermann et al., 2009a; Jordan et al., 2018; Keohane and Victor, 2011). A common theme of the framework is that the causal mechanisms through which the institutions are influenced may be of an ideational (normative dynamics or cognitive) character as well as involving changes to the incentive structures facing actors.

1.3.2 Environmental–Economic Relations

The present book also relies on literature on environmental–economic relations (Ekins, 2000; Grubb et al., 2014; Katz-Rosene and Paterson, 2018; Newell and Paterson, 2010; Stevenson, 2019). As should be evident from the preceding

discussion of the concept of economisation, this concept is greatly indebted to this literature, as it describes one way of reconciling economic and environmental objectives by framing an environmental problem as an economic one. One relevant strand of the literature on environmental–economic relations explores whether economic and environmental objectives are framed as synergistic or conflictive, finding that the framing of the objectives as conflicting would lead to the prevalence of economic objectives (Hoffman and Ventresca, 1999; Jacobs, 2012; Skovgaard, 2014). Another key strand within this literature concerns the role of (especially international) economic institutions in maintaining policy paradigms based on markets and economic growth (Bernstein, 2001; Dauvergne, 2016). According to the literature on economic–environmental relations, environmental policymaking predicated on economic principles has been prominent inter alia because of support from powerful economic actors and resonance with economic discourse (Bernstein, 2001; Newell, 2012; Newell and Paterson, 2010). At the same time, such policy-making predicated on economic principles has often led to policy responses that prioritise economic efficiency over justice concerns and which do not constitute a radical departure from existing policy paradigms.

1.3.3 Fossil Fuel Subsidies and Climate Finance

In a more empirical vein, the book draws on the literature on climate finance and fossil fuel subsidies, particularly the political aspects of these issues. The literature on fossil fuel subsidies (see Chapter 4 for more detail) has mainly focused on technical and economic aspects, although the political aspects have been developed more recently (see for instance the contributions to Inchauste and Victor, 2017; Skovgaard and van Asselt, 2018b; van Asselt and Van de Graaf, 2017). Although much of this literature focuses on the domestic politics of fossil fuel subsidies (see e.g. Overland, 2010; Rentschler, 2018; Rentschler and Bazilian, 2017b), the global attempts to address fossil fuel subsidies, including the role of the norm of fossil fuel subsidy reform (Van de Graaf and Blondeel, 2018), have been the subject of studies focusing inter alia on the G20, the IMF and the OECD (Skovgaard, 2017a, 2018). The literature on climate finance, including on the political aspects, has a longer track record (see e.g. Keohane and Levy, 1996), and a stronger emphasis on the international level (Haites, 2013; Skovgaard et al., 2017; see also Chapter 9). This difference in emphasis on the international level is perhaps not surprising, given that fossil fuel subsidies are domestic policies, whereas climate finance (understood as financial flows from developed to developing countries) are international in nature. The international governance of climate finance has been the subject of studies that have focused on the climate system (Pickering et al., 2017), individual

institutions such as the Green Climate Fund (Abbott and Gartner, 2011), how to determine whether climate finance commitments are being met (Pauw, 2017; Roberts and Weikmans, 2017; Weikmans et al., 2020), as well as which normative ideas should guide the generation and allocation of climate finance (Ciplet et al., 2013; Moore, 2012; Stadelmann et al., 2014).

1.3.4 The International Economic Institutions

The book also draws on the literature on the three institutions studied for empirical knowledge (see also Chapter 3). Given their nature as economic institutions, it is perhaps not surprising that much of the literature has focused on their role regarding economic governance (see Babb, 2013; Chwieroth, 2008, 2010; Woods, 2006 regarding the IMF; Carroll and Kellow, 2011 regarding the OECD; Cooper and Thakur, 2013; Slaughter, 2015 regarding the G20). The IMF literature has outlined the significant power of the institution to influence national policymaking, especially in countries under IMF programmes, owing to these countries receiving financial assistance (Kentikelenis et al., 2016; Pop-Eleches, 2009). The IMF's role regarding environmental policy has been subject to much less attention, inter alia because of the Fund's limited interest in the topic and its emphasis on economic growth at the expense of environmental protection (Harvey, 2005; Lindenthal and Koch, 2013; Polak, 1991). The G20 literature has focused on the role of the institution as a global steering committee (Cooper, 2010; Held and Young, 2013) consisting of twenty of the world's largest economies and covering 85 per cent of global GDP. Although the role as a steering committee has been most pronounced regarding economic policy, especially in the response to the 2008–9 global economic and financial crisis, its role regarding environmental policy has also been significant (Kirton and Kokotsis, 2015; Slaughter, 2017). The G20's role in environmental governance has in particular been studied with regard to greening the fiscal stimulus following the 2008–9 economic and financial crisis (Barbier, 2010; Klein, 2019, Meckling and Allan, 2020; Tienhaara, 2016). Finally, the OECD has, arguably because of its more limited influence within global governance, been the subject of fewer studies (but see Carroll and Kellow, 2011). Given that the OECD covers a wider range of policies in its day-to-day practices (albeit from an economic perspective), much of this literature has focused on the impact of the OECD on governance within fields such as education (Niemann and Martens, 2018) and environment (Busch, 2009). The OECD's economic approach to environmental issues has been characterised as 'liberal environmentalism', a normative compromise between environmental protection and economic growth that predicates international environmental protection on the promotion and maintenance of a liberal economic order (Bernstein, 2001).

1.4 The Contributions of the Book

This book contributes to the literature it draws upon in a number of ways. The main contribution is to study six instances of economic institutions addressing climate change issues (two issues each being addressed by three institutions) at the international level through the lens of economisation, thus providing new knowledge about the factors shaping such economisation and its consequences. An important aspect of this contribution is the development and application of the concept of economisation. By using this concept to study the three institutions addressing the two climate issues, the book explores to what degree and in what way it is possible to reconcile economic and environmental objectives in economic institutions, in a manner based on core economic tenets. Studying the causes and consequences of economisation is important in this respect. Much of the literature on economic–environmental relations has mainly focused on these relations within environmental institutions, rather than on *how* environmental issues have been addressed by the more powerful economic institutions (Bernstein, 2001). The question of how is important, since the power of the economic actors means that their involvement holds significant transformational potential, and different factors may influence their roles, hence leading to different approaches among the economic institutions.

Furthermore, the concept of economisation also contributes to ongoing debates about similar dynamics, including whether the world is characterised by the climatisation of other policy domains (Aykut and Castro, 2017). While economisation, climatisation, and securitisation (Buzan et al., 1998) are not mutually exclusive concepts, they draw attention to different aspects of political phenomena, the economic aspects being particularly politically and academically relevant in a time when the roles of economics, economic thinking and economic institutions are being intensely debated. Furthermore, the concept of economisation allows for a comparison with other policy issues experiencing similar economisation dynamics (e.g. education) and draws attention to economic institutions and framings which historically have been very important.

Beyond the concept of economisation, this book contributes to the literature on international institutions and organisations by developing and applying a framework analysing the causes and consequences of institutional output (see Chapter 2). This framework includes intra-institutional factors (institutional worldview and entrepreneurs operating within the institutions) as well as extra-institutional ones (relations with member states and interaction with other institutions). While some of these factors (worldview, entrepreneurship and membership relations) are often included in studies of institutional output (see e.g. Biermann et al., 2009b), the inclusion of institutional interaction means that each institution is not treated as an isolated entity, but that the influences from its institutional environment are also included.

Furthermore, the book contributes to the literature on international institutions and organisations by studying how institutions have addressed issues beyond their normal portfolio, and identifying factors influencing how far they could go regarding such new issues.

Furthermore, there are more empirical contributions to the literature on climate finance and fossil fuel subsidy reform in terms of analysing and comparing the relatively underexplored role of the three institutions (but see Kim and Chung, 2012; Skovgaard, 2017a), and by providing an overarching comparison between the two issues. Finally, the book contributes to the broader literature on climate governance and the role of economic institutions therein. Although scholars have provided theoretical accounts of individual instances of economic institutions addressing climate change (Busch, 2009; Downie, 2015; Lehtonen, 2007; Ruffing, 2010; Skovgaard, 2017a; Slaughter, 2017), the present book provides a more exhaustive overview and allows for a comparison between the two policy areas and the institutions. By studying the interaction between these institutions and other international institutions addressing climate change, the book offers an empirical account of the role of these institutions in the wider complex. Likewise, the book contributes to the literature on the three institutions (see Cooper and Thakur, 2013; Park and Vetterlein, 2010a; Woods, 2006), especially those focusing on policy change within the institutions (Chodor, 2017; Chwieroth, 2010; Hibben, 2015; Seabrooke, 2012; Vetterlein and Moschella, 2014).

1.5 Case Selections

1.5.1 International Economic Institutions

The economisation of climate change at the international level has taken place within a range of economic institutions, from the newly founded Coalition of Finance Ministers for Climate Action to the World Trade Organization (WTO), and covers a range of topics from climate change in general to climate insurance. The three institutions have been chosen on the basis of their individual importance in international economic governance and the variation that they represent (see also Chapter 3 for more detail on their similarities and differences). The IMF has played an important role in promoting the Washington Consensus and neoclassical economic policies (Babb, 2013; Momani and Hibben, 2018), the G20 was crucial in addressing the 2008–9 global economic and financial crisis (Drezner, 2014) and the OECD has shaped the knowledge basis for policies addressing inter alia education, environment and development (Carroll and Kellow, 2011). Furthermore, all three institutions have economic growth and stability as main objective, while covering

a range of issues, unlike other institutions such as the World Bank (which has development as its objective) or the WTO (which has a narrow focus on trade).

While sharing the fundamental characteristic of being economic institutions, the three institutions also represent a variation on theoretically relevant variables that may influence their output (see Chapter 2), allowing for a comparative exploration of their influence beyond the process-tracing of the individual case studies. First, they differ in membership, with the G20 covering twenty of the world's largest economies, the OECD all developed countries and the IMF virtually all countries in the world. Second, they also differ in their decision-making processes, with the G20 and the OECD using consensus-based procedures to reach agreements among the member states and the IMF using voting based on countries' financial contributions to the IMF, a system that grants the major developed countries a position close to a combined veto power. Third, the fact that the IMF and OECD have international bureaucracies, and the G20 does not, allows for a comparison of the influence of such bureaucracies. Fourth, the IMF and the OECD differ in the degree of autonomy their bureaucracies enjoy vis-à-vis the member states, with the IMF being significantly more autonomous. Fifth, the institutions differ in the governance functions they perform. Whereas the G20 is a political forum for debating and agreeing on how states should address political issues, the OECD is a knowledge provider that analyses and evaluates member state policies and the IMF is an operational institution that can pursue policies independently of member states.

1.5.2 The Policy Issues

The policy issues of fossil fuel subsidies and climate finance are also characterised by similarities and differences (see Chapters 4 and 9). Both offer very clear-cut cases of economisation and are relatively new arrivals to international climate politics (fossil fuel subsidies having been introduced more recently than climate finance), having rapidly increased in importance within the last decade. These characteristics distinguish these issues from issues such as adaptation, mitigation (understood in a broad sense) or renewable energy, which have been much less economised, and which have been part of international climate politics for longer, making it more difficult to identify the consequences of economisation on these issues. Unlike issues such as adaptation, mitigation and renewable energy, the two issues are both defined in terms of their relevance to climate change policy (*climate* finance and *fossil fuel* subsidies) and to economic policy (climate *finance* and fossil fuel *subsidies*).

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In both cases, the practices now defined as constituting fossil fuel subsidies (and their reform) and climate finance took place long before the two concepts emerged. Subsidies have been provided to the consumption and production of fossil fuels since at least the end of the Second World War (Steenblik, 1999), and the financing of projects that mitigate climate change in developing countries, for example, renewable energy, also dates back decades (Michaelowa and Michaelowa, 2011b). Yet, the concept of energy subsidies only date back to the 1980s (World Bank, 1983), and fossil fuel subsidies to the 1990s (Larsen and Shah, 1992). Likewise, the concept of climate finance emerged only following the 1992 Earth Summit. On a closely related note, both issues have been characterised by heated debate regarding what exactly can be defined as fossil fuel subsidies (Koplow, 2018; Skovgaard and van Asselt, 2019; see also Chapter 4) and climate finance (Roberts and Weikmans, 2017; see also Chapter 9). Such definitional contestation has resulted in estimates of their global volume that range from 300 to 5,000 billion in the case of fossil fuel subsidies (Coady et al., 2019; IEA, 2019) and from 2.2 to hundreds of billions in the case of climate finance (Dasgupta and Climate Finance Unit, 2015; UNFCCC Standing Committee on Finance, 2018). The size of (most of) these estimates points to the economic importance of both issues. For comparison, the GDP of Indonesia was USD 1,000 billion in 2018; and that of the UK was 2,900 (World Bank, 2020c). Although the estimated economic impact of temperature increases of 3–4 degrees lies in the range of 2–15 per cent of GDP[6] (Kahn et al., 2019) and is thus much greater, the reform of fossil fuel subsidies and the provision of adequate climate finance are crucial for the mitigation of climate change (Gupta et al., 2014; Skovgaard and van Asselt, 2019).

Yet, the two issues also differ. First, regarding the nature of the issue addressed, they differ in their fiscal impact, with climate finance constituting expenditure for the countries providing it, whereas fossil fuel subsidy reform constitutes a way of reducing expenditure. Fossil fuel subsidy reform can be framed as a policy instrument that reduces emissions *and* saves public money *and* removes macroeconomic distortions, a triple-win situation that is attractive to finance ministries in particular, a key constituency of the three institutions. Climate finance does not allow for such resonance. Second, the international discussions of climate finance are characterised by political contestation between developed and developing countries to a much larger degree than the discussions of fossil fuel subsidies. This is because climate finance concerns the flow between these two groups of countries and fundamental issues of climate equity, whereas fossil fuel subsidies are primarily domestic phenomena. Arguably, mainly developing countries enjoy the benefits of

[6] Global GDP is currently at 85,000 billion USD (World Bank, 2020c), but will be significantly higher when the impacts of climate change are fully present.

climate finance (although developed countries also benefit from mitigation and from reduced refugee flows caused by adaptation finance) and the costs of climate finance fall on developed countries, whereas both the costs and benefits of fossil fuel subsidies are domestic (except for the impact on climate change). Third, climate finance was already an established issue by the time the three institutions started addressing it, unlike fossil fuel subsidies which were mainly put on international and domestic agendas by the G20's commitment to reform them. Thus, regarding climate finance, the institutions were forced to navigate in a system in which other international institutions (particularly the UNFCCC) were already active. Fossil fuel subsidies were from the beginning an issue the economic institutions were able to address without encroaching on the turf of other institutions.

1.5.3 Illustrative Country Cases

To illustrate the domestic consequences of the output of the three institutions, I focus on five countries: Denmark, India, Indonesia, the United Kingdom and the United States. These countries have been selected based on their important roles in the international discussions of fossil fuel subsidy reform and climate finance, yet they vary in terms of experience of both issues. Regarding fossil fuel subsidies, while the United Kingdom and Denmark have been reluctant to acknowledge having fossil fuel subsidies, the other countries acknowledge their subsidies, but the extent to which the reform was successful ranges from very limited (the United States), to mixed (Indonesia pre-2014) and finally to high (India, Indonesia in recent years). Interestingly, while the United Kingdom and Denmark have actively promoted fossil fuel subsidy reform internationally, India has been outright sceptical of the international efforts regarding fossil fuel subsidy reforms. Concerning climate finance, all five countries have been very active in the international climate finance negotiations. Denmark, the United Kingdom and the United States are listed in the United Framework Convention on Climate Change's Annex II (UNFCCC, 1992), which obliges them to provide climate finance, whereas India and Indonesia as developing countries are entitled to such finance. While the United Kingdom and Denmark provide relatively large volumes of climate finance per capita (about USD 30 per capita in 2015; UNFCCC Standing Committee on Finance, 2018) compared to other Annex II countries, the United States has provided much lower numbers even under the Obama administration (about USD 9 per capita in 2015; UNFCCC Standing Committee on Finance, 2018). Both Indonesia and India are among the top recipients of climate finance. In the United States, climate finance and other climate issues have been subject to considerable political contestation and radical policy changes from the Obama to the Trump

administration, whereas the topic has been characterised by relative political consensus in Denmark and the United Kingdom. In the international climate finance negotiations, Denmark, Indonesia and the United Kingdom have generally sought to build bridges between developed and developing countries, whereas India and the United States have generally (also under the Obama administration) been among the hardliners in their respective country groupings. Finally, the countries cover both developed and emerging economies (but not Least Developed Countries because of their lesser share of global fossil fuel subsidies), and G20 members as well as one non-G20 member.

1.6 Sources and Methods

The analysis in this book has been carried out using qualitative methods on the basis of interviews with key informants, official sources and secondary sources. The key informants (more than fifty in total) are civil servants from the IMF and the OECD bureaucracies as well member states characterised by a strong commitment to fossil fuel subsidy reform or climate finance (Denmark, India, Indonesia, Sweden, the United States and the United Kingdom). Within the IMF and OECD, a limited number of officials have fossil fuel subsidies and climate finance as their main responsibility, and in both cases I have interviewed a significant share of these officials, as well as officials having fossil fuel subsidies and climate finance as a minor but important part of their responsibilities, for example, officials working with IMF country programmes. The informants were interviewed during the period 2011–20 at the headquarters of the two organisations; in the national capitals; at national representations to the OECD; and via phone, Skype, Zoom or (in a couple of cases) email. The interviews were semi-structured, with the informants being asked similar general questions as well as more specific questions regarding their individual responsibilities. Several of the informants interviewed at the beginning of the 2011–20 period were re-interviewed in 2019–20 to update the findings from the original interviews and ask follow-up questions.

The analysis has uncovered how the institutions have addressed fossil fuel subsidies and climate finance as well as the causes and consequences of the way in which they addressed the two issues. Their output has been identified mainly on the basis of official documents, whereas the analysis of causes and consequences has relied on the interviews and secondary sources. Regarding the consequences, the analysis focuses on both the international level (other institutions) and the domestic level. Interviews with officials working within the institutions (especially officials working for the OECD or IMF bureaucracies or G20 presidencies) have been particularly important for the identification of the causes influencing the institutions.

As mentioned earlier, I use five countries – the United States, the United Kingdom, India, Indonesia and Denmark – as illustrative case studies for illuminating the domestic consequences of the institutions' output. In these case studies, I have operationalised ideational change influencing the public agenda by identifying the articles in the two leading newspapers of each country that link the international institutions' activities regarding fossil fuel subsidies or climate finance to the country in question. This number is compared to the total number of articles referring to fossil fuel subsidies or climate finance domestically and internationally. The analysis also focuses on whether domestic actors (e.g. NGOs) have used the activities of the international institutions to change national policies on fossil fuel subsidies or climate finance successfully. Ideational change and change to incentives with a direct influence over the policy process have been studied through process tracing, relying on a combination of official documents, key informant interviews, second-hand sources and the author's observations as an official working on the topic. The official documents originate from the governments and institutions in question. Since ideational and learning-based influences predominantly take place via direct interaction between officials and the institutions, the informants selected have been central to this interaction, which is why most of them come from finance ministries. Other informants come from development, environment and foreign ministries. Ideational change can be identified in terms of whether official documents indicate changed beliefs (including beliefs about how best to achieve goals) and goals among policymakers, and whether informants point to such changes stemming from the institutions. Power-based change is identified based on the interviews with key informants and secondary sources indicating such change.

The main focus is on the period after 2009, when the 2009 G20 commitment to reform fossil fuel subsidies and the COP15 to the UNFCC, also known as the Copenhagen Summit, meant that the institutions' interest in fossil fuel subsidies and climate finance were raised to a different level.

1.7 An Overview of the Book

Beyond this introduction, the book comprises four parts. Part I sets the stage for the rest of the book by outlining the analytical framework (Chapter 2) and describing the three institutions (Chapter 3). The analytical framework is intended for the classification of institutional output, the factors shaping the output and the consequences of the output at the international and domestic levels. Chapter 3 describes the G20, the OECD and the IMF, particularly their respective histories, governance functions, organisational set-up, worldview, membership and decision-making

procedures, interaction with other institutions, environmental track record and, in the case of both the OECD and the IMF, the autonomy of the IO bureaucracy as well. Following the 2008–9 economic and financial crisis, the G20 became *the* global forum for the coordination of economic policy, and the emphasis on economic objectives is visible in its prioritisation of issues and their economic impact. As one of the most powerful international institutions, the IMF has a strong track record as regards influencing state policy but has traditionally not paid much attention to environmental protection. Finally, the OECD promotes policies improving the economic and social wellbeing of people, and since the 1970s it has influenced environmental policy at the global level and within the OECD countries, especially by promoting liberal environmentalism.

Part II of this book applies the analytical framework to how the institutions have addressed the issue of fossil fuel subsidies and their reform, thus studying three cases of economisation. Chapter 4 introduces fossil fuel subsidies and the various attempts to address them at the domestic and particularly the international levels. It outlines how fossil fuel subsidies, despite their environmental and economic costs, have been difficult to reform, and how the politics of fossil fuel subsidies have been intertwined with discussions about how they should be defined, estimated and framed. The subsequent Chapter 5 analyses the role of the G20 using the analytical framework. The 2009 G20 commitment to reform fossil fuel subsidies has proved to be a catalyst for the efforts to promote such reform. The chapter outlines the factors shaping this commitment (particularly the policy entrepreneurship of the US government but also the G20 worldview and membership circle) as well as subsequent efforts to ensure that member states live up to this commitment and other consequences of the commitment. The G20 commitment catalysed action in a range of other institutions including the World Bank, the OECD, the International Energy Agency and the Asia-Pacific Partnership, and elevated the norm of fossil fuel subsidy reform from obscurity to a level of salience in which numerous countries were forced to deal with it. In the case of the OECD, which is the subject of Chapter 6, the G20 commitment to the reform of fossil fuel subsidies lifted OECD fossil fuel subsidy output to a new level, and the worldview of the OECD shaped how it was addressed. The OECD influenced how the G20 and other international institutions addressed fossil fuel subsidies and has been important in providing knowledge about fossil fuel subsidies to states. Chapter 7 analyses the role of the IMF, which played an unexpectedly pro-environmental role when defining fossil fuel subsidies in terms of inadequate pricing of externalities including climate change, and in inducing countries under IMF programmes to reform their subsidies. The IMF's worldview based on neoclassical economics and IMF staff acting as policy entrepreneurs were key factors shaping its approach. The IMF's efforts in countries

under IMF programmes had considerable influence in inter alia Indonesia, whereas the Fund's fossil fuel subsidy definition led to fossil fuel subsidies moving up the agenda in some countries, as well as to cognitive changes within countries and institutions. The final chapter of Part II (Chapter 8) compares how the three institutions addressed fossil fuel subsidies. It finds that although they adopted somewhat different approaches, their output was mainly synergistic and shared a common economic framing of fossil fuel subsidies, shaped by the fundamental elements of their worldviews, institutional interaction and overlapping memberships. The differences between the institutions, most notably the IMF and the OECD, can be explained by differences in their institutionalised worldview, policy entrepreneurship and their relationships with member states.

Part III of the book turns to climate finance. Chapter 9 describes climate finance, its increasing importance over the past twelve years both within the climate negotiations and in the implementation of climate policies, and the key issues of contestation in this regard. Issues relating to the definition of climate finance and generating and allocating finance (especially the roles of the normative ideas of equity and efficiency) are discussed in detail. The chapter also discusses the role of other international institutions in the governance of climate finance. Chapter 10 analyses the role of the G20, which has addressed climate finance since the run-up to COP15 in 2009, stressing cost effectiveness, the economic consequences of climate change and the use of economic instruments to address it. The consequences of the G20 output were most pronounced at the international level, particularly the UNFCCC and the commitment of developed countries to the mobilisation of USD 100 billion in climate finance. Chapter 11 focuses on the OECD and how it addressed climate finance from a development and an investment perspective. The former perspective involved the OECD framing climate finance as a subtype of development aid while stressing economic aspects (efficiency, leveraging private finance). The latter perspective involved framing climate finance as an instrument for redirecting investments from 'brown' to 'green' and linked it to fossil fuel subsidy reform, carbon pricing and institutional investment policy. In terms of consequences, the two OECD approaches had cognitive influences on how both the G20 and the OECD member states addressed climate finance. The less extensive IMF output on climate finance is the topic of Chapter 12, which shows how the IMF mainly addressed climate finance as a way of addressing climate change as an externality (e.g. by promoting carbon pricing as a source of climate finance), an approach shaped by the worldview of the IMF. The IMF's approach had direct but limited consequences predominantly for the international level, particularly the G20. Finally, Chapter 13 compares how the institutions addressed climate finance. It finds that despite the overarching convergence between the institutions

as regards addressing climate finance as an economic issue, the institutions diverge to some degree on climate finance. This is particularly the case concerning whether carbon pricing was essential to raising climate finance and whether climate finance constitutes a subtype of development aid. The convergence resulted from their shared characteristics as economic institutions as well as institutional interaction, while their different institutional worldviews and degrees of autonomy resulted in divergent approaches, with the IMF notably acting more independently of its member states than the other two institutions.

Part IV contains the concluding chapter of the book, which summarises the findings of the book: international economic institutions address climate issues as economic issues, a dynamic that can be understood in terms of economisation, yet there are important differences in how exactly such economisation defines the issue at hand, underscoring that economisation does not produce one given result. These differences have mainly been shaped by the institutional worldview of the institution and entrepreneurship, and to some degrees by the relationship with member states and institutional interaction. Regarding the relations with member states, the degree of autonomy of IO bureaucracies has constituted an important scope condition for the influence of institutional worldviews and entrepreneurs. The institutions have been more influential regarding fossil fuel subsidies than regarding climate finance (the G20 and especially the IMF have also prioritised climate finance less than fossil fuel subsidies). This difference in outcome is due to fossil fuel subsidy reform having a positive fiscal impact and being addressed by a very limited number of international institutions when the three institutions started addressing it, both factors differentiating it from climate finance. These findings are discussed in the wider perspective of economic institutions and climate policies more broadly speaking, arguing that economisation does not lead to a paradigm shift away from established practices. Subsequently, the broader theoretical implications for the study of economic–environmental relations and the study of institutions are discussed, as are the perspectives for future research, both including a focus on the concept of economisation and the analytical framework. While the book has contributed by introducing the concept of economisation as a way of understanding how economic actors address environmental issues, and demonstrated the usefulness of combining intra-institutional factors with both member-state relations and inter-institutional interaction, future research could focus on a broader set of cases beyond climate change, and focus on domestic level economisation to a greater degree and on developing the concept of economisation. Finally, the implications for policy and practice are discussed, arguing that whether and how issues should be subject to economisation should be treated as a political choice.

Part II

Setting the Stage

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2

A Framework for Studying Institutional Output and Its Alignment, Causes and Consequences

Exploring how the G20, OECD and IMF addressed fossil fuel subsidies and climate finance through the lens of economisation requires an analytical framework studying not only how the institutions addressed the issues, but also the causes and consequences of their doing so as well as their alignment. In this context, it is useful to draw on David Easton's (1965, chapter 22) distinction between the output and outcome of policy systems.[1] Adapted to the study of international institutions, output concerns what the institutions *do,* specifically the regulations, policy instruments, compliance mechanisms and so forth they produce (Gutner and Thompson, 2010; Young, 2001). The outcome concerns the consequences of the output in terms of changes in actor behaviour (Easton, 1965; Young, 2001). Besides output and outcome, the book also studies how the output of international institutions is aligned (degree of conflict or synergy) as well as the factors that have shaped the output. Studying the institutions' economisation of climate finance and fossil fuel subsidy reform requires studying their output to identify precisely how they have addressed the two issues as economic ones. As discussed in Chapter 1, economisation consists of two dimensions: (1) the economic institution (or actor) addressing the issue and (2) how it has addressed it, here operationalised as the institution's output.

The framework consists of different elements intended to study causes, output, alignment and outcome respectively. Within this framework, certain concepts appear in several of the steps, namely ideas (including normative and cognitive ones) and incentive structures (see Table 2.1), and constitute central themes of the book. Others, such as entrepreneurs or agenda-setting, appear in only some of the stages. Given the focus on economisation and the economic character of the institutions, the book pays particular attention to how factors pertaining to this character (e.g. the economic training of their officials) have shaped how they

[1] A common third dimension, the impact of policy output on the problem it was intended to address (e.g. the effects on climate change), has not been included here, as it is too difficult to isolate the effects of the institutions on these problems. On the difficulties in studying the impact of institutions, see Szulecki et al. (2011) and Tallberg et al. (2016).

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Table 2.1 *Analytical framework*

	Output	Alignment (synergistic, conflictive, cooperative)	Causes	Consequences (international and domestic)
Cognitive (ideas)	Cognitive ideas (e.g. definitions, causal claims)	Interpretation of cognitive ideas	Institutional worldviews (cognitive aspects)	Changes to cognitive ideas (including learning)
Normative (ideas)	Norms, normative ideas	Interpretation of norms	Institutional worldviews (normative aspects)	Normative change (including norm diffusion)
Incentive structures	Commitments, conditionalities	Incentives (direction of)	Membership circle, degree of autonomy from member states	Commitments, conditionalities
Others		Types of output Actors targeted	Entrepreneurs Interaction with other institutions	Agenda-setting

addressed climate finance and fossil fuel subsidies, as well as the consequences of the economisation (e.g. inducing finance ministries to address fossil fuel subsidies). The similar concepts appearing at different steps (e.g. cognitive ideas) are closely interrelated. As an illustrative example, the cognitive aspects of the institutional worldview may play a bigger role than other factors in shaping cognitive output such as causal claims, which again may potentially play a more important role than other factors in changing cognitive ideas in other institutions and countries, thus constituting a cognitive pathway with several steps.

2.1 Institutional Output: What Is It They Do?

International institutions produce different kinds of output, such as legally binding agreements, expert reports and the provision of venues for informal networking and learning. Importantly, I focus on all kinds of actions that an institution undertakes that are directed at its external environment (i.e. not those concerning its internal dynamics such as changed procedures; see Knill and Bauer, 2016). Before turning to cognitive, normative and incentive-oriented aspects of institutional output, I discuss the different types of formal and informal output.

I divide the formal output targeting the external environment into four categories. The first is the regulatory output that promotes or prohibits specific actions, including the setting of commitments (both legally binding and soft law), recommendations and criticisms of specific actions (Tallberg et al., 2016). The second is

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the declarative output that asserts a joint position of the institution, for example common goals (Tallberg et al., 2016). It may de facto be difficult to distinguish between regulatory and declarative output, as declarative statements may also limit member states' possibilities of undertaking specific actions. The third is the knowledge output that consists of the creation and distribution of knowledge through publications, including data and analyses (Barnett and Finnemore, 2004), for example of the landscape of climate finance. The fourth is distributive output that reallocates resources, in the shape of financial and technical resources (e.g. for capacity-building), sanctions or punishments, and conditionalities for enjoying particular benefits, for example IMF conditionalities for receiving IMF loans (Tallberg et al., 2016). The informal output includes informal consultations (e.g. between representatives of the institutions and a country government), low-key support for policymaking (e.g. advice) and workshops and seminars providing a venue for the dissemination of knowledge and interaction between actors. In this way, the workshops and seminars allow for learning and socialisation.

It makes sense to focus on three aspects of their output, namely the cognitive, normative and incentive-based dimensions.[2] These three dimensions can be found in most of the aforementioned outputs, for instance do all of them involve some kind of cognitive aspect in terms of defining what is important. While the classification of the output according to the typology outlined earlier is important for understanding their respective roles and comparing them, focusing on these three dimensions is crucial for understanding economisation. Specifically, the cognitive and normative dimensions concern (inter alia) how and to which degree an issue is framed as an economic issue (the second aspect of economisation), but can also involve other kinds of framings, for instance in terms of equity. Incentives do not concern economisation as directly as the other two dimensions but understanding the output and outcome of the institutions requires studying the incentive-based dimension of this output as well as the cognitive and normative dimensions.

The distinction between cognitive and normative aspects draws on the distinction between cognitive ideas regarding what something is or how to understand a given issue and normative ideas regarding 'what is good or bad' about 'what is', good and bad understood in terms of 'what one ought to do' (Schmidt, 2008). In terms of economisation, this may play out in terms of framing climate change as an externality or a market failure, a framing that includes the cognitive idea that climate change constitutes a market failure and the normative idea that this market failure should be corrected to create a long-term optimal outcome (see Jacobs, 1997; Katz-Rosene and Paterson, 2018; Skovgaard, 2012). In practice, normative

[2] For the sake of simplicity, these three dimensions will also be referred to as *cognitive*, *normative* and *incentive-based* output respectively.

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and cognitive ideas are often closely intertwined, for example framing a stream of revenue as climate finance leads to the conclusion that providing such revenue is appropriate. Yet, I argue that it makes sense to distinguish between them for heuristic reasons: comparing the output between the three institutions and the two areas in question provides more analytically useful results if you are able to identify to what degree the output differs regarding normative and cognitive ideas. Importantly, mainstream economics rarely determines exactly how ideas firmly established in the discipline should be applied, and hence diverging applications of ideas rooted in this discipline (even within the same paradigm such as neoclassical environmental economics) are possible.

The *cognitive* dimension covers the definition of what issues *are*, in this case climate finance and fossil fuel subsidies. More specifically, the cognitive dimension of the institutional output generally speaking refers to ideas regarding causal relations (e.g. 'X causes Y') as well as how empirical phenomena should be defined and what is important about them (Sabatier and Weible, 2014; Schmidt, 2008). For instance, cognitive ideas regarding fossil fuel subsidies or climate finance may concern how they should be defined, what their consequences are, how they can be reformed or scaled up and so forth. Regarding causal relations, the cognitive dimension concern ideas regarding the causes of a given policy issue and the consequences of the policies addressing these issues (Campbell, 1998). Such causal ideas may concern how to best promote fossil fuel subsidy reform or use climate finance. Regarding the definition of the phenomena, both issues have been characterised by intense disputes over their definitions, that is whether a given policy can be characterised as a fossil fuel subsidy (Skovgaard, 2017a; see Chapter 4 for more details) or a financial flow as climate finance (Roberts and Weikmans, 2017; Skovgaard, 2017b; see Chapter 9 for more details). The definitional aspect is important not only in terms of which policies or financial flows fall under the definition, but also which aspects of the issue (fossil fuel subsidies or climate finance) are important, for example if they are framed as economic issues rather than environmental or development ones. Often, the definition of the problem shapes causal ideas about the solutions that are logical to use (Schön and Rein, 1994). On a closely related note, the cognitive dimension also concerns the kinds of data that are relevant for understanding the issue, for example whether it is best measured in quantified, monetary terms, specifically in terms of economic costs or benefits (Jacobs, 1997). The production of knowledge is a key type of formal institutional output (as discussed in the beginning of this section), and such knowledge production has a strong cognitive dimension in defining what is important about an issue and how it can be measured, for example the size of fossil fuel subsidies and climate finance flows.

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The *normative dimension* refers to how the institutions define the key normative issues that characterise the politics of fossil fuel subsidy reform and climate finance. Normative ideas refer to normative ideas about 'what one ought to do' (Schmidt, 2008), including norms understood as intersubjective standards of appropriate behaviour (Finnemore and Sikkink, 1998; March and Olsen, 1989) as well as more fundamental normative ideas about what is right and desirable. Regarding the former, a relevant example of a norm is the emerging norm of fossil fuel subsidy reform, which defines fossil fuel subsidies as environmentally damaging and as something that should be phased out (Van de Graaf and Blondeel, 2018). More specifically, concerning international economic institutions, Susan Park and Antje Vetterlein (2010b) define policy norms as shared expectations for all relevant actors within a given community about what constitutes appropriate behaviour, which is encapsulated in policy output. Regarding the latter, relevant fundamental normative ideas include the idea that (policy) objectives should be defined in terms of optimising economic output (Cole, 2008; Jacobs, 1997; Skovgaard, 2017b). The exact meaning and application of normative ideas have been highly contested at the international level, as has been the case with the norm of fossil fuel subsidy reform, which has been characterised by disagreement between international economic institutions regarding to what extent many countries subsidise fossil fuels (Skovgaard, 2018; Van de Graaf and Blondeel, 2018). While all output of the institutions has or may have a normative dimension, the normative dimensions are particularly relevant when they act as norm entrepreneurs (Finnemore and Sikkink, 1998).

The third dimension of institutional output consists of *incentives,* referring to measures that aim to change the incentive structures facing actors. Unlike the ideational dimension, incentives do not alter the ideas and knowledge held by actors or which ideas are considered appropriate or authoritative but aim to change actors' behaviour by altering the costs and benefits associated with particular actions. While normative ideas may affect actors' preferences and hence how they react to incentives, the incentive-based dimension of output concerns incentive structures that influence actors without changing their preferences. Thus, while actors may change their preferences, these preferences tend to be constant and determine how the actors respond to incentive structures. More specifically, while the ideational aspects concern the shape economisation takes in terms of how climate finance or fossil fuel subsidies are framed as economic issues (cognitively and normatively), the incentives concern how economisation translates into concrete incentives for and against particular actions. Incentive-based output has been the focus of liberal institutionalist literature, which argues that international institutions are created to provide incentives for cooperation through punishing non-

cooperation and rewarding cooperation, for example by providing transparency regarding whether a state cooperates or not, allowing for punishment from other states or an International Organisation (IO) (Keohane, 1984, 1989). The incentive-based output of the institutions may take the shape of regulatory agreements among member states or between the institution and a state, or of distributive output such as the provision of support (both being formal types of output). The former agreements include inter alia commitments between states (e.g. to undertake fossil fuel subsidy reform or provide climate finance), the violation of which may result in sanctions or reputational costs that would reduce the state's credibility when future commitments (in this field or in others) are to be negotiated (Smith and Urpelainen, 2017). Whereas sanctions are generally explicitly defined as a response of the institution to particular actions, reputational costs operate through states (including but not limited to member states) having less faith in the state violating the commitment. Incentives also include distributional output in the shape of conditionalities (e.g. cessation of IMF loans if countries do not reform fossil fuel subsidies; see also Schimmelfennig et al., 2005; Vreeland, 2007) as well as material support (e.g. finance or expertise) for particular actions. Finally, beyond regulatory and distributive output, the incentive-based output also includes output that allows for states to signal the credibility of their offers or commitments, or to gain more information about the offers or commitments of other states, for example through informal discussions or the provision of data (on the role of commitments and information in international negotiations; see Underdal, 1983).

2.2 How Institutions Align

After identifying the institutional output of the different institutions, the next step is to explore how their output is aligned. While the direct effects of one institution's output on another institution (e.g. one institution placing a commitment on another) will be studied in the section on the consequences of institutional output, in this section, I focus on the extent to which their output is synergistic, co-existing or conflictive (Biermann et al., 2009a; Zelli et al., 2020). In other words, the different kinds of output may support or undermine each other, or they may be directed at different issues or governance functions in a non-interacting way that neither supports nor undermines the output of other institutions, for example because they occupy different niches (Abbott et al., 2016).

First, regarding the cognitive ideas, if the different institutions use different sets of such ideas to describe the same empirical phenomenon, it may constitute a conflictive relationship (March and Olsen, 1989; Schön and Rein, 1994). Such conflict may concern what is important about the issue or causal relationships in the shape of divergence regarding the causes of or solutions to a particular problem.

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The institutions may also differ regarding the definition of fossil fuel subsidies and climate finance, and hence also whether a given policy constitutes a fossil fuel subsidy or a financial flow of climate finance. Beyond conflict, diverging outputs may also lead to the outputs being of little relevance to each other and creating confusion among audiences (where similar audiences are targeted) regarding what is important as well as information overload (Skovgaard and Canavan, 2020; Zelli et al., 2020). As regards knowledge that is based on similar or closely related cognitive ideas, the output from the institutions is more likely to be synergistic, for example the IMF building on OECD data on climate finance streams when producing its own analysis of climate finance.

Second, normative output may be more or less conflictive or synergetic, the former in terms of outright conflicting norms but also in terms of differing interpretations of the same norm. Although conflict between the core norms of the institutions (Biermann et al., 2009a) is unlikely given that these core norms are based on very similar economic paradigms (Bernstein, 2001; Chwieroth, 2008; Lehtonen, 2007; Slaughter, 2017), institutions' interpretations of climate-related norms as well as fundamental normative ideas may differ. The contestation over norms may concern their application to concrete situations (Wiener, 2004), as even relatively minor differences in the interpretation may lead to widely different applications of the norm, for example whether a country's fossil fuel subsidies are inefficient and hence should be reformed or not (Van de Graaf and Blondeel, 2018). More fundamentally, contestation over normative ideas may concern their general appropriateness and validity, as well as how they should be prioritised vis-à-vis each other, for example how efficiency (also known as cost-effectiveness) should be prioritised vis-à-vis equity (see Chapter 9).

Thus, while the institutions' economic core norms pull in the direction of synergy on some fundamental issues (e.g. economic growth and stability being key objectives), there is ample scope for synergy and co-existence as well as conflict regarding several normative ideas and the interpretation of norms. Importantly, synergistic relationships may strengthen particular interpretations of norms or normative ideas, for example if several institutions promote the same interpretation of a given norm. Finally, there may be an intentional or unintentional division of labour, in which certain institutions promote specific norms.

Third, in terms of *incentives*, the key issue is whether these incentives pull in the same or diverging, even opposite, directions. If, for instance, one institution provides support for one kind of action, while another punishes such behaviour, the incentives are conflicting (Gehring and Oberthur, 2009). Synergistic relations are equally possible, for example in the shape of one institution providing (material) support for actions that will help a state to meet its obligations under a commitment

produced by another institution. Beyond providing incentives pulling in similar or opposite directions, there is also the possibility that the incentives provided by different institutions crowd each other out, for example by providing such a multitude of different incentives that it is not possible for the actors targeted to respond to all of them (Abbott et al., 2016; Eberlein et al., 2014).

Fourth, it is worthwhile studying how the institutions align in terms of their types of output or *governance functions*. It is relevant whether all institutions focus on the same kind of output, for example setting commitments or producing knowledge, or if there is an explicit or implicit division of labour, so that one may focus mainly on knowledge production, a second on defining norms and a third on distributive output providing financial incentives (Gehring and Faude, 2014; Zürn and Faude, 2013). While each of the institutions generally provide several types of output, they may differ as to which one is the main type.

Fifth, and finally, it may matter which *actors are addressed* by the output of the institutions. The three institutions differ concerning the states that are their members: the G20's membership covers twenty of the largest (developed and emerging) economies, the OECD all developed countries and the IMF most countries in the world. Furthermore, the institutions also differ to some degree regarding the government institutions they interact with: while the IMF and the G20 interact mainly with finance ministries and central banks (and in the case of the G20 also the offices of heads of state and government), the OECD interacts with many different ministries (Kirton and Kokotsis, 2015; Ruffing, 2010; Vreeland, 2007). All things considered, there are significant overlaps in terms of the actors they address, but there is also a range of actors that are addressed only by one of the institutions. An overlap may increase the likelihood of conflicting institutional output, as different institutions may promote diverging norms, knowledge or incentives to the same states (Zelli et al., 2020). This risk is particularly pertinent if they address different ministries within the same country, for example if the OECD promotes one interpretation of a norm to development or energy ministries and the IMF a different interpretation of the same norm to the finance ministry. Institutions addressing different states with differing output risk creating conflictive relationships among countries as well as institutions.

2.3 Causes of International Economic Institutions' Output and Alignment

The next step is to identify the factors that shape the output and the alignment of the institutions, both in terms of inducing an institution to address fossil fuel subsidies and climate finance in the first place and of shaping how they address them.

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Importantly, inducing the institutions to address the issues concerns the first aspect (that economic institutions address the issue) and how they address the issue concerns the second aspect of economisation (that they address the issue as an economic one). Thus, although these two aspects are closely related (as discussed in Chapter 1), one factor may be more relevant for the first aspect than the second and vice versa. The factors that shape the output of the institutions are also important for shaping their alignment; that is, if similar factors shape their output, the alignment will be synergistic. Hence, I first outline how the factors may shape the output of an individual institution, and subsequently discuss their relevance to institutional alignment. I draw on strands of international relations literature that focuses mainly on institutions as actors in their own right, independent of state behaviour (Barnett and Finnemore, 2004; Nielson and Tierney, 2003; Park and Vetterlein, 2010a) as well as literature on international institutions and their interaction (Oberthür and Stokke, 2011; Zelli and Asselt, 2013). Given that two of the institutions (the IMF and the OECD) are IOs, the first strand of literature is highly relevant to them but less so (and in a different way) to the G20.

Regarding the IO strand, Biermann et al. (2009b) distinguish among three kinds of influences on IOs: problem structure, extra-organisational (mainly member states) and the organisation itself. The two problem structures of the two policy issues (fossil fuel subsidies and climate finance) are constant between the institutions analysed here, thus allowing for a study of the effect of problem structure only when comparing the institutions' handling of the two issues (in the concluding Chapter 14). Here, problem structure refers to the position of the issues in policy spheres (in this case economic and environmental), their costs and benefits (here especially fiscal costs), their degree of international contestation (especially North–South contestation) and how entrenched state preferences regarding the issues are (Jinnah, 2015; Weiss and Jacobson, 1999).

Yet, extra- and intra-organisational factors vary between the institutions, allowing for a comparison of the three institutions' handling of each issue. Intra-organisational influences explain the role of IOs in terms of their organisational culture and policy entrepreneurs within the bureaucracies (Barnett and Finnemore, 2004; Park and Vetterlein, 2010b). Extra-organisational influences mainly explain the role of IOs in terms of their status as agents contracted by principals (the member states) to perform a function that will benefit the principals (Hawkins et al., 2006; Nielson and Tierney, 2003). I argue that although the G20 does not have a bureaucracy as such, it is possible to speak about intra-institutional factors also in its case, namely policy entrepreneurs with an institutionalised role (e.g. G20 presidents and chairs of working groups) and the worldview inherent to the G20 (see also discussion in Chapter 1 of the relationship between IOs and institutions).

I organise the various causal factors from the literature into four categories. These categories are the worldview of the institution[3] (intra-institutional), policy entrepreneurs operating within the institution (intra-institutional), relations with member states (extra-institutional) and interaction with other institutions (extra-institutional). While these institutions vary significantly in terms of relations with member states, they vary less in terms of the other factors (see the discussion of case selection in Chapter 1). In Chapter 3, the three institutions' worldviews, relations with member states and interaction with other institutions are discussed in more detail.

The *institutional worldview* refers to normative as well as cognitive ideas inherent to the individual institutions and together constitute the worldviews that shape how they perceive and address policy issues (e.g. the IMF's worldview rooted in neoclassical economics leading it to define the non-pricing of externalities as a subsidy). This worldview may play an important role in shaping how the institutions address fossil fuel subsidies and climate finance, but cannot directly induce them to address it, only constitute a contextual factor for other factors inducing the institutions to address the issues. The sociological institutionalist IO literature focuses on the worldviews of IO bureaucracies (Barnett and Finnemore, 2004; Park and Vetterlein, 2010b), and draws on sociological and historical institutionalist (Hall and Taylor, 1996; March and Olsen, 1989) and cognition-oriented bureaucratic politics literature (Allison and Zelikow, 1999; Drezner, 2000) to argue that such worldviews are inherent to the bureaucratic cultures of the IO bureaucracies. In the words of Graham Allison and Philip Zelikow (1999), 'where you stand depend on where you sit'. These worldviews are inherent to the institutions and shape how the actors within the institutions perceive policy issues, including what is problematic about them, their causes and how they can and should be addressed (Bacchi, 2009). Thus, the worldview encompasses both cognitive and normative ideas, which, as mentioned previously, are often closely linked, since the framing of the situation defines which norms are salient, which actions are logical and what the consequences of the different actions will be (Kratochwil, 1989).

In the case of bureaucracies, the worldviews are more institutionalised than in a forum such as the G20. Regarding such international bureaucracies, their organisational culture is closely tied to the training (particularly educational background) of the officials – in the case of the international economic institutions their training as economists (Chwieroth, 2010; Kanbur, 2001). Training and worldview are hard to disentangle in practice, not only because they tend to pull in the same direction, but also because organisations characterised by a particular

[3] I use the term 'institutional worldview' or just 'worldview' rather than 'organisational culture' because it does not presuppose a bureaucratic organisation (relevant in the case of the G20), and because it focuses specifically on the perception of issues, unlike culture, which covers a broader range of organisational characteristics.

worldview tend to recruit staff with an educational background (from specific disciplines such as economics and even particular universities) that corresponds with this worldview, in this way reproducing the worldview (DiMaggio and Powell, 1983). The worldviews of the institutions are not entirely unitary, but often differ in some respects between different sections and divisions of a bureaucracy (Kaarbo, 1998). Thus, a bureaucracy may be characterised by a shared set of core normative and cognitive ideas, for example that optimising economic value is the main objective and that market logic constitutes an optimal way of achieving it, but may differ among sections regarding secondary beliefs or ideas, for example the relationship between economic value and other objectives (on the relationship between different levels of beliefs or ideas, see Jenkins-Smith et al., 2014). Importantly, the worldview operates on a much broader scale than the cognitive and normative output, that is, the worldview concerns ideas on a conceptual level potentially applicable across a broad range of cases, whereas cognitive and normative output concerns the ideas applied to a concrete situation.

Regarding the worldviews of the three institutions (see also Chapter 3), the OECD's approach to environmental issues has often been characterised in terms of the paradigm of 'liberal environmentalism' stressing economic instruments and compatibility between economic growth and environmental protection (Bernstein, 2001). The IMF is arguably more directly influenced by neoclassical economics than the OECD (Chwieroth, 2008; Howarth and Sadeh, 2011). Finally, the G20 does not have a bureaucracy, but relies on the G20 Presidency as secretariat. Even if the worldviews are less institutionalised in a forum such as the G20, the frequent interaction between actors may establish a shared worldview or at least perspective on an issue, especially if the participants come from bureaucracies with similar worldviews (e.g. finance ministries) and share educational background (DiMaggio and Powell, 1983). A forum for experts within the G20 set-up may develop into an epistemic community sharing normative and causal beliefs as well as a common policy enterprise (Haas, 1992). Even if it does not fully develop into an epistemic community, socialisation processes may be present, in which case the worldviews of the participants start to converge around a set of normative and causal beliefs (Johnston, 2001).

The term *policy entrepreneurs* refers to individuals within the institutions (especially their bureaucracies) as well as to collective actors, who may induce the institutions to address an issue or promote particular ways of addressing it (e.g. treating climate finance as a kind of development aid). Policy entrepreneurs are understood as actors promoting significant policy change (Mintrom and Norman, 2009). Their activities include framing policy problems, advocating new ideas and policy proposals, specifying policy alternatives, mobilising public opinion and

setting the decision-making agenda (Kingdon, 2003; Roberts and King, 1991). As regards new issues, policy entrepreneurs promote them by framing them in ways that lead to particular policy responses (Chwieroth, 2008), and are less constrained in their framings than in the case of established issues. The lesser constraint is due to new issues having a lower degree of precedence (prior action on the issue) and determinacy (agreement on how an issue shall be understood and which ideas apply; see Jordan and Huitema, 2014; Rhinard, 2010; Skovgaard, 2015). They also promote new issues by moving them up the agenda of the institution they operate within as well as other institutions and organisations (Bakir, 2009; Kingdon, 2003). The policy entrepreneurs have to operate within the worldviews of the institutions and frame issues in ways that resonate with these worldviews. They also have to operate within the constraints and opportunities constituted by the resources available and their mandates. In the case of entrepreneurs from IO bureaucracies, these constraints and opportunities originate from the bureaucracy and the relationship with the member states (see later in this section). In the case of the G20, the constraints and opportunities stem from the set-up of the G20, with a Presidency chairing meetings and expert groups reporting to ministerial meetings, as well as constraints and opportunities within the state that the policy entrepreneur works for, for example, domestic decision-making procedures. Policy entrepreneurs are distinguished from norm entrepreneurs in that they work to change policy rather than promoting a specific norm (see Finnemore and Sikkink, 1998 on norm entrepreneurs), yet de facto several of the policy entrepreneurs studied here may also be defined as norm entrepreneurs.

Relations with member states is a term that covers which states are members of the institutions, how the member state representatives arrive at decisions (voting or consensus), the ministries that represent the states vis-à-vis the institutions and the degree of autonomy of the institutions' bureaucracy vis-à-vis the member states. It is relatively straightforward for a member state to induce institutions to address an issue (unless other member states veto such efforts, as Saudi Arabia did in the case of fossil fuel subsidies prior to 2009). Yet their ability to prevent the institution from addressing an issue and shape how the institution addresses it depends on its autonomy (discussed later in this section). Membership in terms of which states are members is relevant, since the aggregate state preferences and power constitute one factor shaping the institutional output (Zürn and Faude, 2013). The G20 covers twenty of the world's largest developed and emerging economies, OECD covers only developed countries and while the IMF covers most countries, its voting rules grant the major developed countries a position close to a combined veto power, with the United States according to some scholars having an influence beyond its share of votes (Stone, 2008). This is

because the IMF arrives at decisions through voting, with voting rights reflecting a country's share of the global economy, while the G20 and the OECD member states arrive at decisions through consensus. The question of which ministries represent the member state may also matter (Raustiala and Victor, 2004; Skovgaard, 2012), since different ministries are characterised by different objectives and worldviews (Allison and Zelikow, 1999). For instance, finance ministries promote fiscal balances and growth and see the world through an economic lens (Seabrooke, 2011; Skovgaard, 2017b; Wildavsky, 1986), and environment ministries promote environmental protection (Weale et al., 1996).

Regarding autonomy, principal–agent theory (relevant only to IO bureaucracies) focuses on the role of these bureaucracies in terms of their status as agents contracted by the principal (the member states) to perform a function that will benefit the principal, and on the IO's degree of autonomy from principals (Hawkins et al., 2006; Nielson and Tierney, 2003). The member states constitute one collective principal that delegates the task of addressing an issue to the agent (the IO). The more autonomy the agent has, the more it can act independently of the principal and produce output that differs, even contradicts, the preferences of key member states or even the principal as a whole.

The autonomy of an IO is operationalised in terms of the control over resources, involvement of member states in the decision-making process and specificity of its mandate (Bauer and Ege, 2016; see also Chapter 3). An IO that has considerable resources and controls how they are raised has more autonomy to take up new issues and address issues in ways deviating from the principal's preferences than an IO that needs to have its use of resources approved by the principal. Likewise, an IO that may produce output independently of its principal has more autonomy than one in which the principal is closely involved in the production of output and that needs approval by the principal of the output. Often, the IO may produce two kinds of output: one that is produced solely by the IO bureaucracy and another which requires the approval and sometimes the active co-production of member states. The key question is then how important the outputs from the two streams are compared to each other, and how closely involved the member states are in the second stream, for example, whether they just need to approve the output or if they are involved in the decision-making process from an early stage. Furthermore, an IO with considerable degrees of freedom in its mandate, for example, to interpret the issues that fall under its portfolio, has more autonomy than those with a very specific mandate. In conclusion, the degree of IO autonomy acts as a scope condition for the influence of both the institutional worldview and policy entrepreneurs within the institutions' bureaucracies. The IMF worldview and policy entrepreneurs would be more capable of influencing institutional output

than the OECD worldview and policy entrepreneurs, since the IMF controls its own resources and operates more independently of the member states than the OECD (Busch, 2009; Dreher and Vaubel, 2004).

Interaction with other institutions covers both the interaction among the institutions studied in the book (e.g. the OECD fulfilling secretariat functions for the G20; Hajnal, 2019) and with other institutions, especially the United Nations Framework Convention on Climate Change (UNFCCC) and the World Bank. The literature on the dyadic interaction between institutions (Oberthür and Stokke, 2011; Stokke, 2001, 2012), and on the fragmentation and coupling of institutions into institutional/regime complexes (Biermann et al., 2009a; Keohane and Victor, 2011) rests on the assumption that international institutions cannot be understood without including their relationships with other institutions. The same goes for the literature on interaction among IOs (R. Biermann, 2008; Kranke, 2020; Momani and Hibben, 2015). Interaction with other international institutions influences when and how an institution addresses climate issues. The mechanisms through which institutions *are influenced by other institutions* are similar to the mechanisms through which they *influence other institutions*, as discussed in Section 2.4. Thus, the approach adopted here is similar to the literature on dyadic interaction (Gehring and Oberthur, 2009; Oberthür and Stokke, 2011), except that I disaggregate this interaction to distinguish between the influences affecting the institutions studied here and the influences they exert influencing others.

The mechanisms include ideational change, as well as changes to incentive structures and to agenda-setting. *Ideational change* includes changes to the ideas within the institutions, including both cognitive and normative dimensions. As such, it may alter the ideas held by individuals within the institution (be they IO officials or member state representatives) as well as ideational environments within the institution (whose ideas are considered relevant and appropriate). The ideational environment is more institutionalised within IOs, and an IO may (to a larger degree than a forum such as the G20) be less receptive to new ideas stemming from another IO with a diverging worldview (Biermann, 2008; Momani and Hibben, 2015). In the case of cognitive ideas, this includes the provision of new knowledge or learning processes in which cognitive ideas framing fossil fuel subsidies and climate finance are changed or introduced (see also Gehring and Oberthur, 2009). Changes to the normative ideas within the institution include inter alia the institution in question accepting new normative ideas or being socialised into a norm promoted by another institution (on socialisation, see Checkel, 2005). *Changes to incentive structures* consists of changes to incentives facing the actors within one institution originating from another institution, including the transfer of resources, pressure to address an issue in a particular way or agreements made within one

institution influencing the willingness to compromise in another institution (see also Zelli et al., 2020). For instance, IOs may receive more resources, or a commitment made within one institution inducing the member states of that institution to push for similar commitments within other institutions. Finally, *agenda-setting* concerns actions from one institution influencing the priority given to climate finance or fossil fuel subsidy reform by another institution, for example, the G20 tasking another institution to provide an analysis of climate finance or fossil fuel subsidies.

Regarding the factors shaping the alignment among the institutions, the same factors are relevant. Generally speaking, the more similar the factors shaping the output of the individual institutions, the more synergistic they will be; for example, if their worldviews are very similar and in all institutions play an important role in shaping their output, it will pull in the direction of more synergistic alignment. Interaction among institutions plays a particularly important role in encouraging the institutions to adopt similar positions. Moreover, interacting with other institutions than the ones studied here (e.g. the World Bank, the International Energy Agency) may lead to similar positions if they interact with the same set of institutions, and to divergent positions if they interact with different sets of institutions.

2.4 Consequences of IEI Output

The output of the institutions may have different consequences for actor behaviour, what is referred to as outcome. These consequences play out differently at the domestic and the international levels.

2.4.1 International Consequences

At the international level, the focus is on the influence of other intergovernmental institutions rather than on private or public-private institutions (see Betsill et al., 2015; Chan et al., 2015 for examples of literature on the interaction between intergovernmental and private and public–private institutions). The interaction covers influences on the other institutions studied here as well as on other institutions such as the UNFCCC or the World Bank. The mechanisms through which the institutions studied *influence other institutions* are similar to the mechanisms through which they *are influenced by other institutions*. Hence, the mechanisms include ideational change (cognitive and normative), changes to incentive structures (altering the incentives for actors within other institutions for particular

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actions) and agenda-setting (moving the issues up or down the agenda), as discussed in Section 2.3.

2.4.2 Domestic Consequences

At the domestic level, states are the main target of their output, and consequently the kind of actors that are most directly influenced by the output. Other actors, particularly companies and NGOs, may also change their behaviour as a result of the output of institutions, but most of these changes in behaviour stem from changes in state behaviour, for example, the state changing a policy due to institutional output such as norms or commitments (on the central role of the state, see Eckersley, 2004; Setzer and Nachmany, 2018). Direct influences from institutions to non-state actors are – at least regarding the topics studied here – less important, and hence the focus will be on the influence on state policy. This influence includes studying the more indirect influences the institutions may have on state policy via the agency of non-state actors, for example, by making it possible for them to shame the state for not living up to international commitments.

The focus is on the individual institutions' interaction with selected countries, viz. Denmark, India, Indonesia, the United Kingdom and the United States. I draw on existing frameworks to compare different mechanisms of influences from the international to the domestic level (Dobbin et al., 2007; Knaggård et al., 2016; Marsh and Sharman, 2009; Simmons et al., 2006) to identify four causal mechanisms of influence: cognitive change, normative change, changes to incentive structures and changes to agenda-setting. Studying these influences requires a focus on their impact on policy processes and policy debates (e.g. Kingdon, 2003; Sabatier and Weible, 2014) concerning climate finance and fossil fuel subsidies respectively, including the actors within this process and the setting in which they operate. A key assumption is that domestic policy is created through policy processes, in which different sets of governmental and non-governmental actors (different ministries and agencies, politicians, interest organisations, NGOs, etc.) seek to influence policy so it reflects their preferences. These actors have to operate within the formal structures of the policy process (e.g. who has access, who is authorised to draft proposals or to reach final decisions, etc.). They also have to operate within informal, ideational structures, which shape which cognitive ideas are considered relevant and valid, and which normative ideas are considered legitimate (Bakir, 2009). These ideational structures range from fundamental ideas that are difficult to change (e.g. about the role of markets) to more specific and malleable ideas that are often rooted in the fundamental ideas (see also Jenkins-Smith et al., 2014). The

different actors have different resources in terms of formal authority, financial resources, ability to mobilise public opinion and/or activists, and so forth.

As with the discussion of institutional output and of the causes of the output, I distinguish between cognitive and normative change, although in practice they may be difficult to disentangle. Both of these kinds of ideas may be internalised by actors as well as act as external constraints or resources for actors that do not internalise them. Importantly, new ideas that resonate with existing ideas and fundamental ideational structures (see Section 2.3) are more likely to lead to ideational change (Jenkins-Smith et al., 2014). As mentioned, these ideas can operate externally of the beliefs of policymakers, but still be something they have to take into account, or policymakers can internalise them and take them for granted (Checkel, 2005). The book focuses mainly on the institutions influencing policymakers directly, since this is the main channel of interaction for the three institutions. There is a particular focus on the officials who interact directly with the institutions, for example, finance ministry officials. Identifying the institutions' more indirect cognitive and normative influences on policy by affecting actors outside the policy process, for example, academics, think tanks or NGOs, is difficult, mainly because it is difficult to distinguish these influences from other influences on these actors. Yet the book also includes influences on the public and decision-making agenda, as discussed later in this section.

Cognitive change describes the provision of knowledge (including data) about the issue, including learning about how other actors have addressed the two issues and the lessons that can be derived from these experiences (e.g. successful cases of fossil fuel subsidy reform in other countries). Such knowledge concerns both the room for manoeuvre of actors to influence decision-making and how actors perceive the world. Thus, cognitive change may influence the framing and definitions used to address climate finance and fossil fuel subsidies, for example, debates regarding which definition of fossil fuel subsidies should be used to determine whether a country has subsidies (Koplow, 2018; Skovgaard, 2018). Such changes to cognitive ideas also include learning, understood as changing beliefs concerning the 'best' (generally most efficient or effective) way to achieve an objective based on experience, in this case that of other actors (Dobbin et al., 2007; Dolowitz and Marsh, 2012; Dunlop and Radaelli, 2013). Here, it is pertinent to focus on international institutions actively disseminating best practices (see Lehtonen, 2007 and Seabrooke, 2012 for the OECD and the IMF respectively) or acting as forums for peer-based learning (from both successful and unsuccessful reforms) among policymakers (Haas, 2000).

Normative change refers to changes in policymakers' normative ideas regarding the two issues, for example, the socialisation of officials into the norm that climate finance constitutes a way of addressing the risks associated with climate change. The internalisation of norms takes place via actors (often gradually) becoming convinced about its validity, for example, through normative suasion (Checkel, 2005). Concerning normative ideas as external, actors may be bound by previous commitments to normative ideas they do not believe in (e.g. the norm of pan-European liberalism; see Schimmelfennig, 2001) or strategically use such ideas to convince or constrain other actors (e.g. the norm of liberal internationalism; see Hurd, 2005). The spread of a normative idea within a country generally follows a pattern in which it is first internalised by a small set of actors, who are persuaded by its validity, followed by a 'cascade' in which the idea becomes established within the entire policy subsystem or society as something actors need to take into account whether they believe in it or not, and in the final stage acquires a 'taken-for-granted' quality that nobody questions (Finnemore and Sikkink, 1998). Norms and other normative ideas may be subject to contestation regarding their general appropriateness or validity, as well as regarding their application to specific situations (Wiener, 2004; Zimmermann et al., 2017).

Changes to incentive structures refers mainly to the effects of commitments (e.g. to undertake fossil fuel subsidy reform or provide climate finance) and conditionalities (e.g. cessation of IMF loans if countries do not reform fossil fuel subsidies) on the non-ideational structures facing domestic actors involved in how their country addresses fossil fuel subsidies and climate finance. It also refers to new knowledge about the credibility of other states' commitments or offers. These changes may work by influencing the power of these actors by providing them with (or withdrawing) material support or altering their power vis-à-vis other actors by providing them with powerful new international allies that seek the same objectives as them, for example, fossil fuel subsidy reform. The power of international economic institutions is well documented, particularly the influence of the IMF and World Bank programmes[4] (Pop-Eleches, 2009). Changes to incentive structures may also induce actors to change their positions on policy issues by increasing the costs or benefits (for them specifically or for the country as a whole) of particular policies (Kahler, 2000). The failure to adhere to commitments to, for example, fossil fuel subsidy reform, may result in IMF loans not being delivered, or low delivery of climate finance highlighted by OECD reporting may result in reputational costs influencing international cooperation on other issues, cooperation that directly benefits the country.

Agenda-setting refers to changes to the public (e.g. the degree of attention to the issues in the media) and decision-making agendas (e.g. debates within parliament

[4] Often referred to as 'Structural Adjustment Programmes'.

or the government). Reports, statements or commitments by the institutions affecting the place of fossil fuel subsidies on the public (media) and policymaking (within government, parliamentary committees, etc.) agenda constitute the most relevant agenda influences. Such influences allow actors favouring a particular policy change to initiate a debate about the policy, for example, whether the country has fossil fuel subsidies and whether they should be reformed. In this way, agenda-setting may support cognitive or normative change (e.g. framing a policy as a fossil fuel subsidy), or changes to incentive structures. Likewise, changes to the position of the two issues on the agenda may be influenced by cognitive, normative or incentive-based changes.

2.5 Summary

The framework outlined in the preceding text is useful for exploring the institutions' handling of fossil fuel subsidies and climate finance, including the economisation in the shape of their output, and the alignment, causes and consequences of this output. The framework includes reoccurring themes, most notably cognitive, normative and incentive-based dynamics. For instance, the framework may identify whether output in the shape of commitments with a distinct normative dimension (e.g. promoting a norm) have been driven by particular normative factors and have particular normative consequences. The framework will be important for the study of economisation, since it allows one to study how economisation has taken place (including variation between institutions) and the causes and consequences of economisation in its different shapes.

3

The Three Institutions, Their Roles and the Environment

The three institutions studied were all founded to deal with economic issues and to promote economic growth and stability. While this raison d'être and a broadly economic worldview are shared characteristics among them, they differ in terms of governance functions, organisational set-up, worldview, membership and decision-making procedures, interaction with other institutions, environmental track record and in the case of the OECD and the IMF also the autonomy of the International Organisation (IO) bureaucracy. The G20 is an informal forum for the most powerful state leaders and finance ministers in the world, the OECD is a key producer of (often quantified and economic) knowledge about all sorts of policy issues and the IMF is one of the most powerful IOs in the world as regards shaping national policy. To analyse economisation in the shape of how the institutions have addressed fossil fuel subsidies and climate finance, it is necessary to understand their background and how they align in terms of these factors. The factors may explain differences and similarities in their economisation of the two issues, as explored in the subsequent parts of the book. This chapter describes the three institutions individually, starting with the G20, followed by the OECD and the IMF. For each institution, the chapter outlines their history, governance functions, organisational set-up, worldview, membership and decision-making procedures, interaction with other institutions, environmental track record and for the OECD and the IMF also the autonomy of bureaucracies.

3.1 The G20

The G20 was established in 1999 primarily to deal with economic issues. Following the 1997–8 Asian financial crisis, several countries wanted a forum that was smaller, more informal and flexible than the UN institutions, while it at the same time included the larger emerging economies, unlike the Group of Seven (G7)[1].

[1] The United States, Japan, Germany, the United Kingdom, France, Italy and Canada.

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Initially, the G20 was a forum of finance ministers and central bank governors, but since 2008 the state leaders have met annually and the G20 process has been driven by them rather than the finance ministers and central bank governors. Its membership consists of nineteen of the thirty-three largest national economies (Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, United Kingdom, United States), and the European Union.[2] Permanent guest invitees are the IMF, the OECD, the Financial Stability Board, the International Labour Organization, the UN, the World Bank Group, the World Trade Organization, the African Union, the Asia-Pacific Economic Cooperation (APEC), the New Partnership for Africa's Development (the last three represented by the country holding the annually rotating presidency) and Spain. Other countries have been invited as non-permanent guests.

3.1.1 Governance Functions

The G20 is a forum for discussions on all sorts of international issues from violent conflicts to sustainable development, yet its original raison d'être – coordination of economic policy – is visible in its prioritisation of issues and their economic impact. During the first phase of the economic and financial crisis in 2008–9, the G20 emerged as *the* global forum for the coordination of economic policy (Barbier, 2010; Van de Graaf and Westphal, 2011). The G20 formal output is mainly declaratory and to some degree regulatory, consisting of joint statements, commitments, communiqués and reports. The statements and commitments may commit member states to particular actions (e.g. reforming fossil fuel subsidies), but do not contain legal obligations or sanctions in case of non-adherence. The G20 is an informal institution characterised by face-to-face interaction in small in-camera groups (Kim and Chung, 2012). Consequently, it also provides important informal output in the shape of workshops and ministerial meetings constituting venues for disseminating knowledge and socialisation into norms (on in-camera settings being favourable to socialisation, see Checkel, 2005).

More generally, while the G20 functioned as a crisis committee during the 2008–9 economic and financial crisis, coordinating national responses to the crisis, it has subsequently developed into a global 'steering committee' (Cooper, 2010; Crump and Downie, 2018; Drezner, 2014; Held and Young, 2013). A steering committee can be understood as 'a diplomatic device to encourage consensus between the biggest countries on major transnational issues' (Van de Graaf and Westphal 2011: 20). As such, the G20 is used for steering and coordinating

[2] The G20 members do not correspond exactly to the twenty largest economies in the world measured in terms of GDP.

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government policies through the commitments they adopt. While the steering role predominantly focuses on economic governance, particularly preventing excessive problems of global capitalism while preserving this system (Cooper, 2010) and its legitimacy (Slaughter, 2015), issues such as energy (Downie, 2015; Van de Graaf and Westphal, 2011) and climate change (Kim and Chung, 2012) have also been subject to steering. This steering role is more far-reaching and has a more long-term focus than 'just' being a global crisis committee. Finally, the role of the G20 is also described in terms of its ability to address issues characterised by deadlock within larger multilateral forums, particularly within the UN system, owing to its smaller and more informal setting (Cooper and Thakur, 2013; Widerberg and Stenson, 2013).

3.1.2 Organisational Set-up

The G20 does not have its own secretariat but relies on the state holding the annually rotating Presidency. The current Presidency works with the previous and upcoming Presidencies in the so-called G20 troika to ensure continuity, but only the current Presidency decides on the G20 agenda. The Presidency's influence over the agenda is most pronounced in its authority to decide whether papers from the different tracks preparing the G20 state leaders' summit make it to the agenda of the summit or not (Crump and Downie, 2018; Slaughter, 2017). Yet, the power of the Presidency over the agenda is not complete; for instance, the 2014 Australian Presidency was not able to keep climate change off the G20 agenda when most other G20 members wanted to address it (Pickering and Mitchell, 2017). The state leaders' summit is the most authoritative body within the G20 and is prepared through two tracks: the finance track involving finance ministry (and to some degree also central bank) representatives and the Sherpa track involving senior advisors to the state leaders, the so-called Sherpas. These two tracks are constituted by meetings between on the one hand finance ministers and central bank governors and on the other hand Sherpas, as well as a range of expert working groups that prepare draft decisions and papers for the finance ministers (and central bank governors) and the Sherpas respectively. These expert groups are not permanent in the way OECD expert groups are, but typically last for a few Presidencies until they are no longer included in an incoming Presidency's priorities. Generally speaking, the finance ministers and central bank governors deal with issues of economic relevance and the Sherpas with other issues. Besides these two tracks, other ministries such as agriculture, energy health and trade ministers also meet from time to time, but such meetings depend on individual decisions (mainly driven by the Presidency) and are not institutionalised in the way the finance ministers/

central bank governors and Sherpa tracks are. Conclusions from ministerial meetings are notable in their own right beyond shaping state leaders' conclusions, as they define G20 positions on issues that are not deemed sufficiently important to make it onto the limited agenda of the state leaders.

3.1.3 Worldview

Although the G20 addresses a range of issues, its original raison d'être of addressing economic issues still shapes its worldview. The G20 has prioritised economic issues and framed other issues in terms of their economic consequences (Slaughter, 2015; Van de Graaf and Westphal, 2011). Thus, the G20 focuses cognitively on the economic aspects of a given policy (for instance the economic consequences of climate change), but also normatively places economic growth and stability above other priorities, except perhaps peace. The criterion for membership of the G20 is also defined in economic terms: as being among the largest economies in the world. The worldview of the G20 is not firmly established in a bureaucracy, but in the meetings (at the state leader, ministerial as well as Sherpa and expert levels) taking place within the G20, including both the ideational environment emerging from regular interaction (Johnston, 2001) and the worldview of the government institutions the participants come from. In this respect it is important that the entire finance ministries track mainly consists of interaction between representatives of finance ministries and to some degree also of central banks. The economic worldview is also enhanced by the predominance of economic institutions among the permanent guests. Yet, there has also been significant contestation within the G20 concerning which economic ideas should prevail, reflecting that it is not a forum based on adherence to particular norms, but rather on process and on delivery in terms of steering (Cooper, 2010: 744). More specifically, emerging economies, particularly the BRICS (Brazil, Russia, India and China) have questioned the norm of free markets and have defended more interventionist approaches to economic policy-making (Chodor, 2017; Cooper and Thakur, 2013).

3.1.4 Membership and Decision-Making Procedures

The G20 members are selected primarily on the basis of the size of their economy, although countries such as Spain and the Netherlands are not members despite being among the twenty largest economies, and Argentina and South Africa are members despite being the twenty-first and thirty-third largest economies respectively. This is because regional distribution constitutes a criterion for membership besides economic performance (GLI Team, 2018). The G20 covers a greater share

of global GDP (85 per cent in total) and a more diverse group of countries when compared to the G7, and is a more 'club-like' institution when compared to the UN (Cooper and Thakur, 2013; Van de Graaf and Westphal, 2011). A key dynamic within the G20 is the relationship between developed and developing countries, an often conflictive relationship that has led to gridlock due to disagreement particularly between the United States and emerging economies (Chodor, 2017). The G20 does not rely on voting but on consensus-based decision-making. There are de facto some member states (especially the United States but also China) that wield more influence than others due to their larger power resources, which can be used to coerce or pay off other member states (Cooper, 2010). Such power relations are more common at the ministerial, Sherpa and state leader levels than within expert groups, which are more technical than the higher-level meetings. Often issues of political contestation are left by the experts to the political actors to solve.

3.1.5 Interaction with Other Institutions

The G20 is most closely tied to the G7 but differs in that it includes emerging economies. While the G7 is a more homogeneous group than the G20, making compromise easier, it is also less representative of the world's countries (thus reducing its legitimacy), covers a smaller share of the global economy and is less able to address issues spanning developed and emerging economies (Lesage, 2015). The G20 took over from the G7/8[3] as the preeminent minilateral forum following the 2008–9 economic and financial crisis (Cooper and Thakur, 2013). Occasionally, the homogeneity of the G7/8 means that it may adopt positions or commitments that are not possible to adopt within the G20, for example, on limiting climate change to 2 degrees Celsius (G8, 2009).

The relationship with the UN institutions can be interpreted in diverging ways. Whereas G20 members often justify the forum with reference to its ability to break deadlock within UN negotiations, non-G20 countries and civil society organisations have argued that its lack of representativeness and exclusion of smaller countries greatly reduces its legitimacy (Hajnal, 2015; Slaughter, 2013). Although the G20 covers 66 per cent of the global population, Least Developed Countries are not represented in the G20, and consequently the forum has been criticised for not representing the world's poor.

The OECD, the IMF and the World Bank have more synergistic relationships with the G20. Not only are they permanent guests at G20 meetings, they also provide knowledge input in the shape of reports and papers to the G20 and

[3] The G7 was known as the G8 from 1997 to 2014, when Russia was a member. It was expelled from the G8 because of its invasion of Ukraine.

participate actively in G20 expert meetings. Likewise, the OECD is also a permanent guest, knowledge provider and active participant in G20 meetings, and often undertake secretariat functions for the G20 (Hajnal, 2019).

3.1.6 Environmental Track Record

The G20 started to address environmental issues at the official level in connection with the spring 2009 Summit in London, at which state leaders committed to a 'green recovery' through stimulus packages containing investments in renewable energy, energy efficiency, and so forth (G20 Heads of State and Government, 2009a). Prior to 2009, environmental issues had predominantly been discussed by senior officials. The commitment was a response to calls for a 'green new deal' (Barbier, 2010), amid discussions of a return to Keynesian policies following the economic crisis (Tienhaara, 2016). Nonetheless, the commitment to green recovery was not as detailed as the UK Presidency wanted it to be, and its impact on the member states' economic stimulus packages is debatable (Tienhaara, 2016). The focus on green economic policies continued in the subsequent Korean and French Presidencies in the shape of emphasising green growth, a topic that gradually slipped down the agenda of the 2013 Russian, 2014 Australian and 2015 Turkish Presidencies (Tienhaara, 2016).

Besides green recovery/growth, climate finance and fossil fuel subsidy reform, which the G20 paid particular attention to, the G20 interest in environmental issues has largely been shaped by external events. For instance, the G20 routinely expresses its commitment to the United Nations Framework Convention on Climate Change (UNFCCC) process, and stressed sustainable development in relation to the 2012 Rio+20 Conference on Sustainable Development (G20 Heads of State and Government, 2009b; G20 Heads of State and Government, 2010a, 2010b, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019).

Concerning climate change generally speaking, spectators diverge on the track record and potential of the G20. While some argue that the G20 has led the global effort against climate change to a greater extent than the UNFCCC (Kirton and Kokotsis, 2015) or at least has had the potential to break UNFCCC gridlock (Slaughter, 2017), others have argued that G20 efforts may undermine the UNFCCC process (Eckersley, 2012). Climate change has generally been framed in terms of economic impact, as is evident in the G20 state leaders' declaration at the 2012 Los Cabos Summit (and the 2013 Saint Petersburg Summit) that 'Climate change will continue to have a significant impact on the world economy, and costs will be higher to the extent we delay additional actions' (G20 Heads of State and Government, 2012, 2013, item 71).

On a related note, energy, including renewable energy and energy efficiency and their link to climate change, has also increasingly been addressed by the G20 (G20 Heads of State and Government, 2011, 2014, 2015, 2016, 2017, 2018, 2019). The notion of the G20 acting as a global steering committee for energy has been popular among some member states and Presidencies, including the 2014 Australian Presidency, although straddling the divide between energy consumers and producers has proven difficult (Downie, 2015; Van de Graaf and Colgan, 2016; Van de Graaf and Westphal, 2011). The G20 has focused on the objectives of promoting 'transparent, well-functioning, reliable energy markets' in terms of inter alia reducing price volatility in energy markets, improving energy efficiency and access to clean technologies, promoting sustainable development and green growth, as well as improving the global governance architecture for energy (Downie, 2015).

3.2 The OECD

The OECD was established in 1961 to promote policies improving the economic and social wellbeing of people around the world. Its predecessor was the Organisation for European Economic Co-operation founded in 1948 to manage the Marshall aid distributed to non-Communist European countries. It expanded to include Western countries beyond Europe and North America, and later post-Communist European countries and countries above a certain level of income in Asia and Latin America, specifically Colombia, Israel, South Korea, Mexico and Chile.

3.2.1 Governance Functions

The OECD does not possess instruments that can force or incentivise states to change policy in the way for instance the IMF is able to use its conditional lending, but relies on ideational (cognitive and normative) influences (Ruffing, 2010). A key component of such influence is the OECD Secretariat's role as a producer of knowledge and data on all kinds of subjects except security, which is fed into and often produced in collaboration with issue-specific committees and working groups consisting of member state representatives. Thus, the OECD is first and foremost an institution producing knowledge in the shape of data and analysis. The knowledge aims to improve specific policies in its member states and secondarily beyond them. The OECD is one of the most important (*the* most important in certain policy areas such as education and development) providers of cross-country data. It also provides policy recommendations on the basis of a general analysis of a policy issue (e.g. green investment) as well as of a country-specific analysis of a member state's policies. The OECD has also been instrumental in developing and promoting important normative

ideas, notably the polluter pays principle (OECD, 1974). Furthermore, the OECD also acts as an informal venue for interaction and knowledge dissemination among member states, thus providing opportunities for socialisation and learning.

3.2.2 Organisational Set-up

The term 'OECD' refers to the entirety of the OECD including the OECD Council, as well as the OECD Secretariat, the international bureaucracy which is an independent actor in its own right. The OECD Council is headed by the Ministerial Council, which is chaired by one of its members on an annually rotating basis, and which meets annually to endorse a set of strategic priorities (Carroll and Kellow, 2011). Ministers from the member states also sometimes meet in sector-specific configurations, for example, meetings of the ministers of agriculture. The OECD Council also consists of the Council of Permanent Representatives (who are Paris-based and meet regularly), sector-specific Committees and their subsidiary bodies. Each Committee has a range of subsidiary Working Parties, which again have subsidiary Working Groups. For instance, the Environment Policy Committee has the Working Party on Climate, Investment and Development as one of its Working Parties. Members of the Committees come from either the member states' permanent representation to the OECD or national ministries based in their respective capitals (e.g. the ministry of the environment in the case of the Environment Policy Committee), whereas members of the working parties and groups tend to be capital-based experts.

The OECD Secretariat is headed by the Secretary-General, currently Angel Gurría, and consists of twelve sector-specific directorates, for example, the Environment Directorate. Of these, the Economics Department is considered the most important because of its cross-cutting involvement in practically all issue areas and the emphasis on economic issues within the OECD (Lehtonen, 2007; Lehtonen, 2009). The directorates work closely with the committee system (the committees and their subsidiary groups).

The OECD's division into sector-specific silos both within the Council and the Secretariat means there are divergent worldviews present within the OECD, especially compared to the IMF. The member state representatives in the committees, working parties and working groups often come from sector ministries (e.g. education, environment) that perceive the world through the worldview of these ministries.

3.2.3 Worldview

The different directorates of the OECD have distinct worldviews which correspond to those of their different governmental constituencies. Yet, they do not

differ as much as national ministries but are influenced by the overarching worldview of the OECD Secretariat that emphasises the economic aspects and consequences of policy issues and instruments, and prioritises economic growth and development (Ruffing, 2010). Such a worldview is not surprising considering that the OECD is an institution for *economic* cooperation and development, and has been characterised as a focal point for the 'growth paradigm' prioritising economic growth as the first priority and yardstick for societies (Schmelzer, 2015). Yet, the overarching worldview means that the overarching normative emphasis on economic priorities and sector-specific priorities such as environmental protection sometimes conflict.

Regarding cognitive ideas, the overarching worldview defines economic instruments such as taxes, investment policies and deregulation as the most effective ones, and on a more fundamental level prioritises producing data that can be analysed econometrically, and highlights economic consequences (Lehtonen, 2009; Ruffing, 2010). There are differences over time as well as between directorates. In the 1970s, the overarching economic approach changed from a Keynesian emphasis on state intervention and planning to a neoclassical one emphasising free markets (Carroll and Kellow, 2011). In the Secretariat, the fragmentation or differences between directorates are also curtailed by cross-cutting expert groups as well as the recruitment process, which emphasises economic analytical skills and degrees in economics (Dostal, 2004).

3.2.4 Membership and Decision-Making Procedures

The OECD membership covers thirty-six of the richest countries (measured in GDP per capita) in the world. Notably, neither oil-producing rich countries from the Middle East nor some of the poorest EU countries (Bulgaria, Croatia, Malta and Romania) are members. New member states include countries such as Mexico, Chile and South Korea, which because of their status in 1992 as developing countries are not classified as developed countries in Annex I of the UNFCCC. Consequently, they are climate finance recipients rather than contributors and have more lenient mitigation obligations within the UNFCCC than the other OECD countries. Yet, the vast majority of the OECD member states are considered to be developed countries within the UNFCCC regime (with obligations to provide climate finance and to mitigate climate change). Altogether, while it still makes sense to speak about the OECD as the rich or developed countries' club, there is no full correspondence between being rich and developed and being an OECD member.

The processes of adopting output by the OECD member states vary but are generally characterised by a consensual nature. The formal OECD Council output

consists of three types: output only binding on member states that vote for it (unless where otherwise specified), non-binding output (the most common kind) and output concerning the internal workings of the OECD (Carroll and Kellow, 2011). In other words, member states cannot be legally bound by decisions they do not wish to be bound by, but recommendations may rely on informal mechanisms of peer-pressure and reputational costs (Carroll and Kellow, 2011). Most of the preparatory work for and the negotiations concerning Council decisions take place within the committee system, and thus contested issues are generally solved or taken off the table before the Council discusses an issue. In the committee system, issues are decided unanimously by those who vote, meaning that a member state may choose to abstain without endorsing or blocking an issue (Carroll and Kellow, 2011).

3.2.5 Autonomy

The autonomy of the OECD Secretariat is somewhat limited. In terms of *resources*, the OECD is funded solely by member state contributions following a burden-sharing key based on gross national product (GNP). The Council of Permanent Representatives negotiates and approves the annual budget. Consequently, the autonomy of the Secretariat is curtailed by its inability to engage in major activities that its principal does not approve of, and the risk of punishment should it contradict the preferences of several member states. Yet, the expert authority of the OECD Secretariat allows it to publish reviews and other analyses that are critical of member states. More importantly, the member states are closely involved in OECD *decision-making.* Secretariat staff drafts all OECD publications, which are subsequently subject to review in OECD committees, working parties and groups. The publications representing the opinion of the OECD as a whole require consensus-based approval by the member states, while those only representing the opinion of the OECD Secretariat only require approval from the Secretary-General. Yet even the publications not requiring member states' approval are subject to discussion in committees, working parties and groups, allowing states to raise criticism of the findings, but also allowing for the naming and shaming of member states in the committees. Because of the consensual nature of OECD decision-making, it is possible for OECD Secretariat's publications to go against the preferences of individual member states, but it is difficult to go against the preferences of most or even large groups of member states. As regards decisions not directly concerning specific publications, for example, which indicators to include in data collection, the member states generally also have substantial influence.

Finally, the OECD *mandate,* as stipulated in the OECD Convention, is sufficiently broad to allow the OECD Secretariat to address any issue with relevance to economic growth, trade and stability (Carroll and Kellow, 2011), as long as the member states do not object.

3.2.6 Interaction with Other Institutions

The most important institution for the OECD is the International Energy Agency (IEA), which was established in 1974 by the OECD as a response to the 1973–4 oil crisis. The original purpose was to reduce dependence on imported oil, but it has gradually evolved to address all energy issues, including energy efficiency, renewable energy, coal and gas (Lesage and Van de Graaf, 2013; Van de Graaf and Colgan, 2016). The IEA is closely linked to the OECD both formally and informally through regular meetings between the officials from the two Paris-based Secretariats. Their membership circles are also largely coterminous, with OECD membership being a prerequisite for IEA membership and with only Chile, Colombia, Iceland, Israel and Slovenia as members of the OECD but not the IEA.

The OECD Secretariat often acts as a kind of secretariat to the G20, providing analyses of key issues, including taxation and climate change, for G20 working groups and ministerial meetings (Hajnal, 2019). The OECD also interacts with a wide range of specialised UN institutions in most areas except security (which the OECD does not address), including the UNFCCC, the United Nations Development Programme (UNDP), the World Health Organization and a range of other international institutions including several addressing environmental issues. Its role as a knowledge producing institution means it provides much of the data and information shaping the output of these institutions. The interaction between the OECD and UN institutions have at times been conflictive, since the OECD represents developed countries, whereas the UN institutions represent all countries in the world, a majority of which are developing. The OECD also cooperates with international economic institutions such as the IMF, the Bank of International Settlements (BIS) and the World Bank. Finally, the OECD's relationship with the EU ranges from the cooperative to the competitive, as the OECD covers most EU Member States and in certain areas (e.g. education statistics), the EU increasingly undertakes tasks similar to those of the OECD.

3.2.7 Environmental Track Record

OECD involvement in environmental issues dates further back than that of the G20 and the IMF. The OECD Environmental Policy Committee was established in 1970

and the Environment Directorate in 1971 and particularly the latter has played an important role in developing environmental policy both at the global level and in OECD countries by producing knowledge about environmental issues. Thus, the OECD Environment Directorate has for more than four decades been at the forefront of crafting environmental policy solutions (Bernstein, 2001). The formal OECD knowledge output on environmental issues can be divided into the informatory, conceptual and analytical (Busch, 2009: 76). The informatory output consists of publications about past, present and future environmental conditions and policies. The conceptual output develops indicators and methods for designing, assessing and testing environmental conditions and policies. Finally, the analytical output evaluates and reviews environmental policies, instruments and performances, including the regular Environmental Performance Reviews of individual member states, a cornerstone of OECD environmental policy (see also Lehtonen, 2007, 2009). The OECD has focused on a range of environmental and sustainability-related issues inter alia chemicals, waste, sustainable development and increasingly climate change.

In terms of consequences, the OECD has been important in preparing and thus shaping several multilateral environmental agreements, including the 1979 Convention on Long-Range Transboundary Air Pollution (LRTAP) and the 1989 Basel Convention on Transboundary Movements of Hazardous Waste and their Disposal (Carroll and Kellow, 2011).

From the start, the OECD has promoted the integration of economic and environmental policies (Ruffing, 2010). This promotion is evident in its development of the polluter pays principle as a way of internalising the environmental costs of production, and hence of addressing environmental issues in a way that is compatible with free markets and free trade (Bernstein, 2001). On a broader scale, the OECD has been crucial in developing the norm complex or paradigm of liberal environmentalism, which describes a normative compromise between environmental protection and economic growth, and which predicates international environmental protection on the promotion and maintenance of a liberal economic order (Bernstein, 2001). More specifically, the OECD reacted to the 1987 Report of the World Commission on Environment and Development 'Our Common Future' (known as the Brundtland Report) as well as other calls in the 1980s for reconciling environmental protection with economic and social development in developing countries through the concept of sustainable development. The OECD reaction consisted of interpreting the Report's conclusions as support for market-based policy instruments to address environmental issues and for economic growth and environmental protection as being compatible (Bernstein, 2001).

More recently, the OECD Secretariat's (OECD Secretariat, 2018) strategy for contributing to the implementation of the Paris Agreement included support for countries' low-emissions, climate-resilient pathways and for effective carbon prices, fossil fuel subsidy reform and making finance flows consistent with the Paris Agreement.

3.3 The IMF

The IMF was founded in 1944 at the ski resort Bretton Woods, New Hampshire by a group of Allied and neutral countries to ensure the stability of the international monetary system. Its sister organisation, the World Bank,[4] was also established with the purpose of promoting economic development. Together, the IMF and the World Bank are commonly referred to as the Bretton Woods institutions. Although the Bretton Woods institutions are formally UN specialised agencies, they differ from other UN institutions in that they allocate voting rights based on GDP, and for this reason and because of their independence vis-à-vis the UN set-up they are commonly referred to as non-UN institutions. After the 1971 collapse of the Bretton Woods financial system of pegged but adjustable exchange rates, which the IMF was supposed to maintain, it increasingly focused on providing support to countries incurring fiscal problems and on developing countries (Momani and Hibben, 2018). Following the 1997–8 Asian financial crisis, the IMF faced increased criticism regarding the usefulness of its conditionalities and the Washington Consensus (see discussion in Section 3.3.3) and its role within global economic governance decreased. Yet, following the 2008–9 economic and financial crisis, the IMF returned to its former position of strength, as evident in its central role in addressing the sovereign debt crises in Europe (Joyce, 2013).

3.3.1 Governance Functions

The IMF's two most fundamental tasks are *monitoring the economies of member states*, especially their exchange rates and balance of payments, and acting as an *international lender* (Vreeland, 2007). Monitoring can be characterised as regulatory, and to some degree as knowledge output, and includes the so-called Article IV consultations it conducts with nearly all countries. These consultations focus on whether a country's currency is overvalued and its exchange rate policy appropriate, and increasingly also other economic policies. Lending, which can be

[4] I use the term 'World Bank' to refer to the International Bank for Reconstruction and Development (established at Bretton Woods) and the International Development Association (established in 1956). The term the 'World Bank Group' is used to refer to the World Bank as well as the International Finance Corporation, the International Center for the Settlement of Investment Disputes and the Multilateral Investment Guarantee Agency.

characterised as distributive output, takes place in countries facing a balance of payments crisis. IMF loans are dependent on a set of policy conditions that the country has to meet to receive the funds. These conditions include policy changes that will improve fiscal balances, typically in the shape of austerity policies (Ban and Gallagher, 2015; Kentikelenis et al., 2016). In practical terms, officials from the IMF and the government (typically from a finance ministry and central bank) draft a 'Letter of Intent' specifying what the country aims to do if it receives IMF lending. This letter is subsequently sent from the country's head of state or government to the IMF, and thereafter approved by the IMF Executive Board (Vreeland, 2007). The conditionalities take the shape of an IMF programme. In the case of developing countries, these programmes are often developed in collaboration with the World Bank. The IMF has faced considerable criticism regarding these programmes and the policy conditions for having a negative impact on the poor and for infringing on national sovereignty. While the former line of criticism is directed at the so-called 'Washington Consensus' (discussed in detail in Section 3.3.3) and its focus on economic liberalisation and austerity, the latter line of criticism concerns the power of the IMF vis-à-vis national governments (Barnett and Finnemore, 2004).

Besides monitoring and lending, the IMF also provides informal output in the shape of technical and policy advice to governments (often in connection with monitoring and lending) and creates and disseminates knowledge in the shape of publications and workshops. The IMF's Research Department is particularly important in the latter respect. Thus, the Fund's output is mainly formal and to a lesser degree informal and focuses on the reallocation of resources and to a lesser but still important extent on knowledge production (see Section 2.1).

3.3.2 Organisational Set-up

The IMF as a whole is formally governed by the Board of Governors, consisting of one representative from each member state, with each having a different number of votes (see Section 3.3.4). The Board of Governors appoints twenty-four directors who constitute the Executive Board. The five members with the largest number of votes (the United States, Japan, Germany, France and the United Kingdom) each appoint a director, while the other member states elect the other directors, which usually represent larger groups of countries, for example, the Nordic-Baltic countries. The Board of Governors only meet annually, while the Executive Board meets several times each week and is more actively involved in the day-to-day operations of the Fund. The Executive Board also appoints the managing director, who heads the IMF bureaucracy, and always comes from Europe (owing to a compromise according to which the World Bank president always comes from the United

States). The IMF bureaucracy is organised into different departments, including the Area Departments covering different regions of the world, the Functional Departments and the Information, Liaison and Support Departments. The Functional Departments include departments undertaking cross-cutting functions, such as the Fiscal Affairs Department and the Research Department.

3.3.3 Worldview

During the period from its foundation until the late 1970s, Keynesianism and its emphasis on state intervention was the main theoretical foundation of IMF policy (Momani and Hibben, 2018). From the 1980s onwards, the IMF was a stronghold of the 'Washington Consensus', a paradigm based on monetarist economic policy (Chwieroth, 2008). This consensus can be understood as a policy paradigm rooted in the IMF, the World Bank, the Inter-American Development Bank, the US Executive, some members of the US Congress and Washington-based economic think tanks (Babb, 2013). The Washington Consensus emphasised structural reform such as privatisation; trade, financial and labour market liberalisation; and the protection of private property rights; as well as the IMF's traditional focus on cutting fiscal deficits (Babb, 2013). The use of policy conditionalities constituted a key component of the Consensus. In terms of economic theory, the Washington Consensus was rooted in monetarism and so-called 'new classical economics', which both drew on neoclassical economics and defined the market as providing the optimal solution and called for rolling back the role of the state (Momani and Hibben, 2018).

Yet, in the period following the 1997–8 Asian financial crisis, the IMF and the World Bank gradually changed their approach (Park and Vetterlein, 2010b), a change that was reinforced following the 2008–9 economic and financial crisis (Ban and Gallagher, 2015; Moschella, 2015). According to some spectators, the current IMF approach is best understood as a 'post-Washington Consensus' that is more open to Keynesian fiscal policies and less focused on cognitive ideas of liberalisation as creating growth and more emphasis on poverty reduction as a normative objective (Hibben, 2015). Importantly, the IMF's mandate was updated in 2012 to include all macroeconomic and financial sector issues that bear on global stability, and its objectives now is to 'foster global monetary cooperation, secure financial stability, facilitate international trade, promote high employment and sustainable economic growth, and reduce poverty around the world' (IMF, 2020b). How radical the changes in the approach of the IMF have been is debatable (Broome, 2015; Kentikelenis et al., 2016). The Fund has experienced radical change to 'its views on capital controls, the reorganisation of its financial

surveillance function, its interventions in the austerity versus stimulus debate, and lastly, the Fund's views of state–creditor relations' (Ban and Gallagher, 2015, 132). Importantly, a change to so-called revisionist macroeconomic fiscal policy (which breaks with monetarist policy in advocating counter-cyclical fiscal spending) within the Fund was possible because revisionist policy proposals were framed in mainstream academic terms, for example, by relying on macroeconomic modelling (Ban, 2015). Yet, changes in other policy areas have been more incremental. Generally, the Fund narrowed the scope of its policy interventions to focus less on sweeping structural reform, while maintaining its core focus on fiscal consolidation (Broome, 2015). Thus, the Fund focused less on macroeconomic dynamics but kept fiscal balances as a core objective and continued to adhere to the cognitive idea of such consolidation as leading to economic stability and long-term growth. Furthermore, the changes do not imply a break with normative ideas defining maximising economic welfare as the key objective and free markets as the optimal instrument to achieve this. Although other objectives such as social inequality, gender and climate change were added, they were framed in economic terms as being important due to their impact on economic growth and stability (Clift and Robles, 2020; IMF, 2015b).

The constructivist literature on IOs has placed a great deal of emphasis on explaining the IMF approach – be it in terms of a Washington Consensus or a post-Washington one – in terms of the IMF bureaucracy (Barnett and Finnemore, 2004; Chwieroth, 2008; Chwieroth, 2010). These explanations cover norm entrepreneurs as well as the worldview of the IMF (Barnett and Finnemore, 2004' Chwieroth, 2008, 2010; Hibben, 2015; Moschella, 2015). The bureaucratic worldview has generally been described based on the normative idea of maximising (economic) welfare, and cognitive ideas defining interventions in the market (e.g. regulation) as hindering the efficiency that is key to maximising welfare (Chwieroth, 2010). Key to this worldview is the economic training of the IMF officials, which traditionally hold a PhD in economics from a leading university, typically in the Anglo-Saxon world (Barnett and Finnemore, 2004; Chwieroth, 2010). Yet, the IMF worldview is not a fixed or homogenous entity (Kaya and Reay, 2019). As mentioned earlier, Keynesian ideas stressing a more active role for the state were prevalent until the late 1970s, and to some degree influenced IMF policy trends following the 2008–9 economic and financial crisis (Momani and Hibben, 2018). Nonetheless, even after Keynesianism's partial comeback in IMF policymaking, neoclassical economics continue to be at least as important in shaping IMF policy (Hibben, 2016; Momani and Hibben, 2018). Furthermore, much of the change in IMF policy has concerned changes to cognitive ideas regarding the causal effects of expansionary fiscal policy rather than fundamental beliefs about the effectiveness of markets, and has to

a larger degree been driven by IMF top management than by an ideational change among IMF staff (Ban, 2015). Beyond changes over time, there are considerable differences between departments, with some departments, notably the Fiscal Affairs Department, being more informed by neoclassical economics (Ban, 2015; Park and Vetterlein, 2010b).

3.3.4 Membership and Decision-Making Procedures

At the time of writing, the IMF has 189 members, virtually all the countries in the world minus a few of the smallest countries (e.g. Liechtenstein, Tuvalu) as well as North Korea and Cuba for ideological reasons. Yet only 5 per cent of the votes are distributed equally, with the remainder distributed according to the size of their capital deposit or 'quota'. Each country's quota is determined by its economy, more specifically a combination of its GDP, current account transactions and the variability of these transactions over time as well as its official reserves (IMF, 2008c, 2017b). Consequently, the United States has the largest vote share (17 per cent of the total votes), followed by Japan, China, Germany, the United Kingdom and France with 4–6 per cent each (IMF, 2020c). The G7 as a bloc controls 41 per cent of the votes. Most decisions are reached by a simple majority of 50 per cent of the votes, but some require an 85 per cent supermajority. Yet, member states rarely vote, instead generally reaching decisions via consensus (Vreeland, 2007). What this means in terms of the influence of individual member states is debatable. Some scholars have argued that the influence of the United States greatly exceeds its share of the votes, inter alia because smaller member states fear antagonising it (Broz and Hawes, 2006; Stone, 2008). On a related note, Grigoire Pop-Eleches (2009) argues that the member states with the largest economies (including but not limited to the United States) de facto define the course for the IMF. All things considered, while the United States and other major member states are undisputedly very powerful among the member states, especially regarding discussions on the Executive Board, their degree of influence is often dependent on the context and likely to be greater, the more closely involved the Board is (Momani, 2007).

3.3.5 Autonomy

The IMF bureaucracy enjoys considerable autonomy from its member states, especially when compared to the OECD. This autonomy is based on its control over its own resources, the limited involvement of member states in the decision-making process, and its broad mandate. Regarding *resources*, each member state

has a 'capital subscription' similar to a deposit in a bank account with the IMF. It is these funds that the IMF lends out. The interest rate on the loans and the profits from investing funds subsequently pays for the activities of the Fund. Hence, the IMF bureaucracy's activities are not dependent on which activities its member states decide to fund (Barnett and Finnemore, 2004). For most other IOs, the funding of their activities come from member state donations, and consequently the member states may either collectively decide whether to fund a given activity or not, or a member state may individually decide to withhold funding if it does not approve of the IO's policies (Graham and Serdaru, 2020).

As regards *decision-making*, the Executive Board approves all transfers of Fund resources to member states (especially lending), staff reports on member states, changes to member state deposits (so-called quotas) and most other major actions by the Fund (Barnett and Finnemore, 2004). Yet, publications on more general topics and of a more scientific kind (e.g. on the global costs of fossil fuel subsidies) as well as more low-key policy advice do not require Board approval. This is important, as the IMF is a large organisation covering a range of topics and virtually all countries, and although the Executive Board meets several times a week, it does not have the time to go into detail regarding all IMF activities, but instead focuses on the most important ones. The IMF staff draft all proposals that the Board discusses and decides. Although Board members on a few, politically important occasions have been involved in drafting lending programmes, and the IMF bureaucracy avoids drafting proposals that Executive Directors object to, the IMF bureaucracy has considerable discretion, especially concerning lower profile issues (Barnett and Finnemore, 2004; Momani, 2007). Not only may they define how policy issues are framed and which options are on the table, they also shape the agenda of the IMF generally and the Board specifically, and may place new items on this agenda or keep issues off it. Member states without a seat on the Executive Board have a very limited say in the activities of the IMF.

Finally, the IMF *mandate* both in its post and pre-2012 incarnations concerns economic policymaking without clearly demarcating its boundaries. Given that economic policymaking has profound implications for other policy areas, particularly but not limited to how fiscal policy determines the funding allocated to policy areas, the IMF staff has discretion to address all areas of domestic policy. This discretion is something the IMF staff arrived at during the 1970s, 1980s and 1990s by broadening its scope from focusing on currency exchange rates to practically all policy areas with economic implications, an expansion that relied on the argument that these policies and the fiscal deficit had a significant impact on exchange rates (Barnett and Finnemore, 2004, chapter 3).

3.3.6 Interaction with Other Institutions

The IMF's closest partner among the international institutions is the World Bank. Together they are referred to as the Bretton Woods institutions, and their headquarters are next to each other in Washington, DC. More importantly, they share a common policy paradigm in the Washington Consensus (as well as its more recent incarnations), and both moved in the same direction after this paradigm was transformed (Babb, 2013; Park and Vetterlein, 2010b). On an even more fundamental level, their bureaucracies share similar economic worldviews emphasising economic growth and stability as normative objectives and adhering to cognitive ideas defining free markets as causing such growth. Their relationships with their principals are also similar in terms of membership circle and degree of autonomy. Finally, the two Bretton Woods institutions often collaborate closely 'on the ground' in developing countries, both in terms of policy conditionalities in the context of lending and in terms of more general policy advice (Kranke, 2020; Momani and Hibben, 2015). Often there is a division of labour, in which the IMF focuses on macroeconomic and fiscal issues and the World Bank on development issues and concrete projects. While IMF collaboration with the World Bank mainly concerns developing countries (which the World Bank's jurisdiction is limited to), it has also collaborated closely with the European Union (EU) in the context of the debt crises of European countries such as Greece.

Beyond the World Bank and the EU, the Fund also collaborates with regional Multilateral Development Banks, especially within countries. The Washington-based Inter-American Development Bank in particular has also been considered a stronghold of the Washington Consensus (Babb, 2013). Other economic institutions including the OECD (Lesage and Van de Graaf, 2013) collaborate with the IMF on producing and disseminating knowledge. Likewise, the Fund has provided analyses to the G20 on a range of issues, mainly concerning economic policy coordination.

3.3.7 Environmental Track Record

Traditionally, the IMF has not paid much attention to environmental issues, and when it has done so, its approach has clearly reflected its economic worldview. From 1990 onwards, the Executive Board has induced it to address environmental issues, which has led to IMF staff defining environmental degradation as a potential threat to trade and budget balances as well as economic growth (Gandhi, 1998). IMF staff integrated environmental concerns in their interaction with states, including IMF programmes, mainly focusing on win-win situations such as phasing out subsidies to chemicals (Lindenthal and Koch, 2013). The staff also stressed

Pigouvian taxes (and to some degree also reform of environmentally harmful subsidies) as the optimal solution to environmental degradation (Gandhi and McMorran, 1996). Yet, this did not lead to substantial changes to Fund policy (Lindenthal and Koch, 2013); rather, IMF staff were keen on stressing that other institutions, especially the World Bank, were more suitable in terms of expertise and a mandate to address the issue (Fischer, 1996). In 2001, the IMF set up an environmental team within its Fiscal Affairs Department to support the integration of environmental concerns in IMF interaction with states (IMF Survey, 2001). Since 2001, the IMF has increasingly focused on climate change, including its macroeconomic impact, fossil fuel subsidies and carbon pricing (Lindenthal and Koch, 2013). The Fund has recently defined the key areas in which it is addressing climate change as (1) supporting countries contemplating carbon pricing and fossil fuel subsidy reform as a means of meeting commitments under the Paris Agreement, (2) supporting vulnerable developing countries build resilience to climate change, and (3) collaborating with other institutions on improving climate-related regulation of finance and insurance (IMF, 2019g, 2019h).

Nonetheless, the Fund has continuously been criticised for the negative environmental consequences of its policy conditionalities and advice. This criticism has focused on its advice and conditionalities inducing (especially heavily indebted) countries to commercially exploit natural resources, including rain forests and mineral resources, and to cut expenditure on environmental protection (Harvey, 2005; Le Prestre, 1989; Shandra et al., 2011). On a more fundamental level, the Fund has been criticised for its role in promoting the Washington Consensus that has led to less interventionist, more market-based policies and in general to a globalised economy in which emissions-intensive industries have moved to developing countries (Paterson and P-Laberge, 2018).

3.4 Summary

This chapter has outlined the differences and similarities between the three institutions that may be relevant for how they have addressed the two issues. Most fundamentally, the institutions differ in the governance functions with the G20 as a political forum for discussion and steering national policies, the OECD is a knowledge provider and the IMF is an operational institution carrying out its own policies. The organisational structure of the three institutions also varies considerably, with the IMF and the OECD having bureaucracies, and the G20 being a forum. Furthermore, the IMF bureaucracy has considerably more autonomy than the OECD's. They also differ in terms of membership, with the G20 covering twenty of the world's largest economies, the OECD all developed countries and the

IMF virtually all countries. In relation to this, the G20 and the OECD use consensus-based procedures to reach agreement and the IMF's voting procedures are based on countries' financial contributions. Finally, the OECD has a more extensive track record regarding environmental issues than the other two institutions.

In terms of similarities, all three share a worldview that focuses on the economic aspects of problems and defines economic growth and stability as key issues, but where the IMF is more strictly focused on economic objectives. The institutions also interact to a large degree with a similar set of institutions, including each other and the World Bank, while relations with the UN institutions are sometimes conflictual. All of these factors are relevant for how the economic institutions have addressed the two issues as economic issues, that is, economisation. How these differences and similarities play out with regard to the way the institutions address fossil fuel subsidies and climate finance is the topic of the remainder of this book.

Part III

Fossil Fuel Subsidies

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4

Fossil Fuel Subsidies

Key Issues

Subsidies for the production and consumption of fossil fuels exist in most, arguably all countries of the world, in spite of them undermining global efforts to curb climate change. Consumer subsidies are directed at the fossil fuel use of households or companies. They include free electricity or electricity at a reduced price, cooking fuels such as kerosene sold at below-market prices, petrol prices fixed at levels as low as USD 0.10 per litre and – depending on the definition – reductions in the value-added tax (VAT) and taxes on fossil fuels as well as prices that do not reflect the externalities associated with using the fuel. Producer subsidies are directed at the production of fossil fuels, and include inter alia tax rebates and loans, financial and technical support for exploring potential fossil fuel resources such as new oil or gas fields, direct financial transfers, and so forth.

Unlike most other policies in place to mitigate climate change, reforming such subsidies provides fiscal and macroeconomic benefits. Yet, fossil fuel subsidy reform received limited attention at the international level until the 2009 G20 commitment to phase out or reform inefficient fossil fuel subsidies (Van de Graaf and Blondeel, 2018). On the domestic level, policies constituting fossil subsidies have been reformed quite often (frequently only to be reintroduced or expanded at a later stage), but historically such reform has been driven by economic objectives rather than environmental ones (Skovgaard and van Asselt, 2018b). While the subsequent chapters will discuss this commitment and other efforts by the international economic institutions to address fossil fuel subsidies, this chapter will provide an introduction to the subject and the efforts to promote their reform by other institutions than the ones studied here. The chapter starts with a discussion of the different definitions of fossil fuel subsidies, definitions that have far-reaching political consequences, followed by an overview of the estimates of the size and scope of existing fossil fuel subsidies. Subsequently, I discuss the domestic politics of fossil fuel subsidies and their reform, followed by an overview of the efforts to address fossil fuel subsidies of other institutions than the ones studied in this book.

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4.1 Definitions of Fossil Fuel Subsidies

There is no agreement on how to define energy subsidies (Gerasimchuk, 2014; Koplow, 2018; OECD Secretariat, 2010b). This disagreement has far-reaching consequences for the measurement of the global and national levels of fossil fuel energy subsidies and the countries that are considered as having fossil fuel subsidies. Few observers dispute that policies that lower the price paid by consumers below the market price, for example, fixing the price of petrol at USD 0.30 per litre as it has been the case in Iran (Kojima, 2016), constitute an energy subsidy. Yet, several other types of policies may be defined as fossil fuel subsidies depending on the definition. Few if any policies are defined as fossil fuel subsidies by the policymakers that adopt them, but they may subsequently be defined as fossil fuel subsidies by other actors.

An important distinction is the one between attempts to identify (and often also measure) fossil fuel subsidies that rely on an inventory approach and those that rely on a price-gap approach. These two approaches depend implicitly or explicitly on different definitions of fossil fuel subsidies, for example, the price-gap approach relies on definitions of fossil fuel subsidies that define such subsidies in terms of prices being below a given benchmark.

The inventory approach focuses on government policies and defines as fossil fuel subsidies those policies that confer benefits to particular fossil fuel producing or consuming activities. On the consumption side, the inventory approach identifies as subsidies policies including direct spending on the lowering of fossil fuel prices, reduced tax or VAT rates on fossil fuels, and so forth. On the production side, it identifies a broader range of policies as subsidies (although this varies somewhat between different kinds of inventory approaches), including the public provision of infrastructure for fossil fuels (e.g. pipelines, railroads); tax reductions; insurances, loans and guarantees provided with more favourable conditions than what the market offers; research and development; as well as government ownership of fossil fuel extraction enterprises (e.g. loss-making coalmines). The focus on policies means that the inventory approach often leads to debates regarding whether a given policy actually confers such benefits. The inventory approach requires extensive data gathering to identify the subsidies within a given country, and inventories sometimes do not include all subsidies within a country due to data limitations (Kojima and Koplow, 2015; Koplow, 2018). Importantly, inventory approaches rely on different definitions of fossil fuel subsidies, all of them characterised by defining fossil fuel subsidies in terms of policies conferring benefits on the consumption and/or production of fossil fuels. One prominent example of such a definition is the World Trade Organization (WTO)'s definition of subsidies (of all kinds not just those concerning fossil fuels) as a financial contribution by

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a government that confers a benefit to the recipient (World Trade Organization, 1994, Article 1). Yet, it is also possible to include non-financial contributions, for example, policies reducing risk, under the definition of subsidies (Koplow, 2018).

The price-gap approach focuses on the consumer price of fossil fuels rather than the policies influencing such prices. Specifically, it identifies whether the consumer prices are below a given benchmark price and estimates the combined value of the difference between the two prices. The benchmark price is generally based on the international market price of a given fossil fuel, often with the transport and distribution costs and/or VAT added, and in some cases also taxes corresponding to the externalities (e.g. air pollution, climate change, traffic accidents) of using the fuel (Clements et al., 2013; Coady et al., 2015; Gerasimchuk, 2014; Koplow, 2009; Steenblik and OECD, 2003). The level of the benchmark price is crucial for estimates of the size of total fossil fuel subsidies, as a high benchmark price will lead to high estimates of total fossil fuel subsidies at the global and national level. The price-gap approach only identifies the effects of fossil fuel subsidies that influence consumer prices, and hence producer subsidies are included in such studies only to the degree that they have an effect on consumer prices, which they rarely do, as most fossil fuels (e.g. gas or oil) are sold in global markets.

Definitional aspects are also important as regards determining which policies should be reformed or phased out. Both the G20 and the Asia-Pacific Economic Cooperation (APEC) made the commitment 'to rationalize and phase out over the medium term inefficient fossil fuel subsidies that encourage wasteful consumption' (APEC, 2009; G20 Heads of State and Government, 2009b). This wording raises questions regarding the exact interpretation of the terms 'rationalize', 'medium term' and most importantly for the issue of defining fossil fuel subsidies, 'inefficient'[1] and 'encourage wasteful consumption'. As is discussed in Chapters 5–8, much of the discussion has focused on whether a country's fossil fuel subsidies are indeed inefficient and encourage wasteful consumption.

4.2 The Size and Scope of Fossil Fuel Subsidies

The size and scope of global fossil fuel subsidies depend on which of the aforementioned definitions is being used. Subsidies for the consumption and production of coal, natural gas, oil and products derived from these fuels (e.g. diesel, regular petrol, kerosene, liquid petroleum gas) are considered fossil fuel subsidies, as are subsidies for electricity and heat production based on fossil fuels (Kojima and Koplow, 2015). Subsidies for biofuels are generally not considered fossil fuel subsidies. In terms of geographical scope, most or virtually all countries (depending

[1] The first APEC commitment did not contain the word 'inefficient', but subsequent ones did.

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on the definition used) have some kind of fossil fuel subsidies in place. Policies subsidising the consumption of fossil fuels are more substantial in developing countries, whereas policies subsidising their production are common in both developed and developing countries. Price-gap estimates differ in their estimates of fossil fuel subsidies in developed and developing countries. Those which use benchmark prices without externalities, such as the International Energy Agency (IEA, 2018), find that fossil fuel subsidies are much smaller in developing countries than in developed ones, whereas those that include externalities, most notably the IMF (2019), find that developed countries account for more than a quarter of global subsidies. All estimates find that fossil fuel exporting countries have larger subsidies (compared to the size of their populations and GDP) than fossil fuel importing ones.

Studies of fossil fuel subsidies focus mainly on national policies, excluding development finance from multilateral development banks, multilateral and bilateral development institutions for fossil fuel production and consumption, which have been estimated at tens of billions of dollars (Kim and Urpelainen, 2013; Oil Change International et al., 2017). Political debates among policymakers, including the institutions studied in this book, have focused on national level subsidies, and consequently this book will mainly focus on how they have addressed this issue.

As mentioned previously, the different definitions translate into diverging estimates of the global economic costs or size of fossil fuel subsidies (not including support through development finance). The IEA uses a price-gap approach with a benchmark price including distribution, transportation and VAT but not externalities, and its estimate is not global but covers forty of the largest developing and emerging countries. This widely used estimate puts global consumption subsidies in 2017 at just over USD 300 billion, and generally fluctuating between USD 250 and 600 billion (IEA, 2015, 2016, 2017, 2018), depending mainly on the oil price. All told, the IEA estimate is at the low end of the range. The OECD has provided an estimate combining a price-gap and inventory approach (discussed in detail in Chapter 6) and covering the thirty-five OECD countries plus eight partner countries (Argentina, Brazil, China, Colombia, India, Indonesia, Russia and South Africa). The OECD estimates fossil fuel support in these countries studied in 2016 at USD 151 billion, and fluctuating between USD 150 and 250 billion in the years 2010–16 (OECD, 2018b). The OECD and the IEA have more recently started combining their estimates, and arrive at an estimate of USD 340 billion, fluctuating between USD 300 and 600 billion in the period 2010–17 for the countries covered by their combined estimate (OECD and IEA, 2019). The IMF's estimate (discussed in detail in Chapter 7) covers 153 countries and includes both producer[2] and consumer

[2] The producer subsidies constituting a very small part of the IMF's total estimate.

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subsidies, the latter calculated on the basis of a benchmark price including various externalities to arrive at its estimate of USD 5.2 trillion estimate for 2017 (Coady et al., 2019). The IMF's estimate is about ten times higher than the IEA's mainly due to the inclusion of non-priced externalities, but also due to its global scope. Importantly, these estimates do not tell us about who bears the costs of the subsidies. The estimates differ implicitly in this respect, as the IEA and OECD estimates concern the fiscal costs to public budgets of providing the subsidies, while the IMF estimates mainly concern the costs to society of using fossil fuels.

In terms of environmental consequences, fossil fuel subsidies are distinguished from other subsidies in targeting *fossil fuels*, which implies that they by definition have a negative impact on climate change. Different estimates exist of the direct effects of fossil fuel subsidies in terms of encouraging the use of fossil fuels and hence causing CO_2 emissions (Skovgaard and Van Asselt, 2019). These estimates differ in terms of their scope, in terms of the countries and subsidies covered (production subsidies and a range of consumption subsidies are often not included), as well as the methodology used and the time horizon. The estimates find that the emissions reductions alone from phasing out fossil fuel subsidies range from 1 to 23 per cent of the emissions in the countries covered (Burniaux and Château, 2011; Coady et al., 2015, 2019; Jewell et al., 2018). According to the conservative estimate of Jewell et al. (2018), reforming fossil fuel subsidies could deliver a quarter of the emissions reductions pledged under the Paris Agreement. These figures would be higher if the savings from reforms were redirected towards renewable energy (Jakob and Hilaire, 2015; Schmidt et al., 2017). Perhaps most importantly, these estimates cannot capture the political economic effects of breaking the lock-in of fossil fuel subsides in terms of fossil fuel infrastructure as well as the political power of fossil fuel corporate actors locking societies into fossil fuel-based modes of production and consumption (Erickson et al., 2020; Newell and Johnstone, 2018). Beyond climate change, fossil fuel subsidies lead to local air pollution, inter alia through the burning of coal and diesel, with effects on health that accounts for close to half of the global externalities of fossil fuel use according to the IMF (Coady et al., 2015, 2019; Parry et al., 2014).

In terms of redistributive consequences, proponents of fossil fuel consumption subsidies often justify them by framing them as a tool for poverty reduction, especially in developing countries (Rentschler and Bazilian, 2017a; Rentschler and Bazilian, 2017b). Yet, studies of the allocation of fossil fuel subsidies find that most of them are captured by the higher income segments of society. For instance, Arze del Granado, Coady and Gillingham (2012, p. 2241) in their study of twenty developing countries found that 'the richest 20% of households capture on average six times more in fuel subsidies than the poorest 20%'. Fossil fuel subsidies

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are regressive because they tend to be universal while subsidising goods that people with a higher income have more opportunities to enjoy, for example, fuel for cars.

4.3 The Domestic Politics of Fossil Fuel Subsidies and Their Reform

Irrespective of the definition of fossil fuel subsidies that is used, such subsidies have proven difficult to reform (Skovgaard and van Asselt, 2018b, 2019). While the world has arguably witnessed an increase in the number of fossil fuel subsidy reforms since the Pittsburgh commitment in 2009 (Rentschler and Bazilian, 2017b; Van de Graaf and Blondeel, 2018), fossil fuel subsidies still persist globally, and the decline in the IEA's estimates of global subsidies seem more driven by lower oil prices than by reform. Furthermore, it is far from certain to what degree fossil fuel subsidy reforms have been driven by the G20 commitment and the increasing international attention to fossil fuel subsidies. The reforms seem driven mainly by economic concerns, particularly fiscal deficits and the desire to provide more targeted social assistance to the poor (Rentschler and Bazilian, 2017b; Skovgaard and van Asselt, 2018a). The subsidies that have been reformed consist mainly of consumption subsidies in middle-income developing countries such as Egypt, India, Indonesia, Iran and the Philippines (Van de Graaf and Blondeel, 2018), as well as coal production subsidies in developed countries, especially EU member states such as Germany and Spain (Gençsü et al., 2017). The former group have increased and liberalised fuel prices and targeted subsidies at the poor, whereas the latter group have phased out coal subsidies gradually while providing support to communities dependent on coal mining (e.g. retraining of workers; see Zinecker et al., 2018).

An important aspect of the persistence of fossil fuel subsidies is that successful reform has often been followed by the reversal to old levels of subsidies After all, domestic actors have tried to reform fossil fuel subsidies as long as these subsidies have been in existence. Several attempts at fossil fuel subsidy reform have also failed, some before the adoption of the reform and some after implementation, inter alia due to public protests (e.g. in Ecuador and Sudan).

The literature on the politics of fossil fuel subsidies and their reform has identified several factors driving fossil fuel subsidies and the possibilities of reforming them. Here, I draw on the three kinds of factors identified in Skovgaard and van Asselt (2018c). First, the interests, strategies and organisation of actors – including both individuals and collective actors – that promote reform or try to keep subsidies in place. Their strategies include putting fossil fuel subsidies on the national political agenda or trying to block such efforts; framing fossil fuel subsidies in particular ways, building coalitions to promote or counter reform; and

communicating the benefits of subsidies or their reform to policymakers and the public. Fossil fuel subsidies have been framed, on the one hand, in terms of their economic or environmental cost and on the other, as important tools for reducing poverty or improving national development and competitiveness. Beyond the strategies of actors, their degree of organisation also matters, particularly as regards actors benefitting from subsidies (Victor, 2009). Actors opposed to fossil fuel subsidies tend to be less organised in interest groups than those supporting subsidies, yet both form alliances cutting across different political parties, ministries, and non-governmental organisations (Skovgaard and van Asselt, 2019). One reason for the higher degree of organisation of the proponents of subsidies is that the benefits of fossil fuel subsidies are tangible and concentrated in specific groups (e.g. fossil fuel producers, beneficiaries of consumer subsidies), whereas the benefits of fossil fuel subsidy reform are less tangible and more diffuse across time and space (e.g. improved public budgets and environment; see Inchauste and Victor, 2017).

Second, ideational factors, including the aforementioned definitional issues as well as knowledge about fossil fuel subsidies and their environmental and socio-economic effects, also influence the politics of fossil fuel subsidies. Established discourses regarding issues such as development, competitiveness and environmental protection constitute important ideational contexts that may shape whether a particular framing is successful or not, e.g. may the framing of fossil fuel subsidies as environmentally harmful fail in countries in which environmental protection is not defined as important (Skovgaard and van Asselt, 2018c). Importantly, the existence of fossil fuel subsidies is a sensitive issue in several (especially developed) countries, and governments are often reluctant to acknowledge that a given policy constitutes a fossil fuel subsidy.

The third group of factors is more structural and includes macroeconomic developments and the socio-political characteristics of a country. In terms of macroeconomic factors, both fossil fuel reserves (Overland, 2010) and high fossil fuel prices (Benes et al., 2015; Rentschler and Bazilian, 2017b) are associated with higher subsidies, whereas rapid changes to fossil fuel prices have offered windows of opportunity for reform (Benes et al., 2015). Furthermore, states with weak institutional capacity and authoritarian rule are more likely to subsidise fossil fuels, inter alia because they lack the capacity to implement more complex welfare policy instruments such as cash transfers (Cheon et al., 2013; Lockwood, 2015; Victor, 2009). Finally, there is an element of path dependency to fossil fuel subsidies, which means that once in place they are difficult to remove. The path dependency may be due to fossil fuel subsidies empowering actors benefitting from them – particularly fossil fuel extraction companies – and thus contributing to carbon lock-in (Newell and Johnstone, 2018) or becoming part of the social contract between the state and its citizens (Moerenhout, 2018).

4.4 Other International Efforts to Promote Fossil Fuel Subsidy Reform

Beyond the institutions studied in this book, a range of other institutions have been important to the efforts to reform fossil fuel subsidies. In general, their involvement with fossil fuel subsidies has increased since 2009. First, the IEA stands out on the basis of its extensive work on defining and measuring fossil fuel subsidies. These efforts date back to before 2009, most notably the 1999 issue of the IEA's World Energy Outlook, which included fossil fuel subsidies among its key foci (IEA, 2000). The most important part of the IEA's work on fossil fuel subsidies has been its estimates of the total size of fossil fuel subsidies in major non-OECD economies, which was first published in 2006 and has since provided a crucial knowledge base for addressing fossil fuel subsidies. This estimate is probably the most widely used estimate of the size of global fossil fuel subsidies. As mentioned earlier, it covers only forty of the largest emerging and developing countries, and it is thus somewhat misleading to refer to it as an estimate of *global* subsidies, although it covers a very sizeable share of global subsidies. Importantly, the IEA employs a price-gap approach to measuring fossil fuel subsidies based on a benchmark price corresponding to 'the full cost of supply or, where appropriate, the international market price, adjusted for the costs of transportation and distribution, and value-added tax' (IEA, 2016, p. 97, fn. 8). The IEA was one of the four institutions (together with the World Bank, the OECD and Organization for Petroleum Exporting Countries [OPEC]) that was requested by the G20 to measure the magnitude and the consequences of such subsidies (G20 Heads of State and Government, 2009b).

Of the other institutions requested by the G20 to study fossil fuel subsidies, the World Bank also has a long-running track record. World Bank studies on energy subsidies in general date back to the 1980s (World Bank, 1983), and studies on fossil fuel subsidies specifically to the 1990s (Larsen and Shah, 1992). In terms of policy, the World Bank's programmes induced developing countries to reform their energy subsidies (which almost always went to fossil fuels) as part of wider reform packages (Van de Graaf and Blondeel, 2018). However, the World Bank's attention to fossil fuel subsidies waxed and waned until around 2009, when its focus on fossil fuel subsidies reached a consistent level. The World Bank published numerous publications on fossil fuel subsidies in developing countries, particularly on the best way to phase out such subsidies (Kojima, 2016; World Bank, 2013b; World Bank with contributions from International Monetary Fund (IMF), 2014).

In terms of concrete efforts to induce countries to reform their fossil fuel subsidies, the Bank has focused explicitly on fossil fuel subsidies (rather than just subsidies in general). It has done so in terms of country specific recommendations (see e.g. Diop, 2014; Peszko et al., 2019) and assistance to such reform, for example, in the shape of expertise; workshops for learning from other countries;

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and financial support for policy dialogue, communication and the targeting of subsidies, and so forth. (McCulloch, 2017; Skovgaard, 2018). Notable in this respect is the Bank's Energy Sector Management Assistance Program (ESMAP), which has developed both an 'Energy Subsidy Reform Technical Assistance Facility' providing knowledge in the shape of an analysis of the environmental, fiscal, economic, political and social impacts of fossil fuel subsidy reform, as well as support for policy dialogue and the design of reform (World Bank, 2015). ESMAP has also developed the 'Energy Subsidy Reform Assessment Framework' (ESRAF), a guide to analysing energy subsidies, the impact of subsidy reform and the political context for subsidy reform (Flochel and Gooptu, 2016). However, the World Bank has also previously been criticised for providing billions of dollars in funding for fossil fuel production, inter alia coal- and gas-fired power plants, pipelines as well as oil and gas exploration, in spite of commitments to phase out such lending (The Big Shift Global, 2019).

The third of the four institutions requested to study fossil fuel subsidies by the G20, OPEC, had not previously addressed fossil fuel subsidies. OPEC was included among the four institutions due to the insistence of Saudi Arabia (interview with senior OECD officials, 29 April 2015) and has been less active than the other three institutions (Lang, 2011), and has been involved in fewer reports to the G20 than the other institutions. The lower level of involvement is evident in in that OPEC has contributed to fewer of the reports to the G20 than the other institutions (IEA, OECD, et al., 2010; OECD and IEA, 2019). The OPEC member states are among those countries with the highest fossil fuel subsidies total and per capita, and benefit from the fossil fuel subsidies in other countries in terms of increased exports (Jewell et al., 2018).

The institutions discussed in the preceding text cover energy and development. Other international energy and development institutions, such as the International Renewable Energy Agency (IRENA) and the UN Development Programme (UNDP), have been much less vocal concerning fossil fuel subsidies. As regards institutions addressing other issues than economic, development and energy issues, the picture is also rather mixed. Concerning environmental institutions, the United Nations Framework Convention on Climate Change (UNFCCC) is mainly notable due to its lack of attention to fossil fuel subsidies (van Asselt et al., 2018). The Kyoto Protocol contained a brief reference to the reduction or phasing out of subsidies in greenhouse gas emitting sectors (UNFCCC, 1997), but both the United Nations Framework Convention on Climate Change and the Paris Agreement remain silent on the issue. Opposition from oil-exporting countries as well as the general reluctance within the UNFCCC regarding addressing energy issues have meant that the attempts of some countries to place fossil fuel subsidies

within the UNFCCC have been unsuccessful (van Asselt and Kulovesi, 2017; van Asselt et al., 2018). Yet, thirteen countries have chosen to mention fossil fuel subsidy reform in the Intended Nationally Determined Contributions (INDCs) they have submitted in the context of the Paris Agreement, several of them committing to such reform (Terton et al., 2015). More implicitly, Article 2.1.c of the Paris Agreement specifies that the objectives of the Agreement shall be met inter alia by making 'finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development' (UNFCCC, 2015). Although fossil fuel subsidies are not specifically mentioned, they are generally not consistent with a pathway to low greenhouse gas emissions. Yet, the provision does not place any obligations on states to reform fossil fuel subsidies.

Perhaps due to their broader scope covering sustainability and development, the Sustainable Development Goals (SDGs) include more specific commitments to the reform of fossil fuel subsidies in their Target 12.c, which commits all countries to undertaking efforts to rationalise inefficient fossil fuel subsidies that encourage wasteful consumption. The wording of Target 12.c is rather similar to the G20 commitment in its emphasis on *inefficient* fossil fuel subsidies encouraging *wasteful consumption*, but leaves even more freedom to states, especially as they commit only to *rationalising* and not to phasing out such subsidies. Furthermore, the Goal does not include a reference to when such subsidies should be rationalised the way the G20 commitment refers to as the medium term. The effects of the SDG commitment as well as the Nationally Determined Contributions commitments under the Paris Agreement remain to be studied but constitute a move towards more attention to fossil fuel subsidies among environmental institutions.

The UN Environment Programme (UNEP) has been active in promoting fossil fuel subsidy reform through the production of knowledge in terms of reports on fossil fuel subsidies and most importantly an internationally agreed approach to measuring fossil fuel subsidies in the context of the SDGs (developed together with the OECD and the International Institute for Sustainable Development [IISD]; UNEP, OECD and IISD, 2019). It has also promoted the norm of fossil fuel subsidy reform and linked it to the SDGs (UNEP, 2019).

Also trade institutions are more notable in terms of what they have not done than what they have done. In spite of persistent calls for the WTO to adopt measures disciplining fossil fuel subsidies the way that they discipline several other subsidies, it has not done so, and other trade institutions have generally not addressed the issue (Bièvre et al., 2017; Steenblik et al., 2018). In 2017, twelve WTO member states called for the WTO to adopt measures disciplining fossil fuel subsidies, thus utilising one of the most effective incentive-based instruments in international governance, namely retaliatory trade measures sanctioned

by the WTO dispute settlement mechanism. However, this proposal has not found sufficient support from the rest of the WTO member states. One reason for the inaction is that most fossil fuel subsidies are not clearly trade distorting in the way that, for instance, several agricultural and renewable energy subsidies are (Steenblik et al., 2018). Countries could in principle (within the WTO or another trade institution) agree to sanction subsidies not because they are trade distorting but because of their environmental effects, as indeed was the case with draft versions of the currently abandoned Trans-Pacific Partnership Agreement (Steenblik et al., 2018). Yet, at the time of writing support for exploring this option within the WTO has come from only a few countries. The negotiations on an Agreement on Climate Change, Trade and Sustainability launched in 2019 by New Zealand, Costa Rica, Fiji and Iceland to use trade rules to tackle climate change and other environmental issues, specifically address fossil fuel subsidies (Costa Rica et al., 2019). Yet, it is too early to assess the eventual role of such an agreement in promoting fossil fuel subsidies.

Forums of smaller groups of states have been more successful in addressing fossil fuel subsidies, particularly promoting the norm of fossil fuel subsidy reform. Besides the G20, APEC adopted a commitment similar to the G20's just a few weeks later, and has also adopted voluntary reporting and peer-review processes, in which member states can report their fossil fuel subsidies and some of them even undergo peer reviews (Verkuijl and van Asselt, 2020). In 2016, both the North American Leaders' Forum – the heads of state of Canada, Mexico and the United States – and the G7 adopted commitments similar to the G20's but with 2025 as the phase-out date (unlike the G20 commitment which does not include a phase-out date). Furthermore, the Friends of Fossil Fuel Subsidy Reform was established in 2010 on the initiative of New Zealand (Rive, 2018). The Friends is an informal group of – at the time of writing – nine non-G20 countries (Costa Rica, Denmark, Ethiopia, Finland, New Zealand, Norway, Sweden, Switzerland and Uruguay) working to promote the norm of fossil fuel subsidy reform. Its activities include the 2015 Communiqué on fossil fuel subsidies inviting states and non-state actors to support accelerated action to eliminate inefficient fossil fuel subsidies (Friends of Fossil Fuel Subsidy Reform, 2015), voluntary peer review and agenda-setting, including the aforementioned call for WTO to address fossil fuel subsidies.

Finally, among the civil society actors promoting fossil fuel subsidy reform, the International Institute for Sustainable Development (IISD) and its Global Subsidies Initiative GSI stand out (Lemphers et al., 2018). The IISD established the GSI in 2005 to provide knowledge about (initially mainly biofuel, since 2009 mainly fossil fuel) subsidies and promote their reform. It has been involved in international analyses of fossil fuel subsidies and concrete reforms of subsidies.

4.5 Summary

This chapter demonstrates the intricacies of the politics of fossil fuel subsidies. In spite of the widespread international commitments to reforming fossil fuel subsidies and their economic and environmental benefits, these subsidies persist globally. Domestic factors, inter alia the efforts of actors benefitting from the subsidies, lack of awareness of the subsidies, fossil fuel reserves and (weak) governance capacity, have been the main obstacles to fossil fuel subsidy reform. Surprisingly, international environmental institutions have been quiet as regards addressing such subsidies, which puts the activities of the economic institutions into perspective and underscores why it is relevant to study these activities.

5

The G20 and Fossil Fuel Subsidies

The Catalyst

The September 2009 G20 commitment to reform fossil fuel subsidies took most spectators by surprise. Few of the limited number of people working on the topic were aware that such a commitment was being discussed (Van de Graaf and Blondeel, 2018), and the concept was largely unknown in broader circles. The surprise element only adds to the impression that there is a 'before' the September 2009 G20 commitment to reform fossil fuel subsidies and an 'after' (Skovgaard and van Asselt, 2018c). The commitment set in motion a range of efforts from other international institutions, which will be discussed in this chapter as well as the following ones. Its effects on the domestic level are less immediately evident, but nonetheless relevant. The G20 output from the Pittsburgh commitment and the subsequent, more technical output onwards is outlined in the next section. This is followed by a discussion of how US entrepreneurship was important in getting the G20 to address the issue, and how the output has been shaped by the membership circle and worldview of the G20 as well as interactions with the International Energy Agency (IEA), Organisation for Economic Co-operation and Development (OECD), Organization for Petroleum Exporting Countries (OPEC) and the World Bank. The subsequent section outlines the consequences of the G20 output, which was most pronounced in terms of promoting the norm of fossil fuel subsidy reform and of raising awareness of fossil fuel subsidies, in both cases both at the international and (to a lesser degree) the domestic levels.

5.1 Output: The Pittsburgh Commitment And The Subsequent Reviews

The G20 output has predominantly been formal and regulatory, most importantly in the shape of the 2009 commitment. The commitment reads as follows:

To phase out and rationalize over the medium term inefficient fossil fuel subsidies while providing targeted support for the poorest. Inefficient fossil fuel subsidies encourage wasteful consumption, reduce our energy security, impede investment in clean energy sources and undermine efforts to deal with the threat of climate change. We call on our

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Energy and Finance Ministers to report to us their implementation strategies and timeline for acting to meet this critical commitment at our next meeting. (G20 Heads of State and Government, 2009b)

This commitment is most important in normative terms, as it defined and elevated the norm of fossil fuel subsidy reform to a new level (Van de Graaf and Blondeel, 2018). While the commitment referred to the OECD and IEA estimates that phasing out fossil fuel subsidies could reduce emissions by 10 per cent by 2050 (OECD, 2009), it did not provide a definition of fossil fuel subsidies, or specify what the terms 'rationalize', 'medium term' and 'inefficient' meant. In this way, the norm was left vague, especially as regards the policies that would fall under the category of inefficient fossil fuel subsidies and thence be targeted by the norm. Importantly, fossil fuel subsidies were primarily framed in terms of their impact on climate change, while the importance of maintaining support for poverty reduction was also stressed. Fossil fuel subsidies were also framed in terms of macroeconomic consequences (e.g. 'inefficient fossil fuel subsidies encourage wasteful consumption, distort markets, impede investment in clean energy sources') while the fiscal impact was not mentioned.

The 2009 statement also contained two important clauses regarding future efforts to promote fossil fuel subsidy reform. First, the IEA, the OECD, OPEC and the World Bank were tasked with measuring the magnitude and the consequences of such subsidies (discussed in detail in Section 5.3). Second, member states committed themselves to submitting strategies and timetables for phasing out their fossil fuel subsidies while taking into account the needs of the poorest citizens (G20 Heads of State and Government, 2009b), leading to various kinds of output that are most important in normative terms. The commitment to submitting strategies and timetables led to tasking member state experts under the authority of their finance and energy ministers with coordinating and overseeing the implementation of the commitment (Kim and Chung, 2012). The experts have been meeting in the context of a broader working group on energy, the G20 Energy Transitions Working Group (previously the Energy Sustainability Working Group), which focuses on the transition to sustainable energy systems. The expert output on fossil fuel subsidies has generally been reported to the finance ministers, and the largest group of experts also came from finance ministries (interview with senior OECD official, 3 February 2020).

Discussions of how to define fossil fuel subsidies (including whether to include production subsidies), as well as of how to define 'inefficient' and 'wasteful consumption' did not result in an agreement on common definitions. Rather it was agreed to leave these issues to the reporting countries (Lang, 2011). Starting in 2010, the G20 member states reported on an annual basis whether they had any inefficient fossil fuel subsidies and the progress on reforming or phasing out these

subsidies, constituting regulatory output (Aldy, 2017). Seven countries (Australia, Brazil, France, Japan, Saudi Arabia, South Africa and the United Kingdom) have reported that they have no fossil fuel subsidies, whereas other countries have submitted plans of varying ambition for phasing out their subsidies (Kirton et al., 2013). The progress reports have focused mainly on measures taken to reform the subsidies identified in the 2010 country reports (Asmelash, 2017). The G20's bottom-up approach leaving it to the member states to define which fossil fuel subsidies they have and how to phase them out has been criticised for only inducing countries to act to a limited degree (Van de Graaf and Westphal, 2011). Nonetheless, the reporting requirement constitutes important ideational output in terms of forcing G20 member states to acknowledge the salience of the norm of fossil fuel subsidy reform and argue whether it applies to them, as well as in terms of promoting the framing of policies as fossil fuel subsidies. The working group has also served as the forum for officials for discussions and the exchange of knowledge about fossil fuel subsidies on the basis of their own experience and the reports provided by the IEA, OECD, OPEC and World Bank. There are very few forums in which finance (and economics) ministry officials can discuss climate change, and the working group served as a useful forum for such discussions focusing on fossil fuel subsidies (Interview with former senior US Treasury official, 6 May 2014). In the first few years, fossil fuel subsidies were still a new issue where there existed only limited knowledge, and the working group expanded the knowledge about the issue among the participants, and – via the reports from the four International Organisations (IOs) – also among a wider public.

A subsequent development was the 2012 decision by G20 state leaders to request their finance ministers to explore the options for voluntary peer reviews of member states' fossil fuel subsidies and their efforts to reform or phase them out (G20 Heads of State and Government, 2012). The peer review replaced self-reporting as the most important G20 (regulatory) output on fossil fuel subsidies (Rive, 2019). Currently, some member states (mainly those having undergone peer reviews) provide updates on their reform efforts at the meetings of experts, but no agreement has been reached regarding a proposal to reintroduce the mandatory self-reporting process with an IO review of the reports (interview with senior OECD official, 3 February 2020).

In 2016, the two largest economies and emitters, the United States and China, volunteered to be the first countries to undergo a pairwise peer review. In this review, they each first provided a self-report on their fossil fuel subsidies and the efforts to reform them; this was subsequently reviewed by the other country as well as the OECD, the IMF (in the case of China), Germany, Indonesia (in the case of China) and Mexico (in the case of the United States) (G20, 2016a, 2016b). In 2017,

Germany and Mexico, and in 2019 Indonesia and Italy, underwent similar peer reviews, whereas at the time of writing Argentina and Canada have planned such reviews. The later reviews have been carried out by China, Germany, Italy, Indonesia, Mexico, New Zealand, the OECD (acting as chair for all the reviews), and in the case of the 2019 reviews also the IEA, the International Institute for Sustainable Development (IISD) and the World Bank. The peer reviews follow a logic in which a developed and an emerging economy undergo a review together to avoid criticism of double standards. So far, the countries undergoing a peer review are all countries that have acknowledged having inefficient fossil fuel subsidies in their reports to the G20. The peer reviews have been criticised for not including all fossil fuel subsidies in the reviewed countries (see e.g. the criticism of Germany's peer review, Hansen, 2017). They are best understood as providing opportunities for learning (Verkuijl and van Asselt, 2020), getting states to accept the framing of particular policies as fossil fuel subsidies and acknowledging that the norm of fossil fuel subsidy reform is salient in regard to these policies. Importantly, although fossil fuel subsidies were addressed by officials from finance (and economics) ministries, and to a lesser degree also energy ministries, they were framed mainly as a climate change issue which also involved economic inefficiencies such as market distortions and the inefficient use of fiscal resources.

5.2 Causes

Regarding the factors influencing the adoption of the 2009 commitment (and hence the first aspect of economisation), entrepreneurship and relations with member states stand out. Before the Pittsburgh Summit, G20 member states including the United States had attempted to put fossil fuel subsidies on the G20 agenda for five years without success (interview with former senior US White House official, 17 February 2015). The difficulty of addressing fossil fuel subsidy reform in any international forum, particularly forums which include Saudi Arabia, meant that the commitment took spectators by surprise (Van de Graaf and Blondeel, 2018). Several G20 members, particularly Saudi Arabia, had blocked the previous attempts, underscoring the importance of which states are members of the institution and how the member states arrive at decisions (in this case consensus allowing one state to block proposals). The entrepreneurship of the US government (the G20 president) played a key role in placing the commitment on the agenda and also in terms of the US government drafting the commitment text (Van de Graaf and Blondeel, 2018). This draft text went fairly unchanged through the working groups of officials from the member states. One important change was the change in the

timeframe for the phase-out/rationalisation from five years to 'medium term', a change which was at the insistence of the Chinese (interview with former senior US White House official, 17 February 2015). The notion of a deadline for reforming or phasing out inefficient fossil fuel subsidies has proven controversial in all forums debating these subsidies, and has only been possible to adopt in the G7 and the North American Leaders' Forum, two smaller forums that do not include the largest emerging economies or oil producers, notably China, India and Saudi Arabia. This difference between the G20 and the two smaller forums regarding a deadline underscores the importance of which states are the members of the institution. Another important change to the draft commitment, was the BRICs (Brazil, Russia, India and China) successful insistence on adding 'rationalize' to the commitment to 'phase out and rationalize over the medium term inefficient fossil fuel subsidies' (Kirton and Kokotsis, 2015). Thus, the norm became less specific, since a more specific definition would have made it unpalatable to several G20 member states (Van de Graaf and Blondeel, 2018). The broad membership circle of the G20 (covering developed and emerging economies as well as fossil fuel exporters and importers) meant that the wording of the commitment was somewhat vague, but also increased its relevance to a broader set of countries and arguably also its legitimacy beyond the G20.

Within the US government, the initiative came from the White House (more specifically the Council of Economic Advisors). Owing to previous failed attempts to address fossil fuel subsidies in the G20, several officials doubted that the attempt would be successful, but still deemed it worthwhile (interview with former senior US Treasury official, 8 April 2014). The US government chose to act as a policy entrepreneur due to the perceived stalemate in the United Nations Framework Convention on Climate Change (UNFCCC) negotiations which led the government to look for issues which 'were good economic politics' as well as climate politics (interview with former senior US White House official and current IMF senior official, 17 February 2015). Previously, when the G20 member states had sought to address fossil fuel subsidies, the G20 meetings had been meetings of finance ministers (and central bank governors), but the G20 state leaders took over the issue in 2009 when they started to meet due to the economic and financial crisis. The transfer of fossil fuel subsidies from finance ministers to state leaders meant the issue was addressed by a set of actors with more power to adopt far-reaching decisions. Thus, it was a combination of external factors (the UNFCCC stalemate in the run-up to the fifteenth Conference of the Parties to the United Nations Framework Convention on Climate Change [COP15] and the crisis) and policy entrepreneurship which drove the adoption of the commitment. Arguably, had climate change not been as high on the international agenda in 2009, the Council

of Economic Advisors would not have addressed fossil fuel subsidies in the first place. Furthermore, the resources and institutional set-up facing policy entrepreneurs mattered. Had the initiative not come from the United States and the Council of Economic Advisors (recognised as one of the most powerful entities within the US government) and had it not been addressed by state leaders, other member states would have had better prospects of blocking the initiative.

In terms of how fossil fuel subsidies were addressed (the second aspect of economisation), it was the entrepreneurship of the Obama administration that framed fossil fuel subsidies as a climate issue (as well as an economic one), something which was controversial among some countries including India (see Section 5.3. The perceived stalemate during the UNFCCC negotiations as well as in the recently published OECD–IEA report (2009) on the climate consequences of fossil fuel subsidy reform influenced the framing of fossil fuel subsidies as a climate issue. While the UNFCCC stalemate, as previously mentioned, led the United States (and other G20 states) to promote fossil fuel subsidy reform as a climate instrument, the OECD–IEA report provided important knowledge regarding the climate impact of fossil fuel subsidy reform, specifically that 'eliminating fossil fuel subsidies by 2020 would reduce global greenhouse gas emissions in 2050 by ten percent' (G20 Heads of State and Government, 2009b, item 29). In other words, institutional interaction with the UNFCCC, the OECD and the IEA influenced the G20.

The (macro)economic worldview inherent to the G20 is evident in the framing in terms of '*inefficient* fossil fuel subsidies encourage *wasteful consumption, distort markets, impede investment* in clean energy sources' [author's emphasis]. Although the main purpose of reforming fossil fuel subsidies according to the G20 is to fight climate change, the causal chain through which this impact takes place is economic, i.e. through impeding investment and encouraging wasteful consumption. Furthermore, distorting markets is framed as constituting a problematic consequence in itself. In other words, the worldview of the G20 shaped the framing of fossil fuel subsidies (the second dimension or aspect of the economisation of fossil fuel subsidies), yet was less influential regarding the G20's decision to address fossil fuel subsidies (the first aspect of economisation), which was rather driven by climate concerns. This worldview was rooted in the G20's origins as a forum for dealing with economic issues and the economic officials drafting the commitment.

The 2009 commitment set the tone for much of the subsequent G20 output on fossil fuel subsidies. The G20 state leaders reaffirmed the commitment at every summit until the 2017 Summit in Hamburg, when opposition from the United States meant that joint references to the commitment were removed (Asmelash, 2017,

G20 Heads of State and Government, 2017). Only the G20 'Hamburg Climate and Energy Action Plan for Growth', adopted by the remaining 19 G20 members referred to fossil fuel subsidy reform (G20, 2017a). The US decision to withdraw from the Paris Agreement caused major contention at the summit. Consequently, references to climate related issues including fossil fuel subsidies at subsequent summits were adopted by the other G20 members without the United States, although the 2019 Osaka Summit reintroduced the fossil fuel subsidy commitment in a joint G20 declaration (G20 Heads of State and Government, 2018, 2019). While factors such as the membership circle and worldview inherent to the G20 remained unchanged, other factors changed after 2009. The US presidency already under Obama did not engage in the same level of entrepreneurship as in 2009, although the United States and China were important in volunteering to be subject to the first pair of peer reviews. Post-2009 presidencies were a great deal less entrepreneurial than the US one, although some presidencies promoted the issue to a larger degree than others, e.g. the Mexican presidency that managed to convince the members to agree on the conditions for the voluntary peer reviews. Once fossil fuel subsidies were placed on the G20 agenda and a process set in motion, it remained there until the Trump administration took over. In this way, the Trump administration acted as an 'antipreneur' resisting and rolling back normative change (Bloomfield, 2016). Some of the countries that lowered the precision of the commitment (e.g. China) ended up being rather active in the process, whereas others (e.g. Saudi Arabia) argued that the commitment did not apply to them as they did not have any inefficient subsidies (Kirton et al., 2013). Interaction within other institutions mattered most in the cases of the four institutions tasked with providing an analysis of fossil fuel subsidies. They have continuously provided material to the G20 that has shaped the knowledge of participants in G20 meetings as well as the broader public. This knowledge concerned the nature, scope and consequences of fossil fuel subsidies (economic, environmental and distributive) as well as how to reform them (IEA and OECD, 2018; IEA, OECD, et al., 2010; IEA, OPEC, et al., 2010; IEA et al., 2011; OECD and IEA, 2019; OECD Secretariat, 2010a; World Bank with contributions from International Monetary Fund (IMF), 2014).

5.3 Consequences

5.3.1 International Consequences

Starting with the international level, the G20 set in motion a range of activities through interaction with other institutions. Most importantly, among the four institutions requested to provide an analysis, the request caused an increased attention to fossil fuel subsidies beyond the analysis, thus influencing their agendas.

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The **OECD Secretariat** was already working on fossil fuel subsidies before the Pittsburgh Summit, but the request lifted OECD involvement to a new level (interview with OECD officials, 29 April 2015). It was only following the G20 commitment that the member states gave the OECD Secretariat the mandate to scrutinise their national fossil fuel subsidies (interview with OECD officials, 29 April 2015), an activity that goes beyond the G20 request. At a later stage, the decision by the G20 members that have so far committed to peer reviews of their fossil fuel subsidies (China, Germany, Indonesia, Italy, Mexico, and the United States) to invite the OECD Secretariat to chair those peer reviews once again lifted the OECD Secretariat involvement to a new level (Skovgaard, 2017a). Today, the OECD involvement in fossil fuel subsidies extends well beyond servicing the G20 (see Chapter 6 for more detail). A similar picture emerges regarding the **IEA**, which also addressed fossil fuel subsidies prior to the 2009 commitment, but which has increased its activities regarding such subsidies, including the number of reports dedicated to the topic since the commitment.

The **World Bank's** involvement with fossil fuel subsidies was arguably more significant prior to 2009 than those of the OECD and the IEA, as it had not only provided an early analysis but had also promoted reform as part of its programmes (see Chapter 4). After 2009, it continued these efforts while providing an increasing amount of analysis targeting fossil fuel subsidies as a distinct phenomenon (Kojima, 2016; Kojima and Koplow, 2015; Strand, 2013). Its Energy Sector Management Assistance Program (ESMAP) facility has also provided assistance and knowledge for countries considering fossil fuel subsidy reform (Flochel and Gooptu, 2016; World Bank et al., 2015). The drastic increase in World Bank attention to fossil fuel subsidies happened a few years after the Pittsburgh commitment, and can be attributed to the increasing attention to fossil fuel subsidies among member states, officials and management as much as the direct effect of the G20 request. The fourth institution requested to provide an analysis, **OPEC**, has unsurprisingly not paid the same kind of attention to fossil fuel subsidies as the other institutions beyond the reports to the G20, but has addressed the impact of fossil fuel subsidies and their reform on oil demand (OPEC, 2016).

Beyond the requested institutions, the G20 commitment has led to the adoption of similar commitments to reforming, rationalising or phasing out fossil fuel subsidies within forums including the **Asia-Pacific Economic Cooperation** (APEC), the **G7**, the **North American Leaders' Forum** and the **Friends of Fossil Fuel Subsidy Reform** (Friends). Friends was established in 2010 on the initiative of New Zealand inspired by the G20 commitment and with the intention of promoting the reform of fossil fuel subsidies (Rive, 2018). The group deliberately consists of countries that are not members of the G20 to promote the reform of

fossil fuel subsidies beyond this group and avoid duplication. Without the G20 commitment, this institution would not have been created in 2010. The APEC, G7 and North American Leaders' Forum commitments would not have been adopted without the G20 commitment, and include similar language (see Chapter 4), except that the G7 and North American Leaders' Forum commitments also include deadlines for the phase-out. These forums overlap considerably with the G20 in terms of membership. Finally, fossil fuel subsidies moving up the agenda of international institutions, particular among economic institutions, following the G20 commitment was also an important factor in the IMF addressing fossil fuel subsidies (see Chapter 7). Furthermore, although the adoption of **Sustainable Development Goal** (SDG) 12.c to 'rationalize inefficient fossil fuel subsidies that encourage wasteful consumption' (United Nations, 2015) was not directly inspired by the G20 the way the other institutions' commitments were, the wording of the SDG is very similar to the G20 commitment.[1] The fact that there was an existing commitment covering twenty of the largest economies, as well as the member states of both APEC and Friends, paved the way for the adoption of SDG 12.c.

5.3.2 Domestic Consequences

Turning to the influence on national fossil fuel subsidies, the G20 influence on the five selected countries is less clear cut (Skovgaard, 2018).[2] In the case of **the United States**, federal fossil fuel subsidies (defined as policies rather than non-priced externalities) consist of tax expenditure in support of producers of oil, gas and coal, and as consumption subsidies, particularly those directed at the energy costs of low-income households, together valued at several USD billions but falling at least until 2017 (OECD, 2020a). As a comparison, in 2018, the United States had a GDP of more than USD 20,000 billion (World Bank, 2020c). The US federal government has long acknowledged the existence of US fossil fuel production subsidies. The Obama administration tried to end tax breaks for fossil fuel production, but failed in the US Congress due to opposition from Democrats from fossil fuel producing states and Republicans (Rucker and Montgomery, 2011). Regarding the G20 reporting, the Obama administration submitted various self-reports and most notably participated in the first peer review. The US self-report from 2015 of the federal policies it considered to be fossil fuel subsidies was reviewed by a team chaired by the OECD Secretariat and included China, Germany and Mexico. In this report and in the 2014 G20 progress report, the United States acknowledged that the tax reductions and support for low-income households' energy costs constituted

[1] Although the SDG commitment is less demanding in terms of not mentioning the phase-out of fossil fuel subsidies or including a reference to a timeframe ('medium term' in the Pittsburgh commitment).
[2] This section expands on and updates Skovgaard (2018).

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fossil fuel subsidies, although the latter was not inefficient and hence should not be reformed (US Government, 2014, 2015). The 2015 report included four tax exemptions and a liability cap (in the range of USD 0 to 342 million) not included in the 2014 report (US Government, 2014, 2015). These five subsidies were identified in an inter-agency process carried out in anticipation of the peer review with the intention of identifying additional subsidies that merited inclusion (interview with US Treasury official, 20 December 2016). The Trump administration's unwillingness to address fossil fuel subsidies and other climate issues both within the G20 and domestically meant there was little scope for G20 influence on US fossil fuel subsidies.

On the public agenda, the attention to fossil fuel subsidies has waxed and waned over the years (Table 5.1), focusing in the beginning of the period on domestic proposals to end tax breaks and in 2019 on climate action) and only referring to the G20 in a few instances in 2009, 2010 and 2015. As Table 5.1 shows, the total number of articles referring to fossil fuel subsidies increased with a peak of twenty-two in 2012. However, only a few of them referred both to fossil fuel subsidies (in a way that related to US subsidies) and the G20, most notably in 2009 when referring to the Pittsburgh commitment and the Obama administration's role in bringing it about (Eilperin, 2009b; Shin and Eilperin, 2009). None of the articles made a connection between the G20 commitment and domestic fossil fuel subsidy reform (e.g. by referring to the commitment when discussing fossil fuel producers' tax breaks). Not even the peer review of US fossil fuel subsidies caught the attention of the newspapers.

In this way, the G20 changed the policymaking agenda by placing the identification of fossil fuel subsidies on the agenda of several agencies not usually taking much interest in the issue, and the ideational context of action by reframing specific

Table 5.1 *Fossil fuel subsidies and the G20 in the US media:* New York Times *and* Washington Post

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Articles referring to US fossil fuel subsidy reform *and* the G20	3	1	0	0	0	0	2	0	0	0	0	**6**
All articles referring to fossil fuel subsidy reform (international and domestic)	3	6	20	22	9	8	16	0	0	1	15	**100**

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policies as fossil fuel subsidies and making it difficult to argue that they did not constitute such subsidies. A liability cap and two royalty exemptions for oil and gas extraction – which amounted to tens of million dollars annually – were identified in the reports to the G20 as fossil fuel subsidies that could be reformed without congressional approval. They were reformed in 2014 and in 2016 respectively, the latter immediately following the election of Donald Trump as president (Bureau of Land Management, 2016; US Government, 2015).The three subsidies that were reformed are among the subsidies that were not acknowledged until the 2015 report (and the only ones not requiring Congressional approval), and in this way, the Obama administration lived up to the G20 commitment as far as possible. Yet, the decision to reform the subsidies was well under way before the peer review and was adopted by the Department of the Interior in isolation from the policy processes addressing the G20 commitment (interview with senior Department of the Interior official, 15 December 2016; interview with US Treasury official, 20 December 2016). Under the Trump administration, the 2016 decisions to reform the two royalty exemptions were weakened, while the reforms of the liability cap remained in place (Bureau of Land Management, 2018).

The peer review agreed with the US self-review regarding the subsidies identified (including the Low-Income Home Energy Assistance Program [LIHEAP] not being inefficient), but also argued that the support for inland waterway infrastructure mainly used to transport fossil fuels – not included in the self-report – constituted a fossil fuel subsidy (G20, 2016b). Altogether, the G20 commitment institutionalised the norm of fossil fuel subsidy reform, which the Obama administration sought to adhere to within the domestic constraints, and for which it was held accountable regarding policies it was reluctant to define as fossil fuel subsidies. Yet, this norm was challenged by the Trump administration, which explicitly made support for coal, gas and oil extraction a priority, and weakened two of the Obama administration's three reforms (Hermwille and Sanderink, 2019).

Regarding **the United Kingdom**, according to the OECD, direct fossil fuel subsidies consist mainly of reduced rates of value-added tax (VAT) for fuel and power, the covering of liabilities related to coal mining and tax breaks for oil and gas production, together estimated at several billion pounds (OECD, 2020a). This can be compared to the UK's 2018 GDP of USD 2,850 billion (World Bank, 2020c). In recent years, the UK government has introduced new measures subsidising oil and gas production by allowing for increased deductions of extraction costs from corporate taxes (OECD, 2019f). The UK government has promoted fossil fuel subsidy reform at the international level, including within the G20 (UK Treasury Official, interview, 24 November 2014). Yet, in its reports to the G20 (as well as domestically),

the UK government has argued that the UK provides no inefficient fossil fuel subsidies (Kirton et al., 2013; UK Department for Business, 2019a, 2019b, 2019c, UK Department of Energy and Climate Change and HM Treasury, 2013). This argument is based on the definition of fossil fuel subsidies as 'any Government measure or programme with the objective or direct consequence of reducing, below world-market prices, including all costs of transport, refining and distribution, the effective cost of fossil fuels paid by final consumers, or of reducing the costs or increasing the revenues of fossil-fuel producing companies' (UK Department for Business, 2019b; UK Department of Energy and Climate Change and HM Treasury, 2013).

Importantly, this claim was challenged by members of the UK Parliament, first and most notably the House of Commons' Environmental Audit Committee (with members from all major parties) in its report on energy subsidies (2013). The report opened new venues for actors – including environmental non-governmental organisations (NGOs) and renewable energy companies – opposed to fossil fuel subsidies, many of whom testified to the Committee and influenced its report. The Committee used inter alia a price-gap approach that (unlike the government) included VAT in the benchmark price, and consequently lower VAT on inter alia the electricity bills of households and small businesses, and were defined as a (GBP 3.6 billion) subsidy. The Committee also – unlike the UK Government – defined tax rebates for high-cost oil and gas fields and fracking as subsidies. In this way, the ideational influence from the G20 commitment brought fossil fuel subsidies onto the policymaking agenda. Specifically, the government's international commitment to the norm of fossil fuel subsidy reform not only brought attention to the concept of fossil fuel subsidies (a cognitive and agenda-setting dynamic), it also meant that the government could be held accountable to the norm even if it thought it was not relevant to the UK (the ideational dynamic known as entrapment; see also Schimmelfennig, 2001). Actors including members of the House of Commons' Environmental Audit Committee pointed to the perceived inconsistency between the UK government's commitment to the norm and high international profile on fossil fuel subsidy reform and the existence of, even growth in, fossil fuel subsidies domestically (Carrington, 2015a). In subsequent years, petitions to Parliament as well as questions to the UK government raised by members of both Houses of Parliament calling for the reform of UK fossil fuel subsidies were met by the similar response that the United Kingdom does not subsidise fossil fuels gov (HM Treasury, 2017a, 2017b, UK Department for Business, 2019a, 2019b, 2019c, UK Department of Energy and Climate Change and HM Treasury, 2013). Although the government engaged in cognitive discussions of whether

Table 5.2 *Fossil fuel subsidies and the G20 in the UK media:* The Guardian *and* The Independent

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Articles referring to UK fossil fuel subsidy reform *and* the G20	0	0	2	5	5	4	3	0	1	1	2	**23**
All articles referring to fossil fuel subsidy reform (international and domestic)	0	0	8	11	10	9	27	11	18	16	46	**156**

the norm was relevant to UK policies and price levels, it could not argue that the norm was not salient. With regard to the G20, the UK government ruled out participating in a G20 peer review of its fossil fuel subsidies on the basis that it did not have such subsidies (HM Treasury, 2017b).

These dynamics also played out on the public agenda (Skovgaard, 2018). The number of newspaper articles mentioning fossil fuel subsidies has increased substantially since 2011 (Table 5.2). Several articles linked the G20 commitment to fossil fuel subsidies in the United Kingdom, and referred to the debate concerning whether the norm of fossil fuel subsidy reform was relevant to UK policies and the alleged inconsistency between the UK government's international profile on fossil fuel subsidy reform and its domestic policy (Carrington, 2015a, 2019). This link was most pronounced in the period 2011–15, whereas in the subsequent years attention to fossil fuel subsidies increased, but the attention to the link between the G20 and fossil fuel subsidies subsided.

Concerning ideational dynamics at the level of officials, the Treasury was the ministry responsible for developing the UK government's definition of fossil fuel subsidies and for the G20. The two other ministries with important roles – the Department of Energy and Climate Change and the Department for International Development focused mainly on the international level (interviews with a Department for International Development official, 24 November 2014; Department of Energy and Climate Change, 7 October 2014, 28 April 2020). The interaction in the G20 working groups raised awareness of the issue but did not lead to fundamental cognitive and normative changes of ideas regarding British fossil fuel subsidies in the Treasury.

In the case of **India**, fossil fuel subsidies in India consist mainly of selling kerosene and liquid petroleum gas (LPG) at a loss, and are estimated at INR

hundreds of billions or USD billions (OECD, 2020a), or 1–2 per cent of GDP (IISD, 2014). Indian GDP was USD 2,700 billion in 2018 (World Bank, 2020c). National production subsidies are estimated at USD 1.5 billion (Bast et al., 2015). The Indian government acknowledges the existence of Indian fossil fuel subsidies, and has carried out a series of major reforms of consumption subsidies since 2013, liberalising prices and focusing subsidies on the poor (Garg et al., 2020; Jain et al., 2018). India is often hailed as a showcase of successful reform.

The Indian government has been sceptical of the G20 commitment, especially the G20 framing of fossil fuel subsides as an environmental issue, since the Indian government preferred to frame it as a purely economic and fiscal issue (for an example of this perspective, see Dasgupta, 2013). The scepticism reflects the historically predominant (yet increasingly challenged) view within the Indian elite that climate change is the responsibility of developed countries and that developing countries should not commit to climate change actions (Sengupta, 2019; Thaker and Leiserowitz, 2014). Nonetheless, the Indian government has implicitly acknowledged the relevance of the norm to India by reporting its plans to reform fossil fuel subsidies to the G20.

The framing of fossil fuel subsidies as a domestic and economic issue is mirrored in the public agenda, where Indian subsidies increased in importance with a peak in 2012–13 (when there was substantial discussion of whether and how to reform). After 2015, most of the reforms had been successfully implemented, and subsequent (less path-breaking) reforms received less attention. Thus, G20 ideational influence on the institutions on the public agenda is extremely limited, as only one newspaper article linked the G20 with domestic reform, and focused on India's status as a G20 member rather than the G20 commitment (Nandi, 2017; see also Table 5.3).

Table 5.3 *Fossil fuel subsidies and the G20 in the Indian media:* The Hindu *and* Times of India

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Articles referring to Indian fossil fuel subsidy reform *and* the G20	0	0	0	0	0	0	0	0	1	0	0	**1**
All articles referring to fossil fuel subsidy reform (international and domestic)	0	1	10	35	37	19	17	4	7	4	4	**138**

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The fossil fuel subsidy reforms have been the responsibility of the Ministry of Finance and the Ministry of Petroleum and Natural Gas. According to all former and current officials of the two ministries interviewed, the main reasons for undertaking these reforms have been fiscal and macroeconomic: there are cheaper ways of alleviating poverty, and the fossil fuel subsidies were detrimental to the public budget and the balance of trade (as they increased oil and gas imports). Two contextual factors – none of them linked to the G20 – made the reform possible: low oil prices and the liberalisation of the Indian economy since the early 1990s. Low oil prices created the scope in which to liberalise fuel prices without causing public protests.

Like India, **Indonesia** has considerable direct subsidies, which, according to the OECD, were constituted mainly by setting the prices of oil products and electricity below the market price and were estimated at around IDR 100 trillion or USD 7 billion USD (OECD, 2020a), currently at around 5 per cent of public expenditure (G20, 2019b).[3] As a comparison, in 2018, Indonesia had a GDP of USD 1,000 billion (World Bank, 2020c). The Indonesian government acknowledges that these policies constitute fossil fuel subsidies, and has since 2000 attempted, with varying success, to reform them (Beaton et al., 2017; Chelminski, 2018). Most of the sizeable production subsidies for oil, coal and gas have been difficult to quantify, yet it is safe to say that they amount to USD billions (Bast et al., 2015; G20, 2019). Since Joko Widodo became president in 2014, consumption subsidies for petrol have been phased out, and diesel and electricity subsidies reduced, although production subsidies have not been reformed (IISD, 2015b, 2018).

Unlike India, Indonesia has been supportive of the G20 commitment and underwent a peer review of its fossil fuel subsidies in 2019 simultaneously with Italy (G20, 2019b). The Indonesian government has also continuously reported its plans and efforts to reform fossil fuel subsidies to the G20. The peer review forced the Indonesian government to undertake more in-depth analysis of its fossil fuel subsidies, especially in terms of collecting more data about its production subsidies (G20, 2019b, Government of Indonesia, 2019). The peer review commended Indonesia for its reforms, including the way they were communicated and that the subsidies targeted the poor, but also noted more recent increases in fossil fuel subsidies and recommended the gathering of further information about production subsidies (G20, 2019b). The fossil fuel subsidy reform norm has generally had an influence on government policymakers, since failure to live up to the commitment is considered politically embarrassing (interview with Indonesian Ministry of Finance officials, 14 September 2016). The Indonesian government has also highlighted its fossil fuel subsidy reforms in its voluntary reporting to the G20 on

[3] Down from a peak of more than 20 per cent of public expenditure in 2014 (G20 2019).

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Table 5.4 *Fossil fuel subsidies and the G20 in the Indonesian media:* Kompass *and* Tempo

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Articles referring to Indonesian fossil fuel subsidy reform *and* the G20	0	0	0	1	0	0	0	0	0	0	0	**1**
All articles referring to fossil fuel subsidy reform (international and domestic)	0	1	4	61	28	45	18	19	48	60	26	**310**

measures supporting 'energy transitions and global environment for sustainable growth' (G20, 2019a).

Nonetheless, the reforms have been driven by domestic economic concerns rather than concerns about the G20 commitment, which instead was influential in cognitive terms of encouraging the Indonesian government to study their subsidies.

The G20 ideational influence on the public agenda has been virtually non-existent (Table 5.4). Most newspaper articles focus solely on domestic aspects of subsidy reform. Only one article referred briefly to the G20 efforts to phase out fossil fuel subsidies. Generally, the Indonesian public are unaware of the existence of fossil fuel subsidies or tend to underestimate them (Chelminski, 2018).

Finally, in **Denmark**, fossil fuels subsidies consist of reduced energy taxes for fuels used for specific purposes and for oil extraction. The subsidies as identified by the OECD are estimated to amount to above DKK 1 billion or USD 200 million (OECD, 2020a). This can be compared to the Danish GDP of USD 350 billion (World Bank, 2020c). Denmark is not a G20 member, and hence not subject to the 2009 commitment. Yet, it is an active member of the Friends of Fossil Fuel Subsidy Reform, which emerged due to the G20 commitment (see Chapter 4). Danish membership of Friends has not led to public discussions of Danish fossil fuel subsidies. Furthermore, Denmark has not subjected itself to a voluntary peer review of its fossil fuel subsidies within Friends in the same way as Sweden and Finland have done. Despite the increasing focus on fossil fuel subsidies since 2010, only two articles linked the G20 and Danish fossil fuel subsidies (Nielsen and Andersen, 2015). Generally, fossil fuel subsidies have been framed as an international (mainly developing country) phenomenon rather than a Danish one. The G20 commitment has had an indirect influence on Danish discussions of fossil fuel subsidies by

Table 5.5 *Fossil fuel subsidies and the G20 in the Danish media:* Politiken *and* Jyllands-Posten

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Articles referring to Danish fossil fuel subsidy reform *and* the G20	0	0	0	0	0	0	1	1	0	0	0	**2**
All articles referring to fossil fuel subsidy reform (international and domestic)	0	0	3	3	5	8	9	1	10	4	13	**56**

increasing attention to such subsidies among IOs, NGOs and civil servants, which again led to the aforementioned discussions of fossil fuel subsidies.

5.4 Summary

The G20's 2009 commitment was a catalyst for action on fossil fuel subsidies. It constitutes an important normative output, since it elevated the norm of fossil fuel subsidy reform from relative obscurity to a level of salience in which several institutions and most countries – also beyond the G20 – had to address it. Beyond the normative impact, the commitment has also had an important cognitive (and agenda-setting) impact in terms of raising awareness of fossil fuel subsidies on the international and domestic levels, and in terms of the knowledge about such subsidies produced by the four IOs requested to do so by the G20. The G20 output has not altered incentive structures. Subsequent output from the G20 has been more low-key and to some degree hindered by the lack of precision concerning the norm of fossil fuel subsidy reform as formulated in the commitment. Yet, the self-reporting and especially the peer reviews have forced G20 member states to address the salience of the norm to their domestic policies (especially in the case of the United Kingdom) and in the case of the peer reviews, have led to new knowledge about the subsidies of the countries reviewed (in the United States and Indonesia). All things considered, the consequences of the G20 output have been significant at the international level (especially in leading to similar international commitments), whereas the domestic consequences have been more limited but still relevant. The commitment has not in itself brought about any major fossil fuel subsidy reform.

The G20 commitment was triggered by US entrepreneurship utilising a conducive moment and reacting inter alia to the inaction within the UNFCCC (a reaction which amounts to institutional interaction). The commitment was shaped by this entrepreneurship, the membership circle (including insistence from some emerging economies on avoiding the norm being too precise) and the G20's economic worldview. Subsequent G20 output has been less shaped by entrepreneurship (except for the peer reviews) and more by the membership circle, the G20 economic worldview and interaction with the IEA, OECD, OPEC and the World Bank. The pro-fossil fuel stance of the Trump administration has played a small but still significant role in limiting G20 efforts on fossil fuel subsidies, although the other nineteen G20 members have moved forward without the United States.

6

The OECD and Fossil Fuel Subsidies

The Knowledge Provider

Both before and after the G20 commitment, the OECD has played a central role in providing knowledge about fossil fuel subsidies and promoting their reform. As an institution focusing on knowledge production, the OECD's involvement has not attracted the kind of public attention that the G20 commitment has done. The OECD's efforts have been more low key and, in many ways, linked to those of the G20, but undisputedly important to the international efforts to reform fossil fuel subsidies. Furthermore, the OECD involvement with these subsidies dates further back than that of the G20 and most other institutions.

This chapter proceeds with an outline of the OECD's (formal and informal) knowledge output on fossil fuel subsidies, which have an important cognitive dimension in terms of defining what fossil fuels are and how we can understand their implications. The subsequent section explains that the OECD initially addressed fossil fuel subsidies on the OECD bureaucracy's own initiative, but their involvement was lifted by interaction with the G20 and shaped by the institutional worldview inherent to the OECD Secretariat. This worldview emphasised the economic aspects of fossil fuel subsidies, but its influence was restricted by the limited autonomy of the OECD Secretariat. Finally, the consequences of the OECD output are discussed, with the finding that the output has had a cognitive influence on the domestic level and especially the international level.

6.1 Output: Knowledge Reigns Supreme

The OECD output on fossil fuel subsidies is knowledge oriented, either in the shape of formal publications or providing informal venues for learning about such subsidies and being socialised into the norm of fossil fuel subsidy reform. The OECD addressed fossil fuel subsidies before the G20 commitment as part of the regular environmental performance reviews of individual member states, studies of pricing policies and more general studies. Already in 1999, the OECD discussed fossil fuel

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subsidy reform as an instrument to achieve the Kyoto Protocol targets (OECD, 1999). The OECD Secretariat organised three workshops on environmentally damaging subsidies in 2002, 2003 and 2005 (OECD, 2002, 2003, 2005b), focusing mainly on finding a common definition for a subsidy and on methods for measuring subsidies and their environmental impact (Potier, 2002), that is, providing a forum for producing cognitive output in terms of learning and new knowledge. Most of the workshop presentations focused on subsidies in general or agricultural and fisheries subsidies, but a few addressed subsidies for coal, energy or transport (e.g. Franz, 2005). This was arguably a reflection of the fact that the OECD Directorate of Food, Agriculture and Fisheries was the main Directorate leading both workshops and publications, albeit in close cooperation with the Directorates of Environment, Trade as well as the IEA. The subsidies were framed in terms of their impact on sustainable development (OECD Secretariat, 2005; Pearce, 2002a). The Economics Department (the most influential OECD directorate) and the Environment Directorate have also – both before and after the 2009 G20 Pittsburgh commitment – focused on fossil fuel support in their 'Economic Surveys' and 'Environmental Performance Reviews' respectively, which analyse individual OECD member states. In the summer of 2009 – before the Pittsburgh G20 Summit – the OECD Secretariat published modelling of the climate change (and economic) impact of eliminating the subsidies measured by the IEA in *The Economics of Climate Change Mitigation* (OECD, 2009). This book was drafted by the Economics and Environment Directorates, and unlike subsequent OECD output framed fossil fuel subsidy reform in the context of adopting global carbon pricing. Their estimate that eliminating these subsidies would reduce emissions by 10 per cent was taken up by the G20 in the Pittsburgh commitment (see also Chapter 5 and Section 6.3).

Following the Pittsburgh commitment, the OECD increased its output on fossil fuel subsidies. This output was mainly drafted by the Trade and Agriculture Department with important input from the Environment Department and the Centre for Tax Policy and Administration. The OECD Secretariat co-authored reports to the G20 (IEA and OECD, 2018; IEA et al., 2011; OECD and IEA, 2019; OECD Secretariat, 2010a), and organised workshops on the topic. Perhaps most importantly, in 2011, the OECD published its first inventory of fossil fuel subsidies or 'estimated budgetary support and tax expenditures for fossil fuels' in twenty-four member states (OECD Secretariat, 2011). Given the sensitive nature of defining policies as fossil fuel subsidies in most OECD countries, this was an important cognitive output that reframed several national policies as subsidies, highlighting their negative environmental and economic impact. It also constituted important cognitive output in terms of collecting and producing new knowledge

about these subsidies, including about their fiscal costs. The inventory has been updated regularly in the following years (OECD, 2012b, 2015b, 2018b), expanding the countries covered to all thirty-six member states as well as Argentina, Brazil, Colombia[1], China, India, Indonesia, Russia and South Africa). The OECD has also published country briefs about fossil fuel subsidies in the individual countries covered in the inventory since 2015, a potentially controversial output due to the sensitive nature of fossil fuel subsidies (see Section 6.4).

More recently, the OECD Secretariat has chaired the G20 voluntary peer reviews, thus playing an important role in the production of knowledge about the subsidies in the countries reviewed and to some degree also in the institutionalisation of the norm of fossil fuel subsidy reform. The peer reviews are central to the G20's work on fossil fuel subsidies (see Chapter 5), and with the OECD Secretariat chairing the reviews, the sharing of best practices among countries are facilitated (Interview with senior OECD official, 3 February 2020). Importantly, the OECD Secretariat has significantly more expertise on the issue than the states participating in the review (International Organisations [IOs] such as the World Bank and the IEA also participate in some of them), and is a continuous presence in the peer reviews, unlike the other IOs. Altogether, the OECD Secretariat plays an influential role within the peer reviews. The OECD Secretariat's expertise is also the background for the OECD Secretariat and the IEA reviewing review Dutch fossil fuel subsidies in a similar way to how they have reviewed fossil fuel subsidies as part of the G20 peer reviews.

In terms of defining fossil fuel subsidies, the OECD has opted for what is referred to as a Total Support Estimate, combining an inventory and a price-gap approach to identify both consumption and production subsidies (Jones and Steenblik, 2010; Koplow, 2018). Importantly, the Total Support Estimate does not include externalities in its benchmark price. The OECD tends to speak about support rather than subsidies, since the term subsidy is seen as referring to a smaller set of measures than support[2], and since it may be legally problematic in relation to WTO disputes to define a measure as a subsidy (interview with OECD officials, 29 April 2015). The OECD uses the term fossil fuel support in the way that others use fossil fuel subsidies. Hence, when analysing how the OECD has addressed fossil fuel subsidies, I will focus on its efforts regarding what it itself refers to as fossil fuel support. More recently, the OECD and the IEA have combined their respective estimates to produce joint estimates of global fossil fuel subsidies to the G20 (IEA and OECD, 2018; IEA, OPEC, et al., 2010; OECD and IEA, 2019) and have combined their knowledge outputs within a joint portal (OECD and IEA, 2020).

[1] Colombia joined the OECD as its thirty-seventh member in April 2020.
[2] According to this approach, fuel priced above the world market price can be defined as supported but not as subsidised.

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Importantly, the OECD Secretariat placed a strong emphasis on environmental (particularly climate) and fiscal consequences of fossil fuel subsidies, and rather less on the macroeconomic dimensions (e.g. the costs of subsidies to society and their distortionary nature) and significantly less on distributive consequences. For instance, the OECD Secretary-General Angel Gurría wrote in the foreword to the 2011 Inventory that 'reforming or eliminating support for the consumption or production of fossil fuels can contribute to achieving economic and fiscal objectives, while also helping tackle environmental problems like climate change' (OECD, 2011a). The fiscal emphasis is evident in that subsidies are measured in terms of budgetary expenditure and tax expenditure (reductions in tax rates also known as tax rebates), that is their impact on public budgets, an emphasis also present in the OECD's work on agricultural subsidies. The macroeconomic costs of their climate impact are not measured.

6.2 Causes

The OECD's output addressing fossil fuel subsidies was particularly shaped by two factors: institutional interaction and the OECD worldview. Institutional interaction constitutes the most important factor increasing OECD interest in fossil fuel subsidies (the first aspect of economisation) with less influence on how the OECD addressed the issue (the second aspect of economisation). The G20 is the most important institution in this respect. Its request to the OECD Secretariat to analyse fossil fuel subsidies and the implementation of the Pittsburgh commitment lifted OECD involvement to a new level (interview with OECD officials, 29 April 2015). In the following years, the OECD Secretariat arranged workshops for representatives of member states and reported (individually and with the IEA, OPEC and the World Bank) to the G20 on fossil fuel subsidies. Furthermore, it was only following the G20 commitment that the member states gave the OECD Secretariat the mandate to scrutinise their national fossil fuel subsidies (interview with OECD officials, 29 April 2015). More recently, the decision by the G20 members that have committed to voluntary peer reviews to invite the OECD Secretariat to chair those peer reviews once again lifted OECD Secretariat involvement to a new level (see also Chapter 5). Interaction with other institutions was more important in shaping *how* the OECD addressed fossil fuel subsidies. As regards the drafting of the reports, especially country-specific ones, the OECD staff collaborated with the World Bank and the IEA, which in this way influenced the OECD approach to the subject (interview with OECD officials, 29 April 2015).

The worldview proved more important regarding the second aspect of economisation, how the OECD addressed fossil fuel subsidies, particularly in

cognitive terms. The OECD Secretariat is a bureaucracy characterised by emphasising the economic aspects and consequences of policy issues and instruments, and prioritising economic growth and development (see Chapter 3). Addressing fossil fuel subsidies fit such a worldview that in cognitive terms focuses on the economic impacts of policies and in normative terms prefers free-market policies. Fossil fuel subsidy reform has in many countries meant deregulation and leaving price-setting and investment decisions to the market without government interference. Such reform also agrees with the norm complex of liberal environmentalism, which the OECD Environment Directorate was instrumental in developing and which is prevalent in global environmental policy and predicates international environmental protection on a liberal economic order (Bernstein, 2001). Furthermore, the OECD Secretariat – consisting predominantly of officials with degrees in Economics – has the production of knowledge and data as its main task and prefers producing data that can be and are analysed econometrically and which highlights the economic consequences (Lehtonen, 2009; Ruffing, 2010).

In more specific terms, the OECD's Total Support Estimate is rooted in its work on other subsidies, particularly agricultural subsidies. The Trade and Agriculture Directorate was the most important Directorate because of its agricultural subsidy expertise. Because of this institutional legacy, the OECD definition of fossil fuel subsidies is derived from the OECD definition of agricultural subsidies, again derived from the WTO's definition of subsidies (of all kinds) as 'direct transfers, fiscal incentives and provision of goods and services' (OECD Secretariat, 2005, p. 17). The past experience of working with agricultural subsidies was entrenched in the organisation and hence influenced the definition of fossil fuel subsidies and the general framing of fossil fuel subsidies.

Other factors have also influenced the OECD efforts regarding fossil fuel subsidies to some degree. Policy entrepreneurs in the OECD Secretariat played an important role in seizing the opportunity provided by the increasing attention to the issue. Yet, they played a more important role regarding how the OECD addressed fossil fuel subsidies. Particularly Ronald Steenblik, until his retirement in 2018 the OECD's chief fossil fuel subsidy expert and perhaps the foremost expert on the topic globally, has shaped the OECD's approach both through internal discussions and policy and academic publications on fossil fuel subsidies published long before Pittsburgh (Jones and Steenblik, 2010; Steenblik, 1999, 2003, 2016; Steenblik and OECD, 2003; Steenblik et al., 2018). The influence of Steenblik and other policy entrepreneurs within the OECD Secretariat is most pronounced regarding the Total Support Estimate, which they have been committed to, and the fact that they have often been critical of alternative approaches such as the IMF's (Steenblik, 2014).

The influence of policy entrepreneurs and the institutional worldview of the Secretariat have been circumscribed by the role of another set of factors, namely the relations with member states. Member states have not been directly involved in drafting the most important OECD publications, which were published on behalf of the OECD Secretariat. Yet, member states played an indirect role by limiting how far the OECD staff could go (interview with Swedish Ministry of Foreign Affairs official, 30 April 2015). The consensual nature of OECD policy processes, even as regards OECD Secretariat publications (which are discussed but not approved by member states) means publications that go directly against the preferences of large groups of members states are highly unlikely (Carroll and Kellow, 2011). Thus, the relatively low degree of OECD Secretariat autonomy (at least compared to the IMF or the World Bank) acted as a scope condition for the influence of the institutional worldview and policy entrepreneurs, especially before Pittsburgh. If the Secretariat had had more autonomy than is actually the case, the institutional worldview and policy entrepreneurs could have been more influential.

The membership circle of the OECD covers more countries than the G20, but the thirty-seven OECD countries only include developed countries plus a few countries (Colombia Mexico, Chile and South Korea) classified by the World Bank as upper-middle income countries. The OECD addressed the fossil fuel subsidies of its member states as well as a number of other selected states, and addressed their subsidies differently from how the IMF or the IEA did, although the membership circle is very similar to the IEA's (only Chile, Colombia, Iceland, Israel and Slovenia are members of the OECD but not the IEA). Altogether, there is far from a perfect correlation between the preferences of the member states and the output of the OECD. Rather, the output was shaped predominantly by the institutional worldview and to some degree entrepreneurs within the OECD within the limits of the OECD Secretariat's autonomy.

6.3 Consequences

6.3.1 International Consequences

Given that the OECD's output has been ideational, mainly in terms of providing cognitive knowledge about fossil fuel subsidies and how to reform them, but also promoting the norm of fossil fuel subsidy reform, it is not surprising that the consequences have been ideational. At the international level, the most important consequence of the OECD's output on fossil fuel subsidies has been its effect on the **G20**. The OECD together with the three other IOs has provided several reports to the G20, which have shaped the debate within the G20 working groups and consequently also G20 output. In the working groups, the OECD could disseminate knowledge about fossil fuel subsidies to officials, who especially in the early years

had little knowledge of what was still an emerging subject. More recently, the OECD Secretariat chairing the G20 peer reviews has meant significant influence over the definition of what constitutes a fossil fuel subsidy in the countries reviewed. The G20 has de facto adopted an approach similar to the OECD's, identifying fossil fuel subsidies in terms of policies, rather than price levels, and focusing on a wide range of policies including reduced tax rates, the provision of services at below-market rates, etc., including for the production of fossil fuel subsidies. When the OECD approach was used in the 2016 G20 peer reviews of fossil fuel subsidies in the United States and China, it became the de facto standard for identifying fossil fuel subsidies, as is also evident in the efforts to measure fossil fuel subsidies in the context of the Sustainable Development Goals (SDGs) (see later in this section).

Counterfactually, had the peer reviews used a different definition of fossil fuel subsidies, e.g. one based on the IEA's price-gap approach or the IMF's inclusion of non-priced externalities, both the identification of fossil fuel subsidies and the policy recommendations would have been different (see also Chapter 7). The OECD's framing of fossil fuel subsidies in economic, especially fiscal, terms thus influenced how the G20 addressed the issue. Hence, the OECD's economisation of fossil fuel subsidies contributed to the ongoing economisation of the issue in the G20. The G20 treatment of fossil fuel subsidies is also shaped by other factors than the OECD Secretariat, which was only one of the participants in the peer review, but still constituted an important and constant factor.

Beyond the G20, the OECD has also contributed technical expertise to **APEC** peer reviews. The OECD Secretariat officials are closely involved in the development of a definition of fossil fuel subsidies in the monitoring of the **SDGs**. This definition is important, as it will be used to monitor all signatories to the SDGs' (virtually all countries in the world) efforts to live up to SDG 12.c and to 'rationalize inefficient fossil fuel subsidies that encourage wasteful consumption . . . ' (United Nations, 2015). More precisely, it is used to measure progress in terms of indicator 12.c.1 the 'Amount of fossil fuel subsidies per unit of GDP (production and consumption)', an economic framing of fossil fuel subsidies (UNEP et al., 2019). The definition was adopted by the SDG Expert Group on Fossil Fuel Subsidies chaired by Ron Steenblik from the OECD Secretariat and Pete Wooders from the International Institute for Sustainable Development (IISD). It draws on the fossil fuel definitions of the WTO, which the OECD also draws on and which identifies fossil fuel subsidies in terms of policies, as well as the IEA definition which identifies them in terms of prices (UNEP et al., 2019). More specifically, it includes direct budget transfers (based on the WTO definition), so-called induced transfers (based on the IEA definition and measured in terms of

price-gaps rather than policies and also used by the OECD), as well as 'tax expenditures, other government revenue foregone and under-pricing of goods and services, including risk' (UNEP et al., 2019, p. 41) which is optional for governments to report. Risk transfers, part of the OECD definition, are not included.

6.3.2 Domestic Consequences

The domestic consequences of the OECD output are harder to discern.[3] The OECD's output is cognitive and normative, and it is difficult to distinguish the influence of the OECD from other international institutions on the domestic level. In the case of all the five countries studied, the OECD published country briefs focusing specifically on fossil fuel subsidies and also addressed the issue in environmental performance reviews. It also arranged several workshops for officials on fossil fuel subsidies, which was important especially immediately after the Pittsburgh commitment. At this time, fossil fuel subsidies constituted a new concept the understanding of which was still to be shaped, also among officials from finance and energy ministries (author's observation as a Danish official participating in one of these workshops in 2010).

Regarding **the United States**, the OECD identified federal fossil fuel subsidies to producers of oil, gas and coal, as well as to the energy costs of low-income households, together valued at several USD billions (OECD, 2020a). OECD influence on the United States was arguably most salient in the case of the G20 peer review, which as discussed in Chapter 5 constituted a small but significant effect on the Obama administration's efforts to reform US fossil fuel subsidies.

Table 6.1 *Fossil fuel subsidies and the OECD in the US media:* New York Times *and* Washington Post

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Articles referring to US fossil fuel subsidy reform *and* the OECD	0	0	0	1	0	0	2	0	0	0	0	**3**
All articles referring to fossil fuel subsidy reform (international and domestic)	3	6	20	22	9	8	16	0	0	1	15	**100**

[3] This section expands on and updates Skovgaard (2018).

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Besides the peer review, the OECD had already recommended reforming environmentally harmful subsidies in its environmental performance reviews (OECD, 1996, 2005a) and in its country brief on US fossil fuel subsidies (OECD, 2019g). Yet, the OECD defining specific policies as subsidies in these reports had little impact, since these policies were already acknowledged as subsidies, and actors in the United States, including environmental NGOs and parts of the Democratic Party, sought to reform them but faltered due to domestic opposition (see also Chapter 5). On the public agenda, very few references were made to the link between the OECD and fossil fuel subsidies (see Table 6.1), but in one case referring to the OECD's definition of fossil fuel subsidies as including tax breaks for fossil fuel companies and to such tax breaks in the United States (Schwartz, 2015).

In the case of **the United Kingdom**, the OECD identified fossil fuel subsidies worth billions of pounds targeting heating and power consumption by households as well as the production of oil, natural gas and coal (OECD, 2019f, 2020a). In terms of promoting the norm of fossil fuel subsidy reform, the OECD Secretariat commended the United Kingdom for phasing out sizable subsidies for coal production, but also noted the introduction of tax reductions for oil and gas production (OECD, 2019f). The OECD's influence was most pronounced with regard to the House of Commons' Environmental Audit Committee's (which includes members of all major parties) report on energy subsidies (2013) and the related debate about UK subsidies.

While the report and the debate were brought on by the G20 commitment and the UK government's claim that it provides no inefficient fossil fuel subsidies (Kirton et al., 2013), the OECD's output on fossil fuel subsidies shaped the report and the debate. The OECD's definition of fossil fuel subsidies as including all policies that confer benefits on fossil fuels, including reduced tax and value-added tax (VAT) rates, differed from the UK government's definition of fossil fuel subsidies as 'any Government measure or programme with the objective or direct consequence of reducing, *below world-market prices* [author's emphasis], including all costs of transport, refining and distribution, the effective cost of fossil fuels paid by final consumers, or of reducing the costs or increasing the revenues of fossil-fuel producing companies' (UK Department of Energy and Climate Change and HM Treasury, 2013, item 112). In other words, policies that lowered fuel prices below what they would be if they were fully taxed but above the world market price including transport, refining and distribution costs, would be considered a subsidy by the OECD but not by the government. Hence, the OECD's finding that the United Kingdom's reduced VAT rate of just 5 per cent on the heating fuel and power consumption of private households constituted a subsidy worth billions of pounds annually ran counter to the UK government's claims but

was used by the Environmental Audit Committee (2013). Likewise, the Environmental Audit Committee drew on OECD fossil fuel subsidy reports to identify reduced tax rates for fossil fuel extraction as subsidies (House of Commons Environmental Audit Committee, 2013). In 2019, the OECD's definition became again the topic of debate, when the UK government responded to questions from the House of Lords' European Union Committee and a petition to redirect fossil fuel subsidies to renewable energy with reference to the United Kingdom not having such subsidies according to the IEA definition, and that the OECD's inclusion of individual tax reliefs is 'devoid of their context within our overall tax regime' (HM Treasury, 2019, item 2; UK Department for Business, 2019c). This reply led the House of Lords' European Union Committee to suggest that the UK government should use the OECD's definition, as this was more compatible with UK climate leadership (House of Lords European Union Committee, 2019).

As is evident in Table 6.2, the OECD had only a limited impact on the UK public agenda, and only in the period 2012–15. Moreover, few of these articles directly linked OECD estimates and UK fossil fuel subsidies, although the Overseas Development Institute and Oil Change International's (two NGOs) use of OECD data to criticise G20 countries' fossil fuel subsidies was referred to (Vidal, 2014b).

Thus, the OECD had an important cognitive influence on the policy debate regarding fossil fuel subsidies, especially regarding the question of what constitutes a subsidy. It played a more indirect normative role, as the House of Lords' European Union Committee associated the OECD's approach to identifying fossil fuel subsidies with climate leadership. Yet, this did not lead to reform of fossil fuel subsidies, as the United Kingdom has rather increased fossil fuel subsidies for oil

Table 6.2 *Fossil fuel subsidies and the OECD in the UK media:* The Guardian *and* The Independent

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Articles referring to UK fossil fuel subsidy reform *and* the OECD	0	0	0	1	1	1	2	0	0	0	0	**5**
All articles referring to fossil fuel subsidy reform (international and domestic)	0	0	8	11	10	9	27	11	18	16	46	**156**

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and gas production through improving the possibilities for deducting extraction costs from corporate taxes (OECD, 2019f).

India is not an OECD member state but has nonetheless been part of the OECD's inventories of fossil fuel subsidies. According to the OECD, fossil fuel subsidies in India consist mainly of selling diesel, kerosene and liquid petroleum gas (LPG) at a loss, and are estimated at INR hundreds of billions or several USD billions (OECD, 2019d). The OECD acknowledged the substantive Indian fossil fuel subsidy reforms. These conclusions have not caused debate in India, since the policies are widely acknowledged as constituting subsidies. Indian fossil fuel subsidies have been significantly reformed since 2013 (Garg et al., 2020; Jain et al., 2018), but these reforms were driven by domestic fiscal and macroeconomic concerns (see also Chapter 5). The OECD played a more background role compared to the GSI and the World Bank as regards providing opportunities for learning about how to best undertake such reform (Lemphers et al., 2018; Skovgaard, 2018). Regarding the public agenda, it is perhaps unsurprising given that India is not a member of the OECD, that the Indian newspapers studied have not even once linked the OECD and Indian fossil fuel subsidies (see Table 6.3).

Indonesia, like India, is not an OECD member state but has been part of the OECD's inventories of fossil fuel subsidies. The OECD identifies fossil fuel subsidies in Indonesia as consisting of setting the price on oil products and electricity below the market price as well as of production subsidies, and estimated them at around IDR 100 trillion or USD 7 billion (OECD, 2020a). The OECD also commended Indonesia for its subsidy reforms, but noted that fuel prices were fixed

Table 6.3 *Fossil fuel subsidies and the OECD in the Indian media:* The Hindu *and* Times of India

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Articles referring to Indian fossil fuel subsidy reform *and* the OECD	0	0	0	0	0	0	0	0	0	0	0	**0**
All articles referring to fossil fuel subsidy reform (international and domestic)	0	1	10	35	37	19	17	4	7	4	4	**138**

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Table 6.4 *Fossil fuel subsidies and the OECD in the Indonesian media:* Kompass *and* Tempo

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Articles referring to Indonesian fossil fuel subsidy reform *and* the OECD	0	0	0	0	0	0	0	0	0	0	0	**0**
All articles referring to fossil fuel subsidy reform (international and domestic)	0	1	4	61	28	45	18	19	48	60	26	**310**

in 2018 in response to rising international oil prices (OECD, 2019e). More importantly, the OECD Secretariat chaired the G20 peer review. As discussed in Chapter 5, the peer review forced the Indonesian government to undertake a more in-depth analysis of its fossil fuel subsidies, especially production subsidies, and commended Indonesia for its reforms (G20, 2019b). The G20 followed an approach to defining fossil fuel subsidies in line with the OECD's (see Section 6.4.1). The OECD's chairing of the G20 peer review meant it could play a cognitive role in shaping the G20 analysis of Indonesian subsidies, including the focus on production subsidies, which the OECD has prioritised to a greater extent than the IEA or the IMF. Nonetheless, it may be difficult to precisely distinguish when the OECD's influence began and the G20's influence ended in this respect. Yet, Indonesian reforms have been driven by domestic economic concerns rather than the G20 or the OECD. In terms of cognitive influences such as learning about successful reform, the OECD has participated in workshops about Indonesian reform, but have not played the same role as the World Bank and the IMF (Diop, 2014; interview with senior Bappenas official, 20 December 2016). Just as in India, none of the newspapers studied have linked the OECD and Indonesian fossil fuel subsidies.

Finally, regarding **Denmark**, according to the OECD, the Danish government subsidises fossil fuels by reducing energy taxes for fuels used for specific purposes (combined heat and power generation) and diesel. The subsidies that the OECD was able to estimate amounted to above DKK 1 billion or USD 200 million, although falling significantly after 2015 due to reductions in tax rebates for diesel and in the support for combined heat and power (Danish Ministry of Climate Change, 2019,

OECD, 2019c, 2019h, 2020a). These reforms seem to have been driven at least as much by economic concerns as by environmental ones. The 2019 OECD Environmental Performance Review mentioned Danish fossil fuel consumption subsidies, but did not include the reform of these subsidies in its forty-four recommendations for improving Danish environmental policy, and unsurprisingly these subsidies were not subsequently addressed in Danish policy or public agendas, which focused on the recommendations. Otherwise, opposition Members of Parliament have raised the issue of Danish fossil fuel subsidies a couple of times in the Danish Parliament (Danish Ministry of Climate Change, 2015; Danish Ministry of Taxation, 2019). In this context, the Danish government has acknowledged that fossil fuel production is subsidised, but argues that tax expenditure on consumption (defined by the OECD as subsidies) do not constitute subsidies since total fossil fuel taxes exceed the total externalities (Danish Ministry of Climate Change, 2015). Later, in its 2019 National Energy and Climate Plan submitted to the EU, the Danish government acknowledged the existence of indirect fossil fuel subsidies, highlighted that some of these subsidies were being phased out, and that the government would look into further fossil fuel subsidy reform (Danish Ministry of Climate Change, 2019). In general, the various Danish governments have been hesitant to acknowledge that particular policies constitute fossil fuel subsidies as this was seen as contrary to the Danish promotion of the norm of fossil fuel subsidy reform.

Concerning cognitive influences, participation in workshops on fossil fuel subsidies arranged by the OECD enhanced knowledge on and awareness of the topic within the Finance Ministry and other ministries (author's observation, including as a participant on one of those workshops). Yet, within the Danish ministries, fossil fuel subsidies have been perceived as mainly a developing country phenomenon, which did not necessitate changes to Danish policy (interview with senior Danish government official, 13 January 2014). While there were discussions within the Danish government of undertaking a self-review of Danish fossil fuel subsidies using the OECD's definition, it was decided not to carry out the review as the timing would collide with the ongoing analysis of Danish energy subsidies, and (at the time) could be politically sensitive (interview with former Danish senior civil servant, 5 May 2020). Consequently, learning has mainly been relevant in terms of changing Danish beliefs regarding how to best undertake fossil fuel subsidy reform in developing countries, not in developed ones.

The OECD reports have not led to any changes to the public agenda (see Table 6.5), where they have not appeared (although one article mentioned the OECD's role in the G20 peer review of Chinese fossil fuel subsidies; Andersen, 2016).

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Table 6.5 *Fossil fuel subsidies and the OECD in the Danish Media:* Politiken *and* Jyllands-Posten

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Articles referring to Danish fossil fuel subsidy reform *and* the OECD	0	0	0	0	0	0	0	1	0	0	0	**1**
All articles referring to fossil fuel subsidy reform (international and domestic)	0	0	3	3	5	8	9	1	10	4	13	**56**

6.4 Summary

The OECD, a knowledge producing institution, has unsurprisingly had the greatest impact in terms of cognitive output defining what fossil fuel subsidies are and how we can understand their implications. Thus, the OECD has produced an extensive amount of cognitive knowledge about what is important about fossil fuel subsidies and which policies in individual countries can be understood as fossil fuel subsidies. A crucial aspect of this output has been the framing in terms of economic, particularly fiscal impact. The extensive data gathering endeavour as well as the efforts to promote the OECD's definition has had a significant impact on how fossil fuel subsidies – until 2009 an extremely marginal issue – have been addressed, especially at the international level. At the domestic level, the influence of the OECD is more difficult to discern, not least because the OECD Secretariat has often been most influential when it has chaired G20 peer reviews, making it rather difficult to precisely distinguish the OECD's influence from the G20's. It is worth contemplating how different the international efforts to promote fossil fuel subsidy reform might have been had the OECD adopted a different definition, for example, if it had included the non-pricing of externalities in the way the IMF (Coady et al., 2015, 2019) has done, or development finance supporting fossil fuel production, the way the NGOs such as Oil Change International have done (Oil Change International et al., 2017). The OECD output has primarily been driven by institutional interaction with the G20, which lifted OECD involvement to a new level, and the institutional worldview inherent to the OECD Secretariat, which emphasises the economic aspects of fossil fuel subsidies. The relatively limited autonomy of the OECD Secretariat has acted as a scope condition for the influence of this worldview.

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7

The IMF and Fossil Fuel Subsidies

The Unexpected Environmentalist

The IMF is one of the most powerful institutions in the world, often criticised for forcing governments to adopt fundamental policy changes that reflect the worldview of IMF officials rather than the preferences of the government or the electorate (Barnett and Finnemore, 2004). The criticism has particularly focused on the IMF's insistence on promoting policies rooted in the so-called Washington Consensus including trade, financial and labour market liberalisation and cutting fiscal deficits (Babb, 2013; Chwieroth, 2008). Environmental protection has rarely been included among the IMF's top priorities, and the IMF has been criticised for the environmental consequences of its policies (Harvey, 2005; Shandra et al., 2011). Against this backdrop, the IMF's involvement with fossil fuel subsidies is striking: not only did it seem to emerge out of the blue in 2013, but it also placed the IMF among the most radical of the institutions addressing climate change. This chapter proceeds with an outline of this seemingly radical change as well as the IMF's use of conditionalities to promote fossil fuel subsidy reform, followed by a discussion of how this output was driven by IMF officials and shaped by the economic worldview of the IMF. Finally, the chapter finds that the output had some cognitive impact at the international level but had more important ramifications at the domestic level.

7.1 Output: Conditionalities and Carbon Pricing

IMF output has addressed fossil fuel subsidies along two strands, both increasing in importance. First, a strand consisting of bilateral interactions with countries experiencing fiscal problems exacerbated by fossil fuel subsidies and including policy recommendations and IMF programmes inter alia promoting subsidy reform to improve fiscal balances (interview with IMF senior official, 17 February 2015). This strand is composed mainly of distributive output in the shape of conditionalities, particularly that the country in question would receive IMF loans only if it

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embarked on reforms including subsidy reform. Yet, to a lesser degree, the strand also consists of knowledge output in the shape of analyses of the consequences of such reforms and the best ways to undertake them. For decades, the IMF has been opposed to subsidies, especially consumer subsidies fixing the prices of goods, because of their fiscal and macroeconomic impact. The former has been problematic in the eyes of the IMF because subsidies constitute sizeable budget items including at times of fiscal deficits, the latter because subsidies distort the allocation in markets by fixing or supporting prices. At times, subsidies (for fossil fuels as well as other products such as food) have been phased out or cut significantly as a result of IMF insistence, for example, in Egypt (Sherry et al., 2014) and Sudan (Michael, 2013). Over the past ten years, fossil fuel subsidies have been singled out in an increasing number of IMF recommendations to individual countries and have increasingly been treated as distinct from other kinds of subsidies. The IMF has suggested phasing out such subsidies because they are an inefficient, fiscally costly and often economically distorting way of providing welfare benefits (interview with IMF officials, 9 April 2014). The ongoing IMF Extended Credit Facility Arrangement (a kind of IMF programme) for Burkina Faso constitutes an example of this, with detailed recommendations on how Burkina Faso should liberalise the government-fixed fuel prices (IMF, 2015a; interview with senior IMF official, 22 June 2016). This strand mainly emphasises the fiscal consequences of the fossil fuel subsidies, while also stressing the distributional (both positive and negative) and macroeconomic consequences. Environmental consequences (including local externalities) have been accentuated to a lesser extent. In the case of Burkina Faso, the IMF policy was developed by local IMF officials and officials from the Fiscal Affairs Department, and focused on what the IMF refers to as pre-tax subsidies, namely the subsidies lowering consumer prices below the international market price plus distribution costs, not the absence of a full pricing of the externalities (interview with senior IMF official, 22 June 2016). Not including an incomplete pricing of externalities distinguishes the IMF's approach to fossil fuel subsidies in Burkina Faso from its approach to fossil fuel subsidies globally, which did include such non-pricing (see subsequent discussion of the IMF's fossil fuel subsidy definition).

The second strand consists of knowledge output and focuses on the lack of a carbon price (and environmental taxes generally) and on solving this problem from the perspective of an economist, that is, getting the price right (interview with IMF senior official, 17 February 2015). Prior to 2008, the IMF only occasionally addressed subsidies including energy (rather than fossil fuel) subsidies in policy reports[1] (Baig et al., 2007; Gupta et al., 2000) and in country-specific policy

[1] Which were not part of IMF programmes but more analytical.

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recommendations (see e.g. IMF 2004). Energy subsidies were framed in terms of fiscal and macroeconomic impact, without referring to the environmental impact. Thus, subsidising fossil fuels was framed as being similar to subsidising any other product. The IMF used price-gap approaches to measure all kinds of subsidies, and did not include externalities in its fuel benchmark prices (e.g. Said and Leigh, 2006), which meant that getting the price right at this stage did not signify including the costs of externalities in the price.

In 2008 the first official publications[2] to address fuel subsidies as a distinct concept and to include environmental externalities (priced at USD 0.50 per litre petrol and diesel) were published (IMF, 2008a, 2008b). They would provide the blueprint for future IMF output in fossil fuel subsidies. After 2008 the IMF increasingly addressed fossil fuel subsidies and their environmental impact, while maintaining the emphasis on fiscal and macroeconomic consequences. In 2013, they published the report 'Energy subsidy reform: lessons and implications' (Clements et al., 2013) which raised the IMF's engagement with fossil fuel subsidies to a new level. Crucially, the report used a price-gap approach based on a benchmark price including both value-added tax (VAT) and the social cost of externalities, particularly climate change and other environmental externalities such as local air pollution. This approach was adopted on the basis of the IMF's work on fiscal instruments (in the Fiscal Affairs Department) and the emphasis on – as the title of a key publication on fossil fuel subsidies says – *Getting Energy Prices Right* (Parry et al., 2014). The IMF has also offered an online course on Energy Subsidy Reform based on these publications. The notion of 'getting prices right' constitutes a framing of fossil fuel subsidies as being problematic in normative terms because they cause prices to be 'wrong' in the sense of preventing the optimal allocation in markets. A price is right if it reflects all production-related costs to society as well as all benefits to the buyer, as determined in a market where the only government intervention consists of taxes addressing negative externalities, or subsidies addressing positive externalities. Importantly, the notion of including non-priced externalities in the definition of a subsidy was hardly discussed outside the IMF prior to 2013 (one exception being Hodas, 2006).

The cognitive and normative dimensions of this notion are closely intertwined: fossil fuel subsidies are defined (cognitively) in terms of getting the prices wrong, and they are normatively problematic because they get the prices wrong. One can compare this framing of the right price to the proponents of fossil fuel consumption subsidies, who argue that the price is right if it is low enough to allow everybody to buy it, and – in the case of fossil fuel producing countries – allows for people to get

[2] IMF working papers from 2006 and 2007 by IMF staff had addressed fuel subsidies, but as working papers they did not require official IMF endorsement.

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'their share' of the fossil fuel resources of that country (Cheon et al., 2013). Regarding distributive consequences, the IMF framed fossil fuel subsidies as a highly ineffective way of supporting low-income households, since most of the subsidies are captured by citizens with above-average incomes (Arze del Granado and Gillingham, 2012).

The framing also closely linked fossil fuel subsidies to another policy issue, namely carbon pricing. The IMF reports explicitly referred to Pigouvian or corrective taxes as the optimal way of correcting externalities, drawing on the works of the economist Arthur Pigou. Pigou (1932) invented the concept of an externality defined as the cost or benefit of an activity undertaken by one actor that affects another actor not involved in the activity, thus creating a suboptimal situation since the costs of the activity do not reflect the true costs or benefits to society (see also Chapter 1). Furthermore, Pigou developed the notion that externalities should be corrected by placing taxes (or financial support) on the activity creating the externality that corresponds to the social costs (or benefits). For instance, burning coal incurs costs to other parts of society that are not borne by the polluter, and consequently should be corrected by a Pigouvian tax on coal burning corresponding to the environmental damage. Or a positive externality such as non-patented research should receive support corresponding to the social benefit. The linking of fossil fuel subsidies and carbon pricing is closely related to the IMF increasingly advocating carbon pricing, particularly carbon taxes, as the most important climate mitigation instrument (IMF, 2019c, 2019e; Lagarde, 2015; Mooij et al., 2012; Parry, 2019; Parry et al., 2018).

Importantly, the IMF explicitly endorsed environmental taxes over other environmental policy instruments, including not only regulatory standards such as emission standards, which were never popular among neoclassical economists (Lauber and Schenner, 2011; Meckling and Allan, 2020), but also over emission trading schemes, an alternative carbon pricing instrument. Neoclassical environmental economists have been divided over whether environmental taxes or emissions trading schemes constitute the most optimal instrument. Whereas advocates of taxes draw on Pigou's arguments for letting the polluter bear the social costs of pollution, advocates of trading schemes draw on economist Ronald Coase (1960), who argued that the right to pollute should be divided between actors, who could then trade these rights and thus create a price on emissions through trading. According to Coase, the social costs of pollution should not necessarily be borne by the polluter. Other actors working with fossil fuel subsidies had not linked it to carbon pricing, and in carbon pricing circles, fossil fuel subsidies had been mentioned only as a detriment to effective carbon pricing without framing the absence of carbon pricing as a subsidy (see OECD, 2009). It is worth comparing the IMF's

endorsement of Pigouvian taxes to that of the World Bank, which has been very active in promoting carbon pricing, but initially promoted emissions trading and only at a later stage promoted carbon taxes on a par with emissions trading (Skovgaard and Canavan, 2020).

The findings of the report were extended and updated in a 2015 IMF working paper (Coady et al., 2015), whose estimate of global subsidies at USD 5 300 billion[3] in 2015 – compared to estimates of USD 1900 billion in the 2013 report USD (Clements et al., 2013) and USD 550 billion in the IEA's 2014 World Energy Outlook (IEA, 2014) – received significant attention. This increase was due to a revision upwards of the assessments of externalities – especially air pollution. In 2019, the IMF updated its 2015 analysis with new data and found that very little had changed: global fossil fuel subsidies were estimated at USD 5,200 billion for 2017 (Coady et al., 2019).

According to both the 2015 and 2019 analyses, local air pollution accounted for little less than half of the subsidies, climate change for little less than one quarter, with reductions to consumption taxes, direct subsidies and non-air local externalities (congestion, traffic accidents, etc.) for the remaining part (Coady et al., 2015, 2019). Regarding climate change, the social cost of emitting a ton of CO_2 was in 2015 estimated at USD 35 (based on Parry et al., 2014) and USD 40 in 2019 (Coady et al., 2019), figures originating from the US government's Interagency Working Group on Social Cost of Carbon (respectively Interagency Working Group on Social Cost of Carbon, 2013, 2016). The USD 35 and 40 per ton social costs are low estimates, based on William D. Nordhaus' DICE model, which has been criticised for seriously under-estimating the costs of climate change (Howard and Sterner, 2017). In comparison, Richard Tol's (2011) meta study of different estimates of the social cost of carbon arrives at a mean of USD 177 per ton (although most of the estimates are below this mean), and the High-Level Commission on Carbon Pricing (2017) estimated that carbon prices should be between USD 40 and 80 per ton by 2020 to meet the Paris Agreement's target of temperature increases 'well below 2 degrees' (UNFCCC, 2015). Interestingly, one of the IMF's reports from 2019 advocating carbon taxes operated with a carbon price of USD 75 per ton being required to meet the 2-degree target (IMF, 2019e).[4] Yet, the USD 35 and USD 40 estimates are high compared to actual levels of carbon taxation. Only about 20 per cent of global emissions are currently covered by such taxes, with about half of these emissions priced at below USD 10 per ton, and only 5 per cent of them above USD 40 per ton (World Bank, 2020b).

[3] Also including the OECD's estimate of producer subsidies for 2011 being worth USD 16.8 billion.
[4] Defining a carbon price of USD 75 per ton as necessary for meeting the 2-degree target does not necessarily contradict the notion of a USD 40 per ton price as the economically optimal solution. The IMF may estimate that it is optimal to allow temperature increases of more than 2 degrees, and hence a price of USD 40 is optimal.

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According to the IMF's definition, practically all states subsidise fossil fuels, even countries with carbon taxes that do not fully price externalities. Developed countries account for a quarter of energy subsidies, and emerging and developing Asia for half (Coady et al., 2015). Consequently, the 2013 and 2015 reports break with previous analyses which – using different definitions – identified fossil fuel subsidies as a phenomenon primarily seen in developing countries. The reports also contradicted the claims of influential IMF member states (including the United Kingdom and Japan) that they do not subsidise fossil fuels these (Kirton et al., 2013), something which made the report unpopular among the governments of those countries but popular among NGOs. In 2020, the IMF planned to integrate climate mitigation issues, including carbon pricing, in its bilateral Article IV consultations (which are carried out with all member states), although these consultations were temporarily postponed because of the coronavirus pandemic (interview with senior IMF official, 19 May 2020).

7.2 Causes

The most important factor influencing the decision to address fossil fuel subsidies (the first aspect of economisation) was policy entrepreneurs within the IMF, who together with the institutional worldview shaped how the IMF addressed the issue. From 2005 onwards, fossil fuel subsidies gained increasing attention, particularly driven by the fiscal impact of high oil prices (2005–8 and 2011–14) and the 'Poverty and Social Impact Analysis Group' within the Fiscal Affairs Department. More specifically, IMF officials, including members of this analysis group, provided technical assistance to countries suffering from the costs of subsidising expensive fossil fuels and wanting to reform these subsidies, and this experience increased the awareness of the subsidies and how to address them (interview with IMF official, 25 February 2015). Consequently, the IMF stressed the fiscal impact of fossil fuel subsidies while stressing the importance of mitigating measures to protect the poor (interview with IMF official, 25 February 2015). Thus, the contextual factor of high oil prices provided policy entrepreneurs within the IMF with a window of opportunity. As mentioned in Section 7.1, from 2008 onwards, the IMF has increasingly singled out fossil fuel subsidies from other subsidies and stressed their environmental impact; a development in framing that was due to policy entrepreneurship within the organisation.

The notion of including environmental externalities in measures of efficient fuel prices had been floating around for some time among a circle of economists working for the IMF, the World Bank, the US government and various environmental think tanks in Washington DC (interview with senior IMF economist,

24 April 2014). The IMF economists within this group also promoted the notion of including undercharging for environmental costs in a broad definition of fossil fuel subsidies, and such undercharging has received considerable attention from IMF management since 2011 under Christine Lagarde (interview with senior IMF economist, 24 April 2014). Lagarde took a more active interest in climate politics than her predecessors, which opened a window of opportunity for the aforementioned economists. With few exceptions, all publications addressing fossil fuel subsidies since the 1990s have been authored by at least one of the key IMF economists working on fossil fuel subsidies: David Coady, Ian Parry and Benedict Clements. Of these, Parry has a background in environmental energy taxation (with a PhD from the University of Chicago), and has argued the case for carbon taxes in academic and IMF publications (Parry, 2015, 2019; Parry et al., 2014, 2018) as well as being the Fund's leading expert on such taxes and environmental fiscal policy in general. He arrived at the IMF in 2010, when the Fund's interest in the under-pricing of externalities from fossil fuel use was increasing. David Coady is the Chief of the Expenditure Policy Division of the Fiscal Affairs Department and has mainly worked and published on the distributional effects of public policies (and earned his PhD from the London School of Economics). Similarly, Benedict Clements (at the time of writing Chief of the Fiscal Policy and Surveillance Division of the Fiscal Affairs Department, holding a PhD from the University of Notre Dame) has worked and published on public and fiscal policy. Both Coady and Clements have been working on subsidies at the IMF since the Fund first started addressing the issue (Baig et al., 2007; Clements et al., 1998).

In terms of the second aspect of economisation, how fossil fuel subsidies were addressed, the policy entrepreneurs particularly from the Fiscal Affairs Department were important in framing the environmental impact in neoclassical terms (as discussed in Section 7.1). There is nothing surprising about the Fiscal Affairs Department adopting a neoclassical approach, since it – even more than other IMF Departments – has been consistently informed by neoclassical economics even following changes to the Washington Consensus (Ban, 2015; Park and Vetterlein, 2010b). While the IMF has always framed fossil fuel subsidies as well as other subsidies in terms of their negative fiscal consequences, the framing in terms of macroeconomic and especially environmental consequences increased in salience after 2008 because of the aforementioned entrepreneurship. The framing of subsidies as producing suboptimal societal outcomes has long been present within the IMF (see e.g. Gupta et al., 2000), but the focus on the macroeconomic costs of pollution (framing environmental degradation in terms of economic costs) only gained traction after 2008 (Arze del Granado and Gillingham, 2012; Clements et al., 2013; IMF, 2008a, 2008b). Hence, the entrepreneurs successfully defined

fossil fuel subsidies in a way that resonated with the organisation's institutional worldview including the professional background of IMF officials, and leading to a very ideal-typical instance of economisation. This resonance is evident not just in the way in which the Fund has addressed fossil fuel subsidies, but also in how it has addressed climate change in general. Most notably, the 2019 report was part of a broader trend of IMF output addressing the economic aspects of climate change such as fiscal policies to meet the Paris Agreement (IMF, 2019c), the greening of the financial system (Carney, 2019; Grippa et al., 2019), using whales as carbon sinks (Chami et al., 2019) and a bilateral assessment of the climate policies of Belize and Grenada (IMF, 2019b, 2019d). Thus, the economisation of fossil fuel subsidies was part of a larger wave of economisation of climate related issues. While the economisation of fossil fuel subsidies was a frontrunner for the IMF's economisation of climate issues, arguably the more overarching economisation and inherent attention to climate issues was an environment conducive to continued attention to fossil fuel subsidies.

Other factors were less important. Relations with member states were not particularly important, as is evident in the IMF reports stating that virtually all countries have fossil fuel subsidies, conclusions that ran directly against the claims of influential member states such as the United Kingdom and Japan. The IMF's de facto call for carbon taxes also goes against the current policy situation in the majority of member states (including the most influential member state the United States), which have not adopted such taxes. These states broadly endorsed the IMF's 2019 efforts to address mitigation when they were presented as proposals to the Board (interview with senior IMF official, 19 May 2020). Institutional interaction was also limited, beyond the aforementioned group of Washington-based economists at inter alia the IMF and the World Bank, who discussed the notion of including environmental externalities in estimates of efficient fuel prices, and the use of OECD production subsidy data. The IMF was not one of the institutions requested by the G20 to provide reports fossil fuel subsidies in the way that it provided reports on climate finance (see Chapter 12). Although IMF officials have participated in various meetings of fossil fuel experts inter alia in the context of the G20, this interaction has had no significant influence on the decision to address fossil fuel subsidies and how it addressed them.

7.3 Consequences

7.3.1 International Consequences

The IMF's notion of including the non-pricing of externalities in the definition of fossil fuel subsidies constituted a radical break with previous definitions of fossil

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fuel subsidies, especially those by the IEA and the OECD. Yet, it has not led to similarly radical changes in the politics of fossil fuel subsidies at the international level. It did not have an incentive-based influence over other institutions, and although ideational and agenda-setting influences were present, they were also limited. Perhaps because of its radical break with more established definitions or because it ran against the preferences of most states, there were limits to the willingness to use the IMF's definition in other intergovernmental institutions. Regarding the **G20**, IMF officials have participated in the peer review of China, which also referred lengthily to the IMF's reports and their analysis of the non-pricing of the externalities from fossil fuels in China (G20, 2016a). Other peer reviews also brought up the issue of addressing externalities, inter alia through 'corrective taxation' (G20, 2016b), but did not rely on an IMF analysis or the notion of 'getting prices right' to the same degree as the China peer review (G20, 2016a). Furthermore, the attention to addressing externalities has gradually declined since the US and China peer reviews in 2016. The 2017 peer reviews of Mexico and particularly Germany discussed non-pricing of (especially environmental) externalities as possibly constituting a fossil fuel subsidy and in the German review referring to IMF data, the 2019 reviews of Indonesia and Italy did not address the issue (G20, 2017b, 2017c, 2019b, 2019c).[5]

The differences between the peer reviews underscore that the influence of the IMF output was to a large degree contingent on IMF participation in the peer review (the China peer review) and has declined over time. None of the peer reviews included non-priced externalities in their definition of fossil fuel subsidies. Thus, there was some agenda-setting influence in terms of urging the G20 to address such non-pricing, cognitive influence in terms of providing new knowledge about such non-pricing in the countries reviewed and normative influence in terms of recommending addressing this non-pricing. Without the IMF reports, it is unlikely that the non-pricing would have been addressed to the same extent. Yet, crucially, the non-pricing of externalities was not defined by the G20 as a fossil fuel subsidy, and hence, it was not framed as an issue where the norm of fossil fuel subsidy reform would be salient.

Beyond the G20, the actors tasked with measuring progress towards **Sustainable Development Goals** (SDGs, led by the United Nations Environment Programme [UNEP] and the International Institute for Sustainable Development [IISD] with significant OECD involvement) discussed the IMF's definition at great length and compared it to the OECD and IEA definitions, but chose not to include the non-pricing of externalities in its definition, instead opting for an approach closer to the OECD's (see Chapter 6). IMF staff were not part of the development of the SDG 12.c

[5] The G20 did not publish any peer reviews in 2018.

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indicator. The IMF's approach has proven more popular among **environmental NGOs**, a community not otherwise known for embracing the IMF. The Health and Environment Alliance (Nandi, 2017) and the Climate Action Network Europe (2017) are among the NGOs that have been inspired by the IMF's large estimates and the inclusion of non-priced externalities under the heading of subsidies, and used these cognitive ideas to promote climate policies.

7.3.2 Domestic Consequences

The IMF's output has had more pronounced consequences at the domestic level than at the international level. [6] Particularly the Fund's programmes have had an important incentive-based impact on domestic fossil fuel subsidy reform in a range of countries, including Egypt, Sudan and Ukraine (IMF, 2015c; Michael, 2013; Sherry et al., 2014). The IMF made the provision of loans that the country was not able to obtain from other sources conditional upon far-reaching fiscal reform, including fossil fuel subsidy reform. Identifying ideational and agenda-setting consequences requires a more detailed look at individual countries, which is why the chapter turns to the five country cases.

In the case of **the United States**, the IMF estimated that fossil fuel subsidies in the United States totalled USD 649 billion in 2015, of which non-priced externalities constitute US 647 billion (Coady et al., 2019). The IMF had no incentive-based influence, as the United States has not been subject to a lending arrangement since 1965 and limited impact on the public and policymaking agendas. Regarding the public agenda (see Table 7.1), the IMF's 2015 and 2019 reports on the size of global

Table 7.1 *Fossil fuel subsidies and the IMF in the US media:* New York Times *and* Washington Post

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Articles referring to US fossil fuel subsidy reform *and* the IMF	0)	0	0	0	0	0	3	0	0	0	1	**4**
All articles referring to fossil fuel subsidy reform (international and domestic)	3	6	20	22	9	8	16	0	0	1	15	**100**

[6] This section expands on and updates Skovgaard (2018).

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fossil fuel subsidies were referenced a few times in newspaper articles that also explicitly linked them to US subsidies, but without initiating a major policy debate (Mooney, 2015; Schwartz, 2015). The IMFs reports on fossil fuel subsidies and the notion of non-priced externalities as a subsidy did not have a significant influence on the policy agenda at the national level, where carbon pricing has been very controversial since 2009, when the Waxman–Markey proposal for a US emissions trading system floundered in the Senate. Thus, there have not been any attempts (IMF-inspired or otherwise) to link fossil fuel subsidy reform and carbon pricing at the federal level in the United States[7], although there have been separate attempts to introduce both carbon pricing and fossil fuel subsidy reform at the federal level. As mentioned in Chapter 5, the debate over fossil fuel subsidy reform in the United States has been framed in domestic terms.

In terms of ideational consequences, Treasury officials interacted with the IMF officials who drafted the IMF definition on fossil fuel subsidies, something which developed the cognitive understanding of the issue in both organisations (interview with senior IMF economist, 24 April 2014). Yet this collaboration did not induce the Treasury to adopt a price-gap approach including environmental externalities in the way the IMF's definition of fossil fuel subsidies does (Clements et al., 2013). Perhaps the most important ideational influence of the IMF was its participation in the G20 peer review of the United States (see Section 5.3.2). In this case, the IMF managed to ensure that the non-pricing of externalities was included on the agenda in the context of the United States, but without any longer-term changes to the policy agenda or to policy itself.

Regarding **the United Kingdom**, the IMF estimated British fossil fuel subsidies at GBP 28 billion, which virtually only consisted of non-priced externalities (Coady et al., 2019). Incentive-based influences were absent since the last lending arrangement ended in 1979. Agenda-setting and ideational influences were relevant, especially in the context of the inquiry of the House of Commons Environmental Audit Committee into British fossil fuel subsidies (see also Chapter 5). The Committee referred to the IMF's 2013 report and the notion of defining non-priced externalities as a subsidy, but in the end opted for excluding such externalities in the definition they used (House of Commons Environmental Audit Committee, 2013). The IMF's 2013, 2015 and 2019 reports were also picked up by British media (see Table 7.2), which highlighted its high estimates of global and (in 2013 and 2015) British fossil fuel subsidies (Carrington, 2015b; Watkins, 2013). The contradiction between the promises to fight climate change made in 2015 in the run-up to twenty-first Conference of the Parties to the United Nations Framework

[7] Studying the relationship between these two concepts at the state level, where carbon pricing has been discussed and adopted in a number of states, is beyond the scope of this book.

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Table 7.2 *Fossil fuel subsidies and the IMF in the UK media:* The Guardian *and* The Independent

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Articles referring to UK fossil fuel subsidy reform *and* the IMF	0	0	0	0	2	1	5	0	0	0	1	**9**
All articles referring to fossil fuel subsidy reform (international and domestic)	0	0	8	11	10	9	27	11	18	16	46	**156**

Convention on Climate Change (COP21) in Paris and the persistence of British subsidies were highlighted in particular (Carrington, 2015b).

In terms of cognitive influences, the UK Treasury was responsible for both the UK government's definition of fossil fuel subsidies and for the IMF, and hence Treasury officials interacted regularly with IMF officials. This interaction increased awareness of the issue but did not amount to fundamental ideational influences on the Treasury officials. This was mainly because even before the IMF became closely involved in fossil fuel subsidies, the Treasury perceived fossil fuel subsidies in terms similar to that of the IMF's overarching view, namely as undesirable first because of their macroeconomic effects and secondly on the grounds of the environmental effects (interview with UK Treasury official, 24 November 2014; for an example of how the Treasury perceived fossil fuel subsidies through an environmental economics perspective, see Stern, 2006). Yet, the Treasury did not concur with the Fund that non-priced externalities constitute fossil fuel subsidies.

Concerning **India**, the consequences of IMF output have been more limited. The IMF estimated that Indian fossil fuel subsidies amounted to USD 209 billion in 2015, of which non-taxed externalities constituted more than USD 200 billion (Coady et al., 2019). India's last lending arrangement with the Fund (the largest ever) ended in 1993, ruling out incentive-based influences. The influence on the public agenda is also non-existent: only one article in the two leading Indian dailies referred to the IMF output, and this was only a reference to an analysis by an NGO made using the IMF's fossil fuel subsidy data (see Table 7.3).

India's successful fossil fuel subsidy reform has been driven by fiscal and macroeconomic concerns: there are cheaper ways of alleviating poverty, and fossil fuel subsidies are detrimental to the public budget and the balance of trade (see also Chapter 5). Two contextual factors made the reform possible: low oil prices and the

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Table 7.3 *Fossil fuel subsidies and the IMF in the Indian media:* The Hindu *and* Times of India

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Articles referring to Indian fossil fuel subsidy reform *and* the IMF	0	0	0	0	0	0	0	0	1	0	0	**1**
All articles referring to fossil fuel subsidy reform (international and domestic)	0	1	10	35	37	19	17	4	7	4	4	**138**

liberalisation of the Indian economy ongoing since the early 1990s. Low oil prices created the scope in which to liberalise fuel prices without attracting public protests. Although the liberalisation of the Indian economy is arguably the result of ideational influences promoting the belief in free-market economic governance (Mukherji, 2013), more specific ideational influences concerning fossil fuel subsidies have not been significant. Rather they have been limited by scepticism of the framing of fossil fuel subsidies as an environmental issue, since the Indian government frames them as an economic and fiscal issue (Dasgupta, 2013). The scepticism reflects the historically predominant (yet increasingly challenged) view within the Indian elite that climate change is the responsibility of developed countries and that developing countries should not commit to climate change actions (Sengupta, 2019; Thaker and Leiserowitz, 2014).

Indonesia constitutes a different case as regards IMF influence. The IMF estimated Indonesian fossil fuel subsidies at USD 97 billion in 2015, of which non-taxed externalities constituted USD 86 billion (Coady et al., 2019). Incentive-based effects were important in 2002 (and thus before the period in question here), when the IMF programme following the 1997-8 Asian financial crisis led to increases in fixed fuel prices (Government of Indonesia, 2002). After this programme ended in 2003, the absence of direct leverage meant that the IMF played the part of a trusted policy advisor rather than an active stakeholder (former senior IMF official, interview, 14 December 2016). However, the drivers of more recent Indonesian fossil fuel subsidy reforms are primarily domestic (interviews with officials from the Indonesian Ministry of Finance and Bappenas, 14 September 2016 and 20 December 2016). The Indonesian Ministry of Finance has been an important driver of such reforms (and interacted closely with the World Bank) because of

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Table 7.4 *Fossil fuel subsidies and the IMF in the Indonesian media:* Kompass *and* Tempo

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Articles referring to Indonesian fossil fuel subsidy reform *and* the IMF	0	0	0	4	2	0	0	0	0	2	0	**8**
All articles referring to fossil fuel subsidy reform (international and domestic)	0	1	4	61	28	45	18	19	48	60	26	**310**

concerns about their impact on the budget (interview with senior Indonesian Ministry of Finance official, 26 February 2016).

The IMF's knowledge output in the shape of reports has also to some degree been picked up by the Indonesian media (see Table 7.4), including IMF data on the magnitude of Indonesian non-priced externalities and suggestions for how to reform fossil fuel subsidies (Nasution, 2013). Furthermore, the IMF has been cognitively influential in providing analyses of Indonesian fossil fuel subsidies in collaboration with the World Bank. The IMF collaborated with the World Bank, following a standard division of labour in which the IMF focused more on the monetary exchange rate and broad fiscal setting, while the World Bank focused on sectoral and microeconomic issues (former senior IMF official, interview, 14 December 2016).

Finally, in the case of **Denmark,** according to the IMF, fossil fuel subsidies in Denmark amount to USD 6.3 billion, only consisting of non-taxed externalities (Coady et al., 2019). Denmark has never been subject to an IMF programme, and incentive-based influences did not play a role. As regards influences on the public agenda, only one newspaper article has referred to the IMF's estimates (see Table 7.5). Yet, concerning the policymaking agenda and cognitive influences, green politicians have referred to the IMF's estimate that Danish fossil fuel subsidies amount to USD 1,000 per capita and forced the government to admit to having fossil fuel production subsidies (Danish Ministry of Climate Change, 2015; Poll, 2016). Various Danish governments have consistently argued that the high levels of the Danish carbon tax means that it does not make sense to speak about Danish consumption subsidies, thus disputing the IMF's definition. When there were discussions within the Danish government of a self-review of Danish fossil fuel subsidies (see also Chapter 6), the OECD definition was preferred to the IMF one, which was considered – by the Danish government as well as by several other

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Table 7.5 *Fossil fuel subsidies and the IMF in the Danish media:* Politiken *and* Jyllands-Posten

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Articles referring to Danish fossil fuel subsidy reform *and* the IMF	0	0	0	0	0	0	0	1	0	0	0	**1**
All articles referring to fossil fuel subsidy reform (international and domestic)	0	0	3	3	5	8	9	1	10	4	13	**56**

countries – too far-reaching (interview with former Danish senior civil servant, 5 May 2020).

7.4 Summary

As regards fossil fuel subsidies, the IMF turned out in many ways to be the unexpected environmentalist. The Fund's output can be divided into two strands. First, the IMF has for decades induced countries to reform their fossil fuel subsidies through the conditionalities of its programmes, but until recently without treating fossil fuel subsidies differently than any other subsidy. Second, since 2008, the IMF has defined the non-pricing of externalities including climate change as constituting a subsidy. This definition constitutes a game changer in IMF policy on the subject, which was driven by policy entrepreneurs among the IMF officials and was shaped by the economic worldview of the IMF in the context of the IMF bureaucracy's autonomy from its member states. The IMF's output has had some ideational impact on the international level, where other institutions such as the G20 took the IMF's definition of fossil fuel subsidies into account but ended up relying on other definitions. The output has had more important consequences for the domestic level. The first strand had decisive incentive-based consequences for countries such as Indonesia under IMF lending arrangements, which required them to reform their fossil fuel subsidies. The IMF's extensive definition of fossil fuel subsidies, according to which practically all countries in the world subsidise fossil fuels, also had an impact. It was utilised by actors who wanted fossil fuel subsidy reform in countries such as Denmark and the United Kingdom.

8

The Alignment of the Economic Institutions on Fossil Fuel Subsidies

Synergies, but Definitions Can Be Divisive

The three preceding chapters have explored the economisation of fossil fuel subsidies by the G20, the OECD and the IMF, all three of which addressed fossil fuel subsidies as an economic issue. Even when the environmental consequences of fossil fuel subsidies were highlighted, it was done in a manner framing these consequences in economic terms, for example, as wasteful consumption or as non-priced externalities. While the three institutions agreed on the importance of a reform of fossil fuel subsidies due to their environmental and economic consequences, they also differed in how they addressed these subsidies. Most notably, the IMF adopted a radical definition of fossil fuel subsidies based on the Pigouvian notion of corrective taxes, which stood out against the more established definition of the OECD. Thus, the economisation was more ideal-typical in the case of the IMF. The G20 skirted the issue of fossil fuel subsidy definition but worked closely with the OECD. The chapter proceeds with a comparison of the three institutions and demonstrates that economisation may lead to diverging framings of the issue in economic terms. Altogether, they constitute core institutions within the fossil fuel subsidy complex, a complex characterised by synergistic relations (Verkuijl and van Asselt, 2020). Subsequently, the chapter outlines how this divergence was driven by the differences in worldview, policy entrepreneurship and the degree of autonomy of the International Organisation (IO) bureaucracy from principals. Yet, the similarities between their worldviews (they agreed on a range of fundamental issues), institutional interaction and overlapping memberships pulled in the direction of convergence between the institutions. Finally, there is a discussion on the consequences of this divergence at the international and domestic levels (conflicting estimates of fossil fuel subsidies and discussions of which definition to use), while the convergence between the institutions was important for the attention to the issue and the norm of fossil fuel subsidy reform.

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8.1 How They Align

8.1.1 Types of Output

The institutions differed considerably in the form of their output. The G20's output was mainly regulatory with a crucial normative component, most notably in 2009 when it propelled both the concept of fossil fuel subsidies and the norm of fossil fuel subsidy reform high up international and domestic agendas. Subsequent G20 output focused on gathering knowledge about fossil fuel subsidies (especially by requesting such knowledge from four IOs) and directly holding G20 member states accountable to the norm through self-reporting and voluntary peer reviews. The output of the OECD consisted of knowledge but focused more on the cognitive aspects of fossil fuel subsidies by producing extensive knowledge about fossil fuel subsidies, including within individual countries. This knowledge production had a normative aspect in that its purpose was to identify subsidies that should be reformed or phased out. The OECD also disseminated knowledge about fossil fuel subsidies and how to reform them through formal and informal channels such as workshops and direct involvement with countries, including G20 peer reviews, which they chaired. The IMF's output can be divided into two strands. The first strand provides incentives for fossil fuel subsidy reform through the conditionalities of the programmes. The second strand is knowledge based and centres on the IMF's definition of fossil fuel subsidies as including non-priced externalities. This definition has a normative component in 'getting the price right' through pricing externalities and expanding the applicability of the norm of fossil fuel subsidy reform, as well as a cognitive component in framing fossil fuel subsidies in terms of macroeconomic consequences and producing knowledge about the level of fossil fuel subsidies in countries around the world.

The relationship between the G20 and the OECD can be described as synergistic, with the two institutions focusing on different tasks, and the OECD supporting the G20's efforts to promote the norm of fossil fuel subsidy reform through cognitive output. This division of labour is due to the G20 requesting that the OECD provides such support, and, in more general terms, the OECD fulfilling secretariat functions for the G20 in several areas. The relationship between on the one hand the two institutions and on the other the IMF has rather been one of co-existence, with a sometimes conflictive relationship between the IMF and the OECD as regards the issue of subsidy definitions (for the argument that non-priced externalities should not be treated as a subsidy, see Steenblik, 2014).

8.1.2 Scope and Actors Addressed

For all three institutions, it is possible to distinguish between output that is global in reach and output that is more targeted. The G20 commitment and the resulting

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self-reports and peer reviews focused on the G20 members, yet much of the cognitive output produced by the IEA, OECD, OPEC and the World Bank at the request of the G20 was global in reach. Likewise, most of the OECD's output concerned its members plus seven of the largest emerging economies, yet other output, for instance its publications on how to define fossil fuel subsidies, had a global reach. The IMF's first, incentive-based strand targeted countries with financial problems, whereas its second, ideational output on the non-pricing of externalities targeted virtually all countries. Hence, there is a significant overlap in the countries that they address. In the case of synergistic relationships, such as the one between the OECD and the G20, this should not imply any risk of conflicting output. Conflicting output are more likely when institutions address a set of countries with regard to a particular issue but use differing approaches, such as the divergence between the OECD and the IMF regarding the definition of fossil fuel subsidies. Yet, this did not result in conflict at the domestic or international levels, as discussed in detail in Section 8.3. In terms of the government institutions they interacted with, there is also a considerable overlap, as the circle of fossil fuel subsidy experts in each country is limited and these experts are often based in finance ministries, which interact with all three institutions.

8.1.3 Cognitive Dimensions

All three institutions frame fossil fuel subsidies in economic and environmental terms. The environmental framing is perhaps most interesting, as fossil fuel subsidies were previously grouped together with other subsidies and not singled out because of their environmental impact. Distinguishing fossil fuel subsidies from other subsidies implies an emphasis on their environmental consequences.

The G20 left open both the definitional question and the closely related questions of which fossil fuel subsidies exist in individual countries and their size. Importantly, the G20 has primarily framed fossil fuel subsidies in terms of climate change as well as macroeconomic consequences, while the importance of reducing poverty was also stressed. The fiscal impact was not mentioned. The OECD has mainly framed the subsidies in environmental and fiscal terms. While the macroeconomic consequences of fossil fuel subsidies have also received some attention (but not been included in the estimates of their consequences), the distributional impact has hardly been addressed at all. The IMF has adopted a Pigouvian framing, which includes the non-pricing of externalities as a subsidy and highlights the environmental consequences while framing them in terms of their macroeconomic impact. The fiscal and distributional consequences have mainly been emphasised by the Fund outside its knowledge output regarding getting prices right through the pricing of externalities, the fiscal consequences being important to the IMF's first

strand. These differences in framing are not conflictive in themselves, since the institutions merely highlight different aspects of fossil fuel subsidies while agreeing on the importance of their environmental and economic consequences. Yet, the difference between the IMF' economisation of fossil fuel subsidies based on textbook economics and the OECD's economisation based on fiscal concerns underscores how economisation was more ideal-typical in the case of the IMF (see also Chapter 1).

In political terms, the differences in definitions between the OECD and the IMF are more important, since they lead to different estimates of the size of fossil fuel subsidies. The IMF estimated that fossil fuel subsidies were ten, in the case of some countries such as the United States even a hundred, times higher than the OECD did (IMF, 2018a; OECD, 2020a). In this way, rather conflicting bodies of knowledge were produced by the two institutions. While the two subsidy definitions de facto measure different phenomena, they are both generally referred to as measuring fossil fuel subsidies. Yet, it is important to bear in mind that both the IMF and the OECD mainly measured the size of subsidies in monetary (although the former focused on macroeconomic costs and the latter on fiscal ones) and quantitative terms, rather than, for example, the number of policies or the climate impact measured in tons of CO_2e. This monetary and quantitative approach to measuring and addressing a problem constitutes one fundamental cognitive aspect of economisation. Hence, I argue that the cognitive differences between the institutions is best understood as different kinds of economisation, rather than as economic and non-economic ways of addressing fossil fuel subsidies.

8.1.4 Normative Dimensions

All three institutions have promoted the norm of fossil fuel subsidy reform. It is notable that three economic institutions all defined the climate consequences of fossil fuel subsidies as an important reason for reforming them. They also shared a concern over inefficiency and opposition to subsidies as distortionary and leading to economically suboptimal outcomes (e.g. 'wasteful consumption' as the G20 2009 put it). Defining economic efficiency as a key objective is a crucial dimension of the economisation of fossil fuel subsidies of the three institutions, although most pronounced within the IMF. Divergence appeared rather in terms of the IMF's linking of the norm with carbon pricing, a link that was rooted in Pigouvian economics.

This divergence had implications for the application of the norm of fossil fuel subsidy reform, which the IMF found was salient to several situations (whenever

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a fuel was sold at a price that did not include its social costs) in which the OECD did not find that it applied. There are also situations in which the OECD identified fossil fuel subsidies that the IMF did not, for example, consumption subsidies that do affect prices. This divergence is important, because the two institutions identify different issues as problematic in terms of fossil fuel subsidies. For the IMF, it is the *non-pricing* of externalities, for the OECD *policies* subsidising the consumption and production of fossil fuels. Both agree that consumption subsidies lowering the price of fossils below the benchmark price including value-added tax (VAT) constitutes a subsidy, as do production subsidies. The IMF also included production subsidies in its estimate and used OECD estimates of these subsidies, which nonetheless amounted to a minuscule part of the total global fossil fuel subsidies in the IMF estimate (about USD 17 billion out of 5,300 billion). Likewise, the OECD is generally also in favour of environmental taxes, including carbon taxes (Bernstein, 2001; Ruffing, 2010).

Consequently, the two institutions recommend different actions to implement the norm of fossil fuel subsidy reform. While the IMF recommends adopting taxes corresponding to the externalities from fuel use, the OECD recommends phasing out specific policies. The IMF's approach is clearly rooted in the notion of Pigouvian taxation, whereas the OECD's approach is less specific in terms of ideational underpinnings but fits with the paradigm of liberal environmentalism. Liberal environmentalism differs from neoclassical environmental economics in that it is a more encompassing norm complex rather than an academic paradigm with a more specific problem definition (pollution as an externality) and policy solutions (pricing). Nonetheless, there are considerable overlaps, and it is worth noting that one of the fathers of liberal environmentalism and of the OECD's approach to sustainable development, David Pearce, gave a presentation at one of the earliest OECD workshops on environmentally harmful subsidies. Although Pearce advocated Pigouvian taxation to address externalities (Pearce, 2002b), he did not treat the absence of such taxation as a subsidy (a notion that was developed only later; see Clements et al., 2013; Hodas, 2006), but as a way of addressing environmental degradation, a problem defined as distinct from the existence of subsidies (Pearce, 2002a).

8.1.5 Incentives

In terms of incentives, the relationship between the three institutions is more synergistic. The IMF is the institution that has provided the strongest incentives for fossil fuel subsidy reform, but these incentives suit the output of the other two

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institutions. Most importantly, the IMF making fossil fuel subsidy reform a condition for loans under the adjustment programmes has led to fossil fuel subsidy reforms in the G20 members Indonesia and (after the Pittsburgh commitment) Argentina[1] as well as non-G20 countries including Egypt and Ukraine. Thus, IMF incentives have supported the norm of fossil fuel subsidy reform both within and beyond the G20 by inducing countries to reform these subsidies.

8.2 Causes of Alignment

Factors pulling in the direction of convergence and divergence shape the overall pattern of alignment in terms of synergy on fundamental issues and some degree of diverging (although rarely conflicting) ideas concerning definitions, especially between the IMF and the OECD. Regarding convergence, the fundamental elements of the institutional worldviews shaped the basic shared approach to fossil fuel subsidies as an issue that was problematic for environmental and economic reasons. The environmental reasons were mainly conceived of in economic terms as problematic due to their economic costs. Institutional interaction is another important factor for convergence, particularly between the G20 and the OECD, which interacted with other as well as several of the same institutions, particularly the IEA and the World Bank. On a fundamental level, interaction also mattered in terms of the Pittsburgh commitment lifting the topic to a new level internationally, including within the OECD and more indirectly the IMF (see Chapters 6 and 7). Overlap in terms of membership also pulled in the direction of convergence, since several states are members of all three institutions, most notably the largest developed economies. Yet, also institutions that do not overlap to the same extent, most notably the Friends of Fossil Fuel Subsidy Reform, have produced similar output, indicating that convergence can also happen without overlapping membership.

On the other hand, the divergence between the institutions, particularly the IMF and the OECD, has been driven by factors, which influenced the institutions in different ways. The institutional interaction that influenced the OECD did not influence the IMF to the same extent, since there was no request to address fossil fuel subsidies and thus the IMF did not interact in the same way with the G20, the IEA, the World Bank and OPEC. Rather the IMF addressed the issue on the initiative of IMF staff, which more than OECD staff induced their organisation to address fossil fuel subsidies. IMF staff acting as policy entrepreneurs are also the main reason why the IMF to a larger degree than the OECD framed fossil fuel

[1] Although fossil fuel subsidy reform in Argentina was effectively reversed within a short period of time (IMF, 2019i).

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subsidies in terms derived from environmental economics: IMF staff linked the macroeconomic and environmental framing of such subsidies on the basis of the notion of getting the price right.

The differences in how the organisations addressed fossil fuel subsidies was also influenced by more specific differences between their worldviews: the IMF defined the environmental impact in the aforementioned neoclassical way, and the OECD defined fossil fuel subsidies in a fashion reflecting how it had addressed other subsidies. The G20 was much less specific in how it defined fossil fuel subsidies and the applied the norm of fossil fuel subsidy reform, but to a large extent relied on its member states and other institutions, notably the OECD.

The degree of autonomy of the IO bureaucracies proved to be an important scope condition for the influence of the worldview and policy entrepreneurs, and thus also shaping the divergence between the institutions. This is evident in that the IMF, to a greater degree than the OECD, adopted positions running against the preferences of its member states, most notably the claim that developed countries have significant fossil fuel subsidies. The OECD had less autonomy and only received the mandate to scrutinise its members' subsidies after the G20 commitment. The differences between the two organisations demonstrate that differences in membership and voting rules did not have an impact, as the IMF contradicted member states that are more influential within the IMF than within the OECD, especially the United States. Arguably, if the IMF had the same degree of autonomy as the OECD Secretariat, its position would have been more similar to that of the OECD.

8.3 The Consequences of Alignment

The alignment of the three institutions had important consequences both at the international and the domestic levels.

8.3.1 The International Level

The international level is the level where the combined output of the three institutions had the greatest impact. Especially the G20 managed to ensure the inclusion of the issue of fossil fuel subsidies and the norm of fossil fuel subsidy reform on the agenda of other international institutions, which led to new commitments to fossil fuel subsidy reform within Asia-Pacific Economic Cooperation (APEC), the North American Leaders' Forum and indirectly the Sustainable Development Goals (SDGs), and even to the creation of an institution dedicated to fossil fuel subsidy reform, Friends. In addition, the G20 commitment led to other international institutions producing new knowledge about these subsidies, including the OECD.

Together with the IMF's cognitive output on fossil fuel subsidies, they significantly increased the knowledge of such subsidies based on the framing of them as economically and environmentally costly. While it is not possible to provide a full counterfactual analysis, I would argue that without the G20 commitment, the international efforts to address fossil fuel subsidies would have looked different, with fewer or no commitments to reform. Likewise, without the OECD output, there would have been less knowledge about fossil fuel subsidies especially in developed countries. Moreover, without the IMF's output, carbon pricing and the non-pricing of externalities would not have been linked to fossil fuel subsidies.

The synergy between the G20 and the OECD reinforced their respective outputs. The OECD in particular benefitted from the G20 commitment, which lifted its own involvement to a new level (see Chapter 6) and opened the doors for OECD subsidy experts to be part of G20 peer reviews, SDG working groups on the reporting of efforts to fossil fuel subsidies, and so forth. The differences between the OECD and IMF definitions of fossil fuel subsidies also played out at the international level, particularly in the context of the G20 peer reviews and the SDG fossil fuel subsidy working group. In both cases, there was a discussion of which definition to use, and in both cases, approaches closely aligned with the OECD definition won the day. The IMF's approach was discussed and to some degree also applied in the SDG report on how measure fossil fuel subsidies (UNEP et al., 2019) and the first G20 peer reviews (of China and the United States), but not in subsequent peer reviews. Thus, the potential for conflict between the two different definitions did not undermine the efforts to address fossil fuel subsidies, but merely led to expert discussions of their relative merits and in the case of the Chinese and US peer reviews, to discussions of the pricing of externalities in the two countries.

8.3.2 The Domestic Level

The three institutions had less of a discernible effect at the domestic level than at the international level (see Chapters 5, 6 and 7). In the five countries studied, those that reformed their fossil fuel subsidies did so mainly because of domestic pressure. Nonetheless, the fact that the institutions all promoted the norm of fossil fuel subsidy reform meant that the prevailing combined effect was one of synergy with the institutions reinforcing each other. The OECD and the IMF were important in picking up the baton from the G20 and ensuring that the issue remained on the (political to a larger degree than the public) agenda after the initial attention caused by the G20 commitment had died down. The IMF and the OECD also had the ability to produce new knowledge about the issue in a way that the G20 did not. The synergistic relationship between the G20 and the OECD played an important role

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primarily regarding G20 countries – especially those undergoing peer reviews – in terms of the OECD using its expertise on fossil fuel subsidies in general and about the countries subject to peer review in particular.

Regarding the definitional divergence between the IMF and the OECD, actors in developed countries studied picked up the IMF estimates of fossil fuel subsidies within their country in particular. Most notably, the UK House of Commons Environmental Audit Committee discussed the different approaches and the different estimates of UK subsidies provided by the two institutions (House of Commons, 2013). This Committee based its conclusions on the OECD definition. In the context of this debate and in the media in all the three developed countries, the IMF's estimate sometimes received attention because of the higher figures. Yet, all things considered, the OECD definition has been more important (also in the context of the G20 peer reviews), and the relationship between the two definitions has been one of co-existence rather than conflict.

8.4 Summary

The three institutions have worked to promote the norm of fossil fuel subsidy reform. More specifically, they framed fossil fuel subsidies as undesirable because of their environmental *and* economic consequences, though the environmental consequences were framed in economic terms. Although the OECD and the IMF diverged regarding the definition of fossil fuel subsidies, the relationship was generally one of co-existence rather than conflict. Particularly the G20 and the OECD had a synergetic relationship, in which the G20 requested the OECD to provide an analysis of fossil fuel subsidies, which lifted the OECD involvement with the topic to a new level. The OECD also influenced the content of the G20 output. The divergence between the OECD and the IMF centred on the IMF's inclusion of the non-pricing of externalities in its definition of fossil fuel subsidies, a framing rooted in the neoclassical notion of getting prices right. and constituting an even more ideal-typical case of economisation than the OECD's framing. This divergence had ramifications for both the international and domestic levels in terms of conflicting estimates of fossil fuel subsidies and discussions of which definition to use, for example, in the context of the SDGs. Yet, the synergy between the institutions regarding the overarching framing of fossil fuel subsidies and the more specific synergy between the G20 and the OECD helped draw attention to the issue and promote the norm especially at the international but also the domestic levels. The convergence between the institutions was based on the shared elements of their worldviews as economic institutions, institutional interaction and to some degree also their overlapping

membership. The divergence between the IMF and the OECD was driven by the differences in worldview, policy entrepreneurship among IMF officials and the IMF's greater autonomy from principals, which allowed for the intra-institutional factors to play a greater role in the case of the IMF. In this way, IO autonomy acted as a scope condition for the other factors.

Part IV

Climate Finance

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9

Climate Finance

Key Issues

Climate finance is a hotly disputed topic, the contestation over what it means adding to the controversy. While the term is sometimes used to refer to all financial flows that influence climate mitigation or adaptation/resilience, in the context of this book, I focus on financial flows from developed to developing countries 'whose expected effect is to reduce net greenhouse gas emissions and/or to enhance resilience to the impacts of climate variability and the projected climate change' (Gupta et al., 2014, p. 1212). Thus, flows within countries, to developed countries and among developing countries are not included in the discussion. Yet, public climate finance, which unlike fossil fuel subsidy reform constitutes fiscal expenditure, is included.

Climate finance has been addressed within and outside the climate regime complex since the 1992 Rio Conference on Environment and Development. Simultaneously, increasing amounts (though small compared to estimated needs) of climate finance have been delivered from developed countries. The governance of climate finance straddles the international and the domestic levels, the latter including the developed countries which are supposed to deliver it and the developing countries in which it is spent. Furthermore, as an issue that involves both climate change and economic issues, it also straddles economic and environmental (as well as development) institutions and actors at both the international and domestic levels. The name highlights this duality: the purpose is to address *climate change* (an environmental issue), but the way of achieving this purpose is to use *finance* (an economic instrument). Hence, it is unsurprising that climate finance is the issue in the United Nations Framework Convention on Climate Change (UNFCCC) climate negotiations that finance ministries are most involved with (Skovgaard, 2017b).

Although climate finance has been part of the climate regime complex since its inception (Pickering, Skovgaard, et al., 2015) in 1992, this book focuses on the discussions from the run-up to the 2009 Fifteenth Conference of the Parties to the

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UNFCCC (COP15) in Copenhagen to the 2015 Twenty-first Conference of the Parties in Paris. The UNFCCC, adopted at 1992 Rio Conference, stipulates how developed countries shall 'provide new and additional financial resources' to meet the 'costs incurred by developing country Parties in complying with their obligations under the Convention' (UNFCCC, 1992: 4(3)). It also requires that such finance shall be provided in accordance with the principle of 'Common but Differentiated Responsibilities and Respective Capabilities' (UNFCCC, 1992: 4(2)). A key dividing line in the negotiations and in the international debates about climate finance has been that between developed and developing countries. The UN Framework Convention on Climate Change's Annex II stipulates which countries shall provide climate finance (essentially the countries which were OECD members in 1992), and within the UNFCCC negotiations these countries have been the ones defined as developed countries (UNFCCC, 1992). Developing countries are according to the Convention defined as non-Annex I countries; Annex I countries consisting of the Annex II countries plus economies in transition, i.e. post-communist countries.

The other Multilateral Environmental Agreements (MEAs) adopted in Rio (the Convention on Biological Diversity, the United Nations Convention to Combat Desertification) contain similar provisions, and in the decade following Rio, climate finance was mainly treated as a subtype of the 'environmental finance' provided under these MEAs (Keohane and Levy, 1996). Actual climate finance flows remained modest during this period (Michaelowa and Michaelowa, 2011b). Yet, developing countries progressively raised climate finance as an issue in the UNFCCC negotiations, and development finance institutions including the multilateral development banks (MDBs) and the OECD Development Assistance Committee increasingly addressed the provision of climate finance. Within the UNFCCC, the culmination came with the adoption of the USD 100 billion target at the 2009 Fifteenth Conference of the Parties in Copenhagen to the UNFCCC (COP15). The USD 100 billion target is often described as one of the few successes of COP15 (Gomez-Echeverri, 2013). Developed countries committed to 'mobilizing jointly USD 100 billion dollars a year by 2020 ... from a wide variety of sources, public and private, bilateral and multilateral, including alternative sources of finance' (UNFCCC, 1992: para 8). These provisions opened up for subsequent contestation regarding what sources should count towards the target and how (see Section 9.1). The Copenhagen Accord was also the first decision to mention the Green Climate Fund[1], which was formally established the following year at the Sixteenth Conference of the Parties to the UNFCCC in Cancún (COP16).

[1] Referred to as the 'Copenhagen Green Climate Fund' in the Accord.

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Since 2009, climate finance flows have increased, although it is greatly disputed whether they are meeting the USD 100 billion target (OECD, 2019b; Roberts and Weikmans, 2017). At the 2015 Twenty-first Conference of the Parties to the UNFCCC in Paris (COP21), the Parties agreed to set a new, higher collective financing goal before 2025 (UNFCCC 2015: para. 53) and did not solve the definitional issues. Subsequent negotiations have focused on what flows of finance should count towards the USD 100 billion target, scaling up climate finance both before and after 2020, the balance between mitigation and adaptation finance and the role of public and private finance. At the same time, most climate finance has flowed outside the UNFCCC and the other UN institutions in which developing countries yield significant influence (CPI, 2019). Rather, most of the flows have been determined by public and private actors in developed countries and by MDBs. A persistent feature of climate finance flows has been that mitigation receives the bulk of (particularly private but also public) finance and that – depending on the definition – private finance is several times larger than public (CPI, 2019).

This chapter proceeds with an outline of the cognitive debate regarding what kinds of financial flows can be defined as climate finance, followed by a discussion of the key normative issues of contestation in climate finance discussions. The following section focuses on equity versus efficiency regarding the generation and allocation of climate finance. Finally, the most important groups of actors (beyond the three international economic institutions) and their roles in climate finance are discussed.

9.1 What Financial Flows Constitute Climate Finance?

The framing of particular flows of finance as climate finance constitutes an important cognitive aspect of climate finance. While other cognitive aspects may also be relevant, the question of what flows of finance count as climate finance is the single most important question involving cognitive ideas and climate finance. This question has been strongly contested even before the USD 100 billion target, including whether and under which conditions private finance and development aid[2] can be considered climate finance. Defining the target as USD 100 billion *mobilised* by developed countries without specifying what 'mobilised' meant added to the uncertainty. To gain an understanding of the different kinds of finance that are sometimes framed as climate finance and sometimes not, the UNFCCC Standing Committee's so-called 'onion diagram' is instructive (see Figure 9.1). This diagram places different kinds of climate finance in concentric circles: the more undisputed their character as climate finance is, the closer they are to the centre; the larger the flow, the larger the circle. At

[2] I use the term 'development aid' (also referred to as development assistance) to refer to finance provided by industrialised countries for economic development in developing countries and including both bi- and multilateral flows. Development finance will be used in the broader sense of all financial flows to developing countries including private flows.

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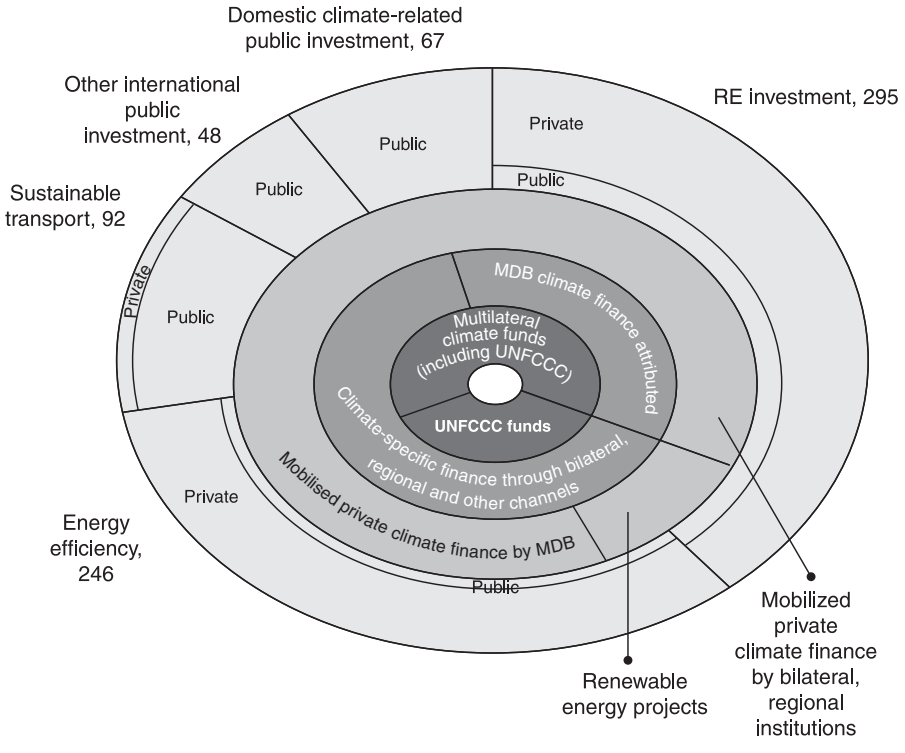

Figure 9.1 The concentric circles of climate finance. All numbers refer to the size of flows measured in USD billions.
Source: UNFCCC Standing Committee on Finance (2018).

the very centre is the funding provided by designated multilateral climate funds. These include the UNFCCC climate funds (the Green Climate Fund and other Funds operating under the UNFCCC such as the Adaptation Fund), in 2015 and 2016 disbursing about USD 600–1,600 million annually, as well as other multilateral climate funds such as the Climate Investment Funds (anchored within the World Bank), funds which in 2015–16 amounted to USD 1,400–2,400 million annually (UNFCCC Standing Committee on Finance, 2018). Some observers argue that only such finance can be counted as climate finance (Dasgupta and Climate Finance Unit, 2015).

The second layer consists of public finance flowing through channels not designated as climate institutions: MDB climate finance not stemming from climate funds and public finance from developed countries flowing through bilateral, regional and other non-MDB channels.[3] According to the Standing Committee (2018), the former amounts to USD 17–20 billion annually, the latter to around USD 30 billion. Of these

[3] Public climate finance is also often referred to as climate aid or climate-related development aid. For the sake of simplicity and to underscore its relationship with other kinds of climate finance, the term public climate finance will be used in this book.

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two kinds of finance, the latter has proven most controversial (Roberts and Weikmans, 2017). It consists of bilateral Official Development Assistance (ODA), provided by developed countries marked as mitigation or adaptation-related by the country itself in its Bi-Annual Reports to the UNFCCC. Because it is up to the individual contributor country to identify its own projects as climate-related, climate-related ODA is often overcoded in the sense that the climate objectives are overstated (Michaelowa and Michaelowa, 2011b; Weikmans et al., 2017). Yet, the controversy regarding treating ODA as climate finance stems not only from overcoding but also from the provision already stipulated in the UNFCCC Convention that climate finance should be 'new and additional' to ODA (see discussion in Section 9.2.1).

The third layer consists of *private* finance for activities addressing climate change mobilised by the MDBs and by regional and bilateral institutions as well as renewable energy projects, in total amounting to around USD 15–17 billion annually in 2015–16, the bulk mobilised by MDBs. These flows differ from the inner layers in stemming from *private sources*, and from outer layers in being mobilised by public finance from *developed countries*, for example, an MDB providing guarantees or taking on parts of the risk associated with loans for climate projects.

The fourth layer covers all the flows that do not flow from developed to developing countries, including public and private finance spent within countries and between developed countries as well as between developing countries, so-called South–South finance (and are hence beyond the main focus of this part of the book). This layer was estimated at around USD 680 billion annually in 2015–16, although the difficulties in collecting reliable data are greater here than in the inner layers (UNFCCC SCF 2018). Some observers have argued that there de facto is a fifth layer of climate finance, namely the finance flowing to activities with a *negative* climate impact, such as fossil fuel extraction and consumption (e.g. coal-fired power plants, aviation), unsustainable logging, steel and cement production, and so forth (Paul et al., 2017; Whitley et al., 2018). Such finance is often referred to as brown finance as opposed to the green finance constituting the finance identified by the Standing Committee on Finance (SCF) (CPI 2018; Climate Transparency 2018), and also includes fossil fuel subsidies discussed in Part II of the book. While such brown flows are undisputedly several times greater than the green ones, they remain outside of the focus of this part of the book.

The preceding discussion concerns the question of the *sources* of finance that can be considered climate finance, yet the question of which *kinds* of finance (grants, guarantees, loans, equity) can be considered climate finance has also loomed large. While there is consensus that grants may count as climate finance, whether and how loans should be counted as climate finance is more disputed. Given that the vast majority of climate finance (including the two inner layers of the onion diagram) is provided as loans or equity, this is important (CPI, 2019). Even public finance

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constitutes predominantly loans, the MDBs almost solely providing loans. Many of the public loans are provided on more favourable terms than those that could finance a project if they were obtained in the financial market, for example, the interest rate is lower or the loan period longer (what is known as a concessional loan). Equity, where financing comes from ownership rather than loans, is mainly private finance.[4] A key issue is how to calculate the value of especially loans but also equity. As regards the USD 100 billion target, to many it seems counterproductive and unfair to equate USD 1 million provided as a grant with USD 1 million provided as a loan that has to be repaid with interest. One solution has been to calculate the 'grant equivalent' of a concessional loan, i.e. the difference between the value of a loan obtained in the market and the actual value of the loan (value calculated as the sum of future repayments and interests, Scott, 2017). Likewise, there is consensus within the UNFCCC that only private finance caused or leveraged by public finance should count towards the USD 100 billion target. In both cases, there has been much technical debate regarding how to carry out the calculations.

9.2 Contested Issues in Climate Finance

Besides the cognitive dimension discussed earlier, contestation over important normative issues have also characterised climate finance (Dellink et al., 2009; Pickering et al., 2017; Skovgaard, 2017b). This includes purely legal norms such as 'Common but Differentiated Responsibilities and Respective Capabilities' (CBDR) that have drawn much attention (Brunnée and Streck, 2013; Jinnah, 2017), as well as less explicitly legally defined normative ideas such as efficiency and equity. Efficiency and equity have been key themes in international climate finance politics, as discussed in the two following subsections. This book will focus on two key issues regarding the different normative ideas that have emerged in climate finance governance, and which are particularly pertinent to international economic institutions:

1. *Generating resources*: Which normative ideas should guide the generation of climate finance?
2. *Allocating resources:* Which normative ideas should guide the allocation of climate finance?

9.2.1 Generating Resources

Regarding the generation of resources, as mentioned at COP15, close to all countries agreed on a USD 100 billion target for 2020 as well as a fast-start finance

[4] Equity consists of both private and listed (e.g. on a stock exchange) equity.

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target of USD 30 billion in 2010–12. Developing countries had in the preceding negotiations proposed a target of 1–1.5 per cent of developed countries' GDP, while several developed countries were opposed to any targets at all, although not to providing climate finance in itself (Bailer and Weiler, 2015). Subsequently, in the Paris Agreement it was agreed that this goal shall continue through 2025 but that prior to 2025 a new goal shall be set from a floor of USD 100 billion (UNFCCC, 2015). Two kinds of normative ideas, focusing on equity and efficiency respectively, have been central to the discussions of the sources that may count towards the USD 100 billion target. On the one hand, equity-oriented normative ideas, among which CBDR (enshrined in the UNFCCC) constitutes an important norm, and implies that developed countries take on a greater burden than developing countries due to their higher level of development, and arguably provide all the climate finance. Another important equity norm, historical responsibility, recommends that countries contribute to the global effort against climate change, including climate finance, according to how much they have emitted historically, thus placing a significant burden on developed countries (Persson and Remling, 2014). On the other hand, efficiency (or cost-effectiveness) concerns generating climate finance in a way that provides the maximum benefit for a given level of climate finance resources (Stadelmann et al., 2014). Importantly, efficiency as a normative idea entails an emphasis on the economic costs and benefits of climate finance, which fits in with the worldviews of the economic institutions. Aiming to maximise benefits at the global level is a key tenet of much environmental economics literature, whereas national governments have often sought to maximise the national benefits from the climate finance they provide (Skovgaard, 2017b). A third notion, effectiveness or focusing on the degree to which a measure is effective in mitigating or adapting to climate change irrespective of economic costs or equity concerns, has been contested in international climate finance discussions, since all actors agree that climate finance should be effective.

These normative ideas have repercussions for how the USD 100 billion target should be met. First, regarding public finance, key issues have been whether to adopt a burden-sharing key based on GDP or emissions determining the individual country contributions and whether emerging economies are obliged to provide climate finance. Several developing countries and non-governmental organisations (NGOs) have used CBDR and historical responsibility to argue in favour of the former and (in the case of emerging economies) used CBDR to argue against the latter. Developing countries do not always agree on these issues, for instance China has been sceptical of historical responsibility, whereas Least Developed Countries advocated softening the sharp distinction between developed and developing countries regarding climate finance by encouraging the latter (especially emerging economies) to also contribute such finance (Least Developed Countries' Group, 2014). The United States

(including the Obama administration) has been against burden-sharing and strongly in favour of contributions from developing countries, while the EU has been in favour of both. In the end, no burden-sharing key has been adopted, while in the Paris Agreement, developing countries are encouraged to provide or continue to provide climate finance voluntarily (UNFCCC, 2015: Article 9.2).

The normative ideas have also been salient regarding the relationship between public climate finance and development aid, particularly the norm that climate finance should be new and additional to ODA. Already before Rio, developing countries worried that environmental finance would be taken from existing ODA. Accordingly they (successfully) insisted on provisions that environmental finance should be new and additional to the existing commitment of developed countries to provide 0.7 per cent of Gross National Income in development aid, a commitment few of them have met (Roberts and Weikmans, 2017; Stadelmann et al., 2011). According to several developing countries, only when a country has met its target of 0.7 per cent ODA can finance above that level be considered climate finance. Yet, the Paris Agreement does not entail the provision that climate finance should be new and additional (UNFCCC, 2015), and in general the post-Paris UNFCCC climate finance discussions have focused more on other issues than whether climate finance is additional to the 0.7 per cent ODA target.

Efficiency, more specifically the complementarities between addressing climate change and promoting development, has been key to the arguments of developed countries and development banks for an integrated approach to climate finance and development aid (Bailer and Weiler, 2015). Yet, developing countries and NGOs argue that the two kinds of finance are fundamentally different since public climate finance is based on developed countries' historical responsibility and CBDR, whereas development aid is based on the responsibility of the wealthy to assist the poor (Michaelowa and Michaelowa, 2011b). Consequently, climate finance should be delivered in a way that reflects developing countries' 'entitlement' to funds, that is, with minimal conditions attached and as grants rather than loans (Ciplet et al., 2013; Moore, 2012). This discussion of the relationship between public climate finance and development aid also concerns the fundamental question of who gets to decide the allocation of climate finance (see Section 9.2.2), since treating it as development aid means that the decisions over how climate finance is spent are de facto left to the individual contributor countries (and to multilateral development institutions such as the MDBs).

Regarding private finance, developed countries as well as development banks have argued that private finance is key to an efficient response to climate change. Most developing countries do not disagree with the importance of private finance, but prefer targets solely for public finance to keep developed countries to their

(equity-based) obligations, and fear that including private finance under targets will erode the obligations of developed countries. Other sources discussed include so-called innovative or alternative sources (e.g. levies on international aviation), which have been less popular among states due to concerns over relinquishing sovereign control over taxation, but popular among non-state actors for both equity and efficiency-based reasons (see inter alia Stadelmann et al., 2013).

More recently, the discussions of climate finance have become intertwined with discussions of investment and greening private financial flows (Campiglio et al., 2018; Hong et al., 2020). In this way, the emphasis is shifting towards making financial flows consistent with climate (and other sustainability) objectives, including ensuring that there is sufficient private investment in renewable energy, energy efficiency, the building of infrastructure that is resilient to climate change and so forth. These more technical discussions rarely address equity issues.

9.2.2 Allocating Climate Finance

The normative ideas guiding the allocation of climate finance concern principles for allocating climate finance between countries as well as between mitigation and adaptation and involve efficiency and equity-oriented normative ideas such as vulnerability. The principle of vulnerability entails prioritising adaptation finance over mitigation finance and the most vulnerable countries over the ones that provide most adaptation for the money (Moore, 2012). Efficiency in the context of climate finance allocation refers to the 'allocation of public resources such that net social benefits are maximised' (Persson and Remling, 2014, p. 489; see also Grasso, 2007; Stadelmann et al., 2014). Thus, efficient climate finance is spent where it provides most mitigation or adaption for the money, which at least in the case of mitigation means emerging economies rather than Least Developed Countries (Fridahl et al., 2015).

Adaptation and mitigation finance differ in that mitigation constitutes a global public good which it is in the interest of developed countries to contribute to independently of where it takes place, whereas adaptation in developing countries only has indirect benefits to developed countries[5] (Ciplet et al., 2013; Persson and Remling, 2014). Adopting a global efficiency perspective, mitigation finance is Pareto-improving due to the lower mitigation costs in developing countries, while adaptation finance is not (Rübbelke, 2011). Consequently, arguments in favour of adaptation are based on vulnerability and historical responsibility norms, unlike mitigation which can be argued for in terms of efficiency and effectiveness. Several developing countries – particularly Least Developed Countries and Small Island Developing States – have called for an even split between mitigation and adaptation

[5] For example, in terms of reduced climate refugee flows.

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Table 9.1 *Overview of key climate finance norms and the resulting positions on issues (in brackets)*

	Generation	Allocation
Equity	CBDR; historical responsibility (public finance from developed countries crucial; climate finance distinct from development aid)	Vulnerability (prioritise vulnerable and poor countries; adaptation); historical responsibility (those affected should be involved in decisions regarding allocation)
Efficiency	Maximising global benefit (private finance crucial; utilise synergies with development aid)	Maximise global benefits (prioritise emerging economies; mitigation)

finance, while developed countries generally have been more interested in contributing mitigation finance (Rübbelke, 2011).

On a more overarching level, equity and efficiency in the allocation of climate finance also concerns the question of who determines the allocation (Duus-Otterström, 2016). If public climate finance is treated in equity terms as constituting a solution to developed countries' historical responsibility, those affected, particularly developing countries, should have a say in how it is allocated. If it is treated as a subtype of development aid, decisions regarding its allocation are de facto left to the contributors (see Section 9.2.1). Hence, efficiency in itself does not lead to specific conclusions regarding who should determine the allocation of climate finance, but may lend itself to arguments for utilising synergies with development aid and economies of scale and avoid building costly new governance structures, de facto favouring developed countries.

9.3 The Climate Finance System and Its Main Components

At the international level, besides the normative fragmentation outlined earlier, the climate finance system is also characterised by considerable institutional fragmentation, with a range of institutions addressing the issue (Pickering et al., 2017). These institutions include UN and non-UN, environmental and non-environmental, public and private institutions.

9.3.1 The UNFCCC

The most important international institution for the governance of climate finance is the UNFCCC (Pickering et al., 2017). As discussed earlier, it was the origin of the

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USD 100 billion target and has been instrumental in institutionalising norms such as CBDR. Yet, the vast majority of the decisions regarding how much to contribute and how to allocate climate finance are reached outside the UNFCCC, in governments of developed countries, MDB headquarters and as regards private finance, corporate headquarters (Pickering, Jotzo, et al., 2015). Hence, the UNFCCC institutions have not played the role that most developing countries would have liked it to play, and often argued in favour of in the climate finance negotiations. The Green Climate Fund (GCF), Adaptation Fund, Least Developed Countries Fund, the Strategic Climate Change Fund and to some degree the Global Environment Facility (GEF)[6] operate under the UNFCCC, and allocated USD 0.6–1.6 billion during the period 2015–16 (the vast majority by the GCF). These funds have their own boards, but the UNFCCC Conference of the Parties provides them with guidance and directions. Despite the GCF increasing its volume of finance, the UNFCCC funds only disburse a small share of the total of public climate finance and have been plagued by internal disagreement and by the Trump administration's unwillingness to contribute to them. The UNFCCC's most important role has been to guide climate finance through the introduction and institutionalisation of norms (e.g. CBDR), targets (the USD 100 billion target). The SCF, a climate finance institution under the UNFCCC, has also played an important role in providing knowledge about climate finance, especially estimates of flows, as well as guidance to the Funds under the UNFCCC.

Decision-making within the UNFCCC takes place on the basis of consensus, which de facto grants developing countries considerable leverage compared to the institutions studied here or the MDBs, in which developed countries have the greatest influence. Unsurprisingly, developing countries have often pushed to have the majority or at least a larger share of climate finance flowing through UNFCCC funds, and greater UNFCCC influence over non-UNFCCC climate finance. Such influence has taken the shape of clearly defined guidelines concerning what constitutes climate finance and how it should be allocated, for instance prioritising Least Developed Countries, adaptation and other priorities that may be downplayed by developed countries (UNFCCC, 2015).

9.3.2 Other UN Institutions

UN institutions beyond the UNFCCC have mainly been important as implementers of climate finance projects, for example, the United Nations Development Programme (UNDP) and Environment Programme (UNEP). Similarly to the UNFCCC, developing countries have significant influence within these institutions. Among the non-UNFCCC

[6] The GEF also serves the Convention on Biological Diversity, the United Nations Convention to Combat Desertification, the Stockholm Convention on Persistent Organic Pollutants and the Minamata Convention on Mercury.

UN initiatives, the most important one has been the High-level Advisory Group on Climate Change Financing (AGF), which was established in 2010 by UN Secretary Ban Ki-Moon to draft a report on the sources of climate finance, including various public, private and so-called innovative or alternative sources, for example, levies on international aviation (United Nations, 2010). This report provided a range of different ideas and possible solutions, which were utilised in climate finance discussions during the subsequent years. More recently, several other UN institutions have also been active in producing knowledge, notably the UNEP Finance Initiative, a partnership between UNEP and the global financial sector. This partnership aims to create principles for what qualifies as sustainable investment and to disseminate knowledge about such investment among public and private stakeholders (United Nations Environment Programme Finance Initiative, 2020).

9.3.3 The World Bank

The World Bank is another central institution in the governance of climate finance. Developed countries have been more in favour of granting the Bank a more important role than developing countries have been, because of the former group's significant influence within the Bank (votes are allocated on the basis of financial contributions and GDP) and its worldview being closer to the positions of developed countries than to developing ones (Schalatek, 2012). The World Bank's main role has been as a provider of climate finance through the Climate Investment Funds (CIFs) and its main lending activities – of which climate related lending is greater than the CIFs (Dejgaard and Hattle, 2020), but it has also sought to influence the wider governance of climate finance. The latter role has involved hosting and participating in climate finance relevant forums such as the Climate Action Peer Exchange for finance ministry representatives as well as knowledge production, including climate data on climate finance recipients (Climate Action Peer Exchange, 2020; World Bank, 2020a). The Bank has also been instrumental in promoting the CDM and developing CDM projects (Lazarowicz, 2009; Lederer, 2012), as well as private climate finance in general. These climate efforts should be seen in the light of the Bank's desire to be a leader on climate change (World Bank et al., 2016). Yet, there has also been criticism of the Bank's considerable lending to fossil fuel projects (Redman et al., 2015; The Big Shift Global, 2019).

9.3.4 Regional Multilateral Development Banks

Similarly to the World Bank, the regional MDBs (the African Development Bank, the Asian Development Bank, the European Bank for Reconstruction and Development

and the Inter-American Development Bank) have also scaled up their climate finance, while also facing criticism for their financing of fossil fuel projects (see Delina, 2017 regarding the Asian Development Bank). In general, they have been less active in promoting climate finance and climate action than the World Bank, but have co-produced reports (particularly on the tracking of climate finance) together as a group also including the World Bank (World Bank Group et al., 2011).

9.3.5 Civil Society Actors

Various kinds of civil society organisations have also been active at the international level. These can roughly be divided into two groups: think tanks and NGOs. The think tanks include environment and development think tanks and research institutions such as the Climate Policy Initiative (CPI), Overseas Development Institute and World Resources Institute, and have mainly focused on producing knowledge in the shape of reports on the global state of climate finance as well as how to implement climate finance projects. Notably, the CPI (2017, 2018, 2019) has produced regular reports providing an overview of global climate finance flows. The NGOs include mainly environmental NGOs, for example, Climate Action Network (an umbrella organisation of environmental NGOs), Greenpeace and the World Wildlife Fund, as well as development NGOs such as Oxfam. They have focused more on activism and influencing public agendas but have also (especially the World Wildlife Fund and Oxfam) produced reports on climate finance. In general, they have emphasised equity and often sided with developing countries.

9.3.6 Corporate Actors

Corporate actors, especially from the financial sector, have been very active in funding climate finance projects. Some of them have also been active in various networks promoting climate action from the corporate world, for example, the Global Investor Coalition on Climate Change and Institutional Investors Group on Climate Change (2020). These networks seek inter alia to enhance knowledge about climate issues such as climate risk among investors and to promote policies facilitating climate-friendly investment as well as commitments to net-zero emissions in companies. In general, individual corporate actors as well as private networks and institutions focus on mitigation rather than adaptation.

9.4 Domestic Politics

The domestic level is arguably the most important for the actual flows of climate finance. The fragmented nature of the climate finance governance system leaves

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most of the decisions of how public climate finance should be allocated to the governments of developed countries (Pickering et al., 2017), which also hold considerable sway over MDBs. The decisions regarding how to allocate climate finance are mainly driven by domestic factors such as income, attention to environmental issues, responsibility and vulnerability to climate change, political orientation of government or the ministry that is responsible (Halimanjaya, 2015, 2016; Michaelowa and Michaelowa, 2011b; Peterson and Skovgaard, 2019; Pickering et al., 2015b). Developing countries have less influence over the allocation, but develop climate finance projects within their borders, sometimes together with international funders and sometimes on their own with the intention of applying for funding. Nevertheless, there are crucial influences from the international level regarding all kinds of domestic climate finance decisions, in the shape of norms, targets and other commitments, the monitoring of climate finance, and knowledge about how to allocate and implement climate finance.

9.5 Summary

Climate finance is a topic at the intersection of climate and economic politics, yet more anchored within the UNFCCC than fossil fuel subsidies. The issue is characterised by considerable contestation over what flows of finance can be defined as climate finance and which normative ideas (particularly equity or efficiency) should guide the allocation and generation of climate finance. Furthermore, the climate finance system is also characterised by institutional fragmentation. Much, but not all, of this contestation and fragmentation reflects a dividing line between, on the one hand, developed countries promoting broad definitions of climate finance, efficiency and maintaining control over climate finance and, on the other, developing countries promoting narrow definitions of climate finance, equity and influence over climate finance. How economisation has worked in the case of the institutions addressing climate finance, including the definitional issues and normative issues outlined above, within the climate finance system, is the topic I turn to next.

10

The G20 and Climate Finance

Introducing Finance Ministries to the Topic

The November 2009 St Andrews meeting of G20 Finance Ministers and Central Bank Governors was supposed to provide key input on climate finance. At this time, climate finance was a hot topic in the climate talks going into the Fifteenth Conference of the Parties to the United Nations Framework Convention on Climate Change (COP15), and observers expected it be an issue where the G20 could provide crucial input (author's observation as a government official working in the COP15 team of the Danish Ministry of Finance). Yet, the attempts to agree on a set of far-reaching conclusions at St Andrews largely failed, and since then this issue has mainly been addressed at the expert level. Thus, climate finance is similar to fossil fuel subsidies as a topic that G20 started addressing in 2009 at the ministerial level, followed by expert discussion. Yet, G20 output on climate finance in general has not had the same catalytic effect as the Pittsburgh commitment on fossil fuel subsidy reform. Nonetheless, it has had repercussions beyond the G20, especially among international institutions. How economisation played out in the case of the G20 addressing climate finance is the topic of this chapter. The chapter starts with an overview of G20 output, from the attempt to reach an agreement in 2009 to the more technical working groups that have addressed climate change from an economic perspective, followed by an analysis of the causes (entrepreneurship from Presidencies, membership circles, interaction with the United Nations Framework Convention on Climate Change [UNFCCC]) that shaped the output. Finally, the chapter discusses the consequences of this output at the international level (salient mainly regarding the UNFCCC and institutions tasked with providing analysis to the G20) and the domestic level (less discernible).

10.1 Output: Failure to Commit, Followed by Knowledge Production

In the spring of 2009, the UK Presidency played an active role in establishing an expert group on climate finance, with the purpose of delivering a report and the

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basis for a G20 finance ministers' and central bank governors'[1] statement outlining their position before COP15. This statement was intended as a formal output of the November 2009 G20 meeting of Finance Ministers and Central Bank Governors in St Andrews (the United Kingdom). Thus, an important objective of the expert group was to influence the UNFCCC output. In the UNFCCC negotiations leading to COP15, it had become evident that climate finance commitments would be an important part of an agreement, but also that the negotiators from Annex II countries could not make credible commitments before they had been given the green light from their finance ministries. Several actors thought that the best way to avoid finance ministries vetoing or weakening climate finance commitments was to involve them in the negotiations and thus ensure that they felt a sense of ownership for the agreement and that the agreement reflected their views (Interview with senior European Commission official, 28 June 2011). Interestingly, climate change was outsourced from the UNFCCC negotiations not because it was uncontroversial (as Zelli, 2011 argues has been the case with the topic of reducing emissions from deforestation), but precisely because it was controversial.

In terms of informal output, the expert group sought to establish common ground through writing papers on topics such as public finance, private finance and how the different kinds of finance should be accounted for (interview with senior European Commission official, 7 September 2011). The process pressured the finance ministries in question to define their position on climate finance through analysis, that is, a process that influenced their cognitive and normative ideas regarding climate finance. The different elements of those papers were brought together in early drafts of the St Andrews Communiqué. The process also established a common ground on several issues before going into the St Andrews meeting in early November 2009 although this did not translate into an actual agreement on climate finance including commitments (interview with senior European Commission official, 7 September 2011).

The first draft from St Andrews contained several provisions that were quite far-reaching at the time given that climate finance negotiations had come to a halt in the UNFCCC negotiations, and would have constituted important regulatory output if adopted. Firstly, regarding the generation of finance, it contained the first mention of the commitment of developed countries to the USD 100 billion target – part of the Copenhagen Accord agreed a few weeks later at COP15 (interview with senior European Commission official, 7 September 2011) as well as the recognition of the different sources (including private and carbon market sources), which remained in the final St Andrews Communiqué (G20, 2009; G20 Finance Ministers and Central Bank Governors, 2009). These provisions can be compared to the UNFCCC

[1] Although the G20 finance ministers and central bank governors meet together, within this forum finance ministers and ministries have been more involved in climate finance discussions than central bank governors and central banks.

negotiation text that was discussed at that time, which contained numbers in sharp brackets ranging from the unspecified to 5.5 per cent of developed countries' GDP[2], and sources ranging from purely public to a combination of public, private and carbon market resources (UNFCCC, 2009b). Thus, the 100 billion target was a rejection of the demand of most UNFCCC negotiators from developing countries that only public financing should count against the target, but it also meant that finance ministries in developed countries accepted the climate finance target (an idea which many of them initially opposed).

Second, the Communiqué emphasised efficiency, an approach that was more widespread among developed than developing countries but resonated better among finance ministers from developing countries than UNFCCC negotiators from the same countries. In this way, the first aspect of economisation (placing climate finance on the agenda of an economic institution) led to the second aspect of economisation (an economic framing of climate finance).

Yet, at the St Andrews meeting, the ministers were unable to agree on the draft joint statement on the table because of the United States insisting that the World Bank should be the trustee of the Green Climate Fund, and China and India opposing this (interview with senior UK Treasury official, 30 June 2011). China also insisted on references to Common but Differentiated Responsibilities and Respective Capabilities (CBDR) which made a compromise more difficult to achieve (interview with senior UK Treasury official, 30 June 2011). Thus, CBDR was much more controversial than efficiency. As a consequence of these disagreements, the climate finance provisions of the official Communiqué of the meeting did not contain any significant commitments or agreements on disputed issues (Vorobyova and Willard, 2009).

Following 2009, climate finance continued to be addressed by experts under the G20 finance ministers and central bank governors, and these meetings became institutionalised with the establishment of the G20 Climate Finance Study Group (until 2013 named the Study Group on Climate Finance) during the 2012 Mexican Presidency (G20 Heads of State and Government, 2012). The Climate Finance Study Group reported to G20 Leaders on how to mobilise climate finance to meet the USD 100 billion target for climate finance agreed at COP15. The Study Group was discontinued after 2016, with the Green Finance Study Group (in 2018 renamed the Sustainable Finance Study Group) continuing some of its efforts and addressing environmental and sustainable finance from a perspective mainly focusing on private finance (Hansen et al., 2017). These discussions were rather technical, and although the G20 finance ministers and central bank governors discussed climate finance provisions in a Paris Agreement in the run-up to the Twenty-first

[2] G77 and China as a group demanded 0.5–1 per cent of the GDP of developed countries.

Conference of the Parties to the UNFCCC (COP21), the level of ambition for G20 involvement was much lower than at St Andrews (IISD, 2015a, 2015b).[3] The G20 expert groups stand out from other climate finance expert groups in terms of mainly reporting to finance ministers and because their members come predominantly from finance ministries (in the case of the Green/Sustainable Finance Study Group also central banks). While finance ministries had discussed climate change in several forums, the G20 was the forum in which this involvement was most institutionalised.

G20 study groups are seldom permanent fixtures and can be discontinued after a period of time, depending on the priorities and preferences of each new incoming Presidency (interview with former chair of G20 Study Group, 30 April 2020) or if the work set out in the Terms of Reference have been completed. The purpose of both post-2009 working groups was to provide knowledge aimed at forming the basis for discussions, rather than significant commitments similar to those the G20 aimed to provide at St Andrews. The Climate Finance Study Group was tasked with considering 'ways to effectively mobilize resources taking into account the objectives, provisions and principles of the UNFCCC' (G20 Heads of State and Government, 2012, para. 71).

More specifically, in 2011, the G20 finance ministers and central bank governors had requested a report on the mobilisation of climate finance from a group of International Organisations (IOs) led by the World Bank and including the IMF and the OECD (discussed in detail in Chapters 11 and 12). This report provided a basis for subsequent discussions in the Climate Finance Study Group. In 2012 and 2013, the Climate Finance Study Group delivered reports on focusing on the mobilisation of climate finance, and defining the issue in terms of meeting the USD 100 billion target without specifying any kind of burden-sharing, except that the funds should be mobilised by developed countries (G20 Climate Finance Study Group, 2012, 2013). In this way, it was up to the individual countries to decide how much public climate finance they wanted to provide, reflecting an approach to climate finance that was very much driven by individual national decisions. In terms of the question of what kind of finance counts as climate finance, private climate funding was framed as constituting an important source of climate finance, and carbon pricing policies were highlighted as a potential source of climate finance but also one which it was up to the individual state to decide whether it wanted to adopt. Carbon pricing was recommended with reference to its efficiency (G20 Climate Finance Study Group, 2012, 2013). Linking climate finance to carbon pricing is an ideal-typical case of economisation, since it links climate finance with the instrument for

[3] The Paris Agreement provisions on climate finance were also rather modest compared to progress made in other areas.

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addressing climate change favoured by most mainstream economists (see also discussion of carbon pricing in Chapter 1 and 7).

After 2013, other issues than mobilising climate finance were included on the agenda, such as improving adaptation finance and collaboration between climate funds as well as leveraging private finance (G20 Climate Finance Study Group, 2014, 2015, 2016a). These issues were treated as being as important as the mobilisation of climate finance and reflected an emphasis on the efficiency of the climate finance mobilised. The approach to these issues was rather technical and avoided references to equity-oriented norms such as CBDR except for generic references to respecting the 'principles, provisions and objectives' of the UNFCCC (G20 Climate Finance Study Group, 2015). The stated objectives of the Study Groups' reports were to share experiences and best practices, reflecting a country-driven approach in which it was up to the individual state to choose the approach that best suited its national circumstances and preferences.

Adaptation finance was addressed in the 2014 and 2015 reports with an emphasis on removing barriers to effective adaptation finance (G20 Climate Finance Study Group, 2014, 2015, 2016a). In general, the importance of private finance and development aid to climate finance was emphasised, as was the use of financial instruments to mobilise climate finance, leverage private finance and reduce investment and climate risks. This emphasis reflects the G20's character as a forum for economic policy. The G20 experts did not (either before or after 2013) provide output explicitly addressing the issue of what constitutes climate finance, but only underscored the importance of tracking climate finance. The 2012 and 2014 reports underscored the divergence of opinions among the member states, particularly regarding the role of public finance vis-à-vis private finance and development aid, including whether public finance should be new and additional to Official Development Assistance (ODA; G20 Climate Finance Study Group, 2012, 2014). Particularly China and India stressed the importance of public finance and additionality as well as of private finance not undermining Annex II countries' obligation to provide public climate finance (G20 Climate Finance Study Group, 2012, 2014). On the other hand, developed countries focused more on leveraging private finance and improving efficiency.

The Green/Sustainable Finance Study Group had the broader purpose of exploring how to scale up green financing, understood as the 'financing of investments that provide environmental benefits in the broader context of environmentally sustainable development' (G20 Green Finance Study Group, 2016), p. 5) Consequently, it did not focus on the USD 100 billion target or other contested issues during the UNFCCC negotiations, but rather on private finance and issues such as greening the banking system, the bond market and institutional investors, as

well as the role of risk and sustainable private equity and venture capital (G20 Green Finance Study Group, 2016, 2017; G20 Sustainable Finance Study Group, 2018). As such, it adopted an economic framing of sustainability, but one which was less focused on externalities and more on overcoming barriers to green investment such as risks. Arguably, this approach was less about textbook environmental economics targeting the nature of the problem (an externality), and more about providing economic, financial solutions to the problem. Furthermore, the focus on sustainability meant that climate change was no longer the only environmental issue addressed, although it still took up considerable space.

10.2 Causes

Regarding the first aspect of economisation, in 2009, the member states and especially the UK Presidency played an important role in ensuring that climate finance was included on the agenda, thus intentionally economising the issue. The entrepreneurship of the UK Presidency was important in shaping the level of G20 efforts regarding climate finance (interview with former senior UK Treasury official, 30 June 2011), and subsequent Presidencies were also influential in shaping the activities of the study groups, for example, the 2012 Mexican Presidency establishing the Climate Finance Study Group and the 2016 Chinese Presidency establishing the Green Finance Study Group. Later Presidencies have been less ambitious in their entrepreneurial roles than the UK, as the deadlock in St Andrews killed off the idea that the G20 could be a major game changer as regards climate finance.

In 2009, there was a general agreement among the finance ministers that the G20 could influence the UNFCCC climate finance negotiations by establishing a common understanding and agreement among the G20 members, who represent the majority of the most important states in the UNFCCC process. The membership circle was also important when the G20 was not able to reach an agreement on the more far-reaching provisions of the draft of the St Andrews Communiqué due to differences between the United States and China (and to a large degree India) regarding World Bank trusteeship of the Green Climate Fund and CBDR. Similar divisions between, on the one hand, China and India and, on the other, developed countries also characterised early discussions of tracking climate finance in the Climate Finance Study Group. These disagreements demonstrate the limits of the influence of economisation: it was impossible to overcome the deep-rooted differences between, on the one hand, China and India and, on the other, developed countries, the United States in particular. In the Green/Sustainable Finance Study Group these divisions were less pronounced as the Study Group was asked to look

at mobilising private capital unlike in the climate finance groups that were focused on public sector transfers related to the UNFCCC negotiations (interview with former chair of G20 Study Group, 30 April 2020).

Furthermore, regarding the membership circle, the G20 does not include lower-income countries. Nonetheless, the G20 have addressed the issue of adaptation finance, which is primarily a concern of lower-income countries since they are the main per capita recipients of such finance, while the emerging economies are the main recipients of mitigation finance (Halimanjaya, 2015; Weiler et al., 2018). In conclusion, while the membership circle mattered especially in terms of limiting how far the G20 was able to go, it cannot explain neither the emphasis on adaptation finance nor on efficiency and economic framings in G20 output compared to the positions of the G20 members in the UNFCCC.

A major factor in the way in which the G20 has addressed climate finance (the second aspect of economisation) has been its economic worldview. This worldview is evident in the general emphasis on efficiency, and the specific emphasis on the importance of private finance and development aid to climate finance, and on the use of financial instruments to mobilise climate finance, leverage private finance and reduce investment and climate risks. Climate finance is economised by treating it as an economic issue to be addressed with financial instruments (leverage, de-risking). While these trends are also evident in the climate finance output from other institutions, e.g. the UNFCCC Standing Committee on Finance (2016, 2018), the G20 has to a larger degree singled them out as key issues. In this respect, the fact that most representatives of member states come from finance ministries or central banks has been an important aspect of this worldview.

Regarding the interaction with other institutions, the UNFCCC in particular played an important role. Not only was the G20 involvement in climate finance driven by the desire to influence the UNFCCC negotiations, but norms from the UNFCCC also shaped the discussions within the G20, most notably the controversy over references to CBDR. The relationship between the G20 and the UNFCCC gradually became more synergistic, going from the G20 being seen as an alternative forum to the UNFCCC for key climate finance discussions to the G20 study groups providing knowledge about how to meet UNFCCC obligations, although with a clear economic framing. The more synergistic relationship between the two institutions should also be seen in the light of the UNFCCC, especially the Standing Committee on Finance (SCF), moving in a more technical direction and leaving more discretion to the states. The move to more technical discussions in both institutions also reflects that with the adoption of the USD 100 billion target,

the most important political decision had been reached, and the remaining topics were more technical. As mentioned earlier, as the G20 output became less focused on the UNFCCC's USD 100 billion target with the Green/Sustainable Finance Group taking over, divisions among member states became less salient. This shows that (cognitive and normative) interaction with the UNFCCC regarding what counts towards the USD 100 billion target meant that divisions over this issue spilled over from the UNFCCC to the G20, although it was ameliorated by the economic worldview of the institution.

Besides the UNFCCC, the Climate Finance Study Group interacted continuously with other institutions, particularly development banks, the OECD and the Global Environment Facility and the think tank the Climate Policy Initiative, which were tasked with providing reports and other input to the Study Group (G20 Climate Finance Study Group, 2015, 2016b). This technical and cognitive input provided the basis for parts of the Study Group's report.

10.3 Consequences

10.3.1 International Consequences

The UNFCCC

The international institution most influenced by the G20's climate finance output is arguably the UNFCCC, at least as regards the Copenhagen Accord negotiations. Although the finance ministers were not able to reach a final agreement on climate finance in St Andrews, they were ready to agree on several issues which would later be found in the Accord (interview with senior European Commission official, 7 September 2011). When comparing the climate finance provisions of the St Andrews Communiqué (and particularly earlier drafts of this Communiqué) and the Copenhagen Accord, crucial similarities between the St Andrews Communiqué and the Accord stand out, as discussed in Section 10.1. Agreements (or in this case, a nearly completed agreement) in one institution affecting the possibilities for agreement in another constitute an incentive-based and cognitive influence (see also Chapter 2). Incentive-based because states would be more inclined to offer to change their negotiation positions within the UNFCCC if they knew – on the basis of the G20 negotiations – that the other states were likely to respond to such offers with similar offers. Cognitive because the G20 process established an understanding among the finance ministers of both developing and developed countries, which influenced how climate finance was addressed in the UNFCCC (interview with senior Indian Finance Ministry official, 3 November 2014). This understanding was developed in the meetings of experts and is visible in the way in which the provisions on the governance of climate finance reflect finance ministerial thinking.

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The G20 process meant that the finance ministries of the G20 developed countries accepted this obligation, including the obligation to fund adaptation, which runs counter to traditional finance ministerial preferences for mitigation finance, which provides a global public good (Pickering et al., 2015b). In this respect, it is important to note that the 'Circle of Commitment' that negotiated the Accord essentially consisted of the G20 minus a few middle-income countries such as Turkey and Argentina but plus representatives of country groups such as the Alliance of Small Island States and a few smaller countries. The importance of the influence of the G20 is also evident in the similarities between the Copenhagen Accord and the St Andrews text, especially when compared to how the Copenhagen Accord and the UNFCCC negotiation text differ (UNFCCC, 2009a, 2009b).

After 2009, the G20 output has not only been more modest in its ambitions, but its influence on the UNFCCC is also harder to discern. The G20 finance ministers (and central bank governors) have only had a limited involvement in the G20 discussions of climate finance, and the state leaders have been less directly involved in the UNFCCC negotiations compared to in 2009. Thus, the direct link between the two institutions at the level of highly powerful government officials has ceased to exist, and while the technical experts participating in the Climate Finance Study Group may influence their country's position during the UNFCCC negotiations, this influence is much more indirect. Another factor is that the USD 100 billion target – despite the uncertainty regarding how it can be met – has been the most important climate finance commitment in the past twenty years. Once it was decided, there was less scope for the involvement of the political level. That meant that a key strength of the G20, its ability to agree on disputed but common political issues among twenty of the most powerful states, was less salient. The experts in the G20 Climate Finance Study Group with their economic approach differed less than the experts in the UNFCCC Standing Committee on Finance. They were influenced by and part of the same trend of framing climate finance in economic terms of leveraging private finance and mainstreaming climate concerns into development aid.

Institutions Tasked with Providing Analysis

Another set of institutions influenced by the G20 output has been the institutions tasked with providing analysis to the G20 Study Groups. Unsurprisingly, given that it often acts as an unofficial G20 Secretariat, the **OECD** has provided many of these reports, but nonetheless these reports constitute a relatively small proportion of the overall OECD publications on climate finance (see Chapter 11). The OECD reports provided to the G20 also stressed the same issues and adopted similar framings to the other OECD publications on climate finance, and did not increase in volume

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after the G20 requests (see Chapter 11). Thus, the G20 hardly induced a fundamental change to the way in which the OECD addressed the issue or the OECD agenda. The same applies to another major provider of reports, namely the **World Bank**, which also provided a range of publications on climate finance beyond those delivered to the G20. Again, the non-G20 World Bank output is rather similar in approach and theme to the publications delivered to the G20 (see e.g. World Bank, 2010, 2013a, 2017, 2018, 2020c). Other **multilateral development banks** (MDBs), particularly the Inter-American Development Bank, have also contributed to the reports to the G20, although to a much lesser degree than the World Bank (G20 Climate Finance Study Group, 2015). **UN institutions**, particularly the Secretariats of both the Green Climate Fund and the Global Environment Facility, and the UNEP and UNDP, also contributed to reports to the G20, again without these reports being radically different to other publications on climate finance published by these institutions (Robbins, 2017; UNDP, 2012). Largely, the reports published by these UN institutions (both those provided to the G20 and the rest) are part of the wider trend of focusing on greening finance and investment rather than the provision of public climate finance.

All of these institutions were used to addressing climate finance, in a knowledge-producing role and/or as providers or implementers of climate finance. Arguably, the G20 commitment exerted its greatest influence over the **IMF**, the **Bank of International Settlements** and the **Financial Stability Board**, which were less used to addressing climate finance, and which provided reports and other input on green and sustainable financial issues such as carbon pricing and green bonds (G20 Green Finance Study Group, 2016, G20 Sustainable Finance Study Group, 2018, IMF, 2011a, 2011b). In the case of the IMF, the output addressing climate finance even decreased significantly when it no longer reported to the G20, demonstrating the G20's influence on the IMF agenda (see Chapter 12).

10.3.2 Domestic Consequences

The arguably most important influence of the G20 on climate finance at the domestic level has been its contribution to a climate finance system in which the most important decisions are left to the developed countries providing climate finance (Pickering et al., 2017). As I have argued earlier, the G20 has contributed to this system via its influence over the Copenhagen Accord provisions on climate finance, a cornerstone of this system. The G20 Climate Finance Study Group also became a part of this system. The factors shaping the domestic decisions regarding the allocation of climate finance mainly consist of domestic factors (Halimanjaya, 2015, 2016; Michaelowa and Michaelowa, 2011b; Peterson and

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Skovgaard, 2019; Pickering et al., 2015b). International influences, including from the G20 (or even from the UNFCCC), have had limited direct impact. The G20 Climate Finance Study Group has worked as an important forum for learning about and developing cognitive ideas about climate finance, especially in the early years, when it was a topic that was new to experts in the Study Group (interview with senior European Commission official, 7 September 2011). In this respect, it is important to note that the G20 Climate Finance Study Group was the main institutionalised forum for finance ministry officials discussing climate finance. The EU had a similar working group also oriented towards developing the EU position in the negotiations, but which covered a much smaller share of the global population and climate finance.

In the case of climate finance, international institutions can shape two aspects of a country's climate finance policy, namely its position in the climate finance negotiations and its provision of climate finance (in the case of developed countries) and the implementation of climate finance (in the case of developing countries) respectively. The involvement of finance ministries is generally lower than the involvement of environment and development ministries both as regards developing a country's position in the UNFCCC negotiations (Skovgaard, 2017b; Skovgaard and Gallant, 2015) and the provision of climate finance (Peterson and Skovgaard, 2019; Pickering et al., 2015), although in both cases it varies considerably from country to country. Yet, while they are less directly involved, finance ministries still hold considerable power over climate finance in all countries, particularly as regards their ability to cut funds for climate finance if it is not spent in a way that they approve of. Thus, involving finance ministry officials in G20 discussions may change the officials' understanding of climate finance, and potentially lead them to accepting climate finance in a way they otherwise would not have done, but also to encouraging their direct involvement in climate finance to shape it to ensure that it matches their worldview.

Yet, existing research does not suggest that G20 member states are more likely to involve finance ministries in either the UNFCCC negotiations or the policy processes determining the allocation of climate finance (Peterson and Skovgaard, 2019; Skovgaard and Gallant, 2015). Thus, there is no overall indication that there is a spill-over from the involvement of G20 finance ministries in G20 climate finance discussions to them becoming more involved in other climate finance policy processes.

It is possible to identify influences from the G20 through the pathways of cognitive and normative change and changes to incentive-based and public and policymaking agendas by examining the five countries studied here in greater detail (see also Chapter 2).

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In the case of the **United States**, the different aspects of climate finance have predominantly been shaped by party politics. The US position in all climate negotiations including those concerning climate finance changed radically with the change of Presidents. While the Obama administration was a hardliner in the climate finance negotiations in terms of opposition to finance targets and relinquishing control over allocation, the Trump administration's decision to leave the Paris Agreement and opposition to the GCF means it plays no role in climate finance negotiations (Bowman and Minas, 2019; Skovgaard, 2017b). Perhaps surprisingly, the provision of climate finance has been less affected, with levels under Trump about a quarter below 2016 levels, although the lack of transparency makes it difficult to determine the exact amounts and their allocation (Thwaites, 2019). Importantly, the United States constitutes an example of a country with a high degree of involvement of the Treasury, inter alia because it has the responsibility of financing flows to multilateral funds, including the GCF and the Climate Investment Funds (Pickering et al., 2015b). The US Treasury under Obama saw the G20 as a forum for climate discussions that was important in its own right and significant for addressing climate change in economic terms (Lew, 2014). Later, the Trump administration has been more sceptical of any kinds of climate discussions in the G20. Yet, even to US Treasury officials during the Obama administration it was not the only relevant forum for discussions with other finance ministry officials, as forums such as the Major Economies Forum and World Bank meetings as well as informal discussions were also important (interview with former US Treasury official, 8 April 2014). Thus, while participation in such meetings were important for cognitive influences in the shape of US officials gradually developing their understanding of climate finance issues, it is difficult to disentangle the influence from the G20 from that of other forums (interview with former US Treasury official, 8 April 2014). In terms of the US public agenda (see Table 10.1), the G20 influence was limited and the

Table 10.1 *Climate finance and the G20 in the US media:* New York Times *and* Washington Post

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Articles referring to US climate finance *and* the G20	2	0	0	0	0	0	0	0	0	0	0	**2**
All articles referring to climate finance (international and domestic)	5	5	4	1	3	1	12	1	3	6	5	**46**

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institution's output on climate finance was only addressed in articles in the *New York Times* and *Washington Post* in 2009, in both cases focusing on how climate finance was not a major issue at the Pittsburgh Summit (Eilperin, 2009a; Galbraith, 2009).

The **United Kingdom** has consistently had a high profile both regarding the climate finance negotiations and the delivery of climate finance (Skovgaard, 2015). The UK is one of the few countries that meets the 0.7 per cent Gross National Income (GNI) target for ODA, and is among the top five global contributors (Atteridge et al., 2019). The United Kingdom has also sought to establish a common ground and promote action on climate finance in various UN and non-UN institutions, including the G20. Most notably, the UK government took on an important entrepreneurial role in establishing the 2009 climate finance expert group and as the host of the St Andrews meeting. At a later stage, the Bank of England, representing the UK government co-chaired the Green/Sustainable Finance Study Group, reflecting Bank Governor Mark Carney's strong interest in the relationship between climate change and risk within the global financial system (interview with former chair of G20 Study Group, 30 April 2020). Thus, both the UK Treasury and the Bank of England have interacted with the G20. Similarly to the United States, participation in the G20 study groups influenced cognitive ideas in these two domestic institutions regarding climate finance issues, but this influence was limited by the UK government (especially the Bank of England at the time of the Green/Sustainable Finance Study Group) already having established an understanding of these issues when entering the G20 discussions. Notably, in spite of the relatively prominent place that climate finance has enjoyed on the UK public agenda (see Table 10.2), only two articles have linked the UK's status as a G20 country to climate finance, in both cases noting the UK government's

Table 10.2 *Climate finance and the G20 in the UK media:* The Guardian *and* The Independent

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Articles referring to UK climate finance *and* the G20	0	0	0	0	0	2	0	0	0	0	0	**2**
All articles referring to climate finance (international and domestic)	20	22	6	1	2	7	33	3	2	2	2	**100**

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reluctance to provide (new) finance to the Green Climate Fund (Carrington and Watt, 2014; Vidal, 2014a).

India was the largest recipient of public climate finance in the period 2002–17, having received about USD 22 billion in climate finance[4] (Atteridge et al., 2019). In the climate finance negotiations, India has adopted a stance stressing historical responsibility, CBDR, developed country targets for public climate finance and channelling climate finance through UNFCCC institutions (Dasgupta and Climate Finance Unit, 2015; Skovgaard, 2017b). The Indian Ministry of Finance has had the lead on climate finance since 2011, when a designated Climate Finance Unit was set up within the Ministry (and also leads participation in the G20). The Ministry of Finance frames climate change as an issue of equity but also of efficiency. The former is more important, since according to the Ministry, the developed countries delivering on their (equity-based) climate finance is a precondition for allocating climate finance in an efficient manner. The emphasis on CBDR has characterised the Indian position in the climate negotiations generally speaking (Sengupta, 2019; Thaker and Leiserowitz, 2014) and is shared with other involved ministries such as the Ministry of the Environment. Regarding the G20, the Ministry of Finance is of the opinion that any decisions on climate issues need to be adopted within the UNFCCC, and the G20 is mainly a forum for economic issues (interview with senior Indian Ministry of Finance official, 3 November 2014). Nonetheless, the Ministry of Finance sees the G20 as an important forum for discussion and sharing best practices and technical knowledge, which may help clarifying and creating a shared understanding among twenty powerful countries, an understanding that may make it easier to reach agreements in the UNFCCC (interview with senior Indian Ministry of Finance official, 3 November 2014). Thus, participation in G20 expert groups has led to cognitive changes in the Ministry, affecting the negotiation position in the

Table 10.3 *Climate finance and the G20 in Indian media:* The Hindu *and* Times of India

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Articles referring to climate finance in an Indian context *and* the G20	0	0	0	0	0	0	7	1	2	0	0	**10**
All articles referring to climate finance (international and domestic)	0	2	1	4	1	5	47	14	3	14	14	**102**

[4] Understood as bilateral and multilateral finance with a principal climate mitigation or adaptation objective.

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Table 10.4 *Climate finance and the G20 in the Danish media:* Politiken *and* Jyllands-Posten

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Articles referring to Danish climate finance *and* the G20	0	0	0	1	0	0	0	0	0	0	0	**1**
All articles referring to climate finance (international and domestic)	0	1	4	61	28	45	18	19	48	60	26	**310**

UNFCCC, but also how the Ministry perceives the implementation of climate finance projects in India.

On the public agenda, the link between the G20 and climate finance existed only in the run-up and aftermath of COP21. Perhaps surprisingly, the rather modest climate finance discussions during the 2015 Turkish Presidency received most attention (Mohan, 2015c).

As regards **Indonesia**[5], the country was the second-largest recipient of climate finance in the period 2002–17, having received USD 9.7 billion in climate finance during this period (Atteridge et al., 2019). During the climate finance negotiations, Indonesia has generally adopted a less hardline position than India. While it has stressed CBDR, developed countries' climate finance targets and the role of the UNFCCC, it has been more positive regarding non-UNFCCC channels for climate finance and has contributed to the GCF, thus contributing to the softening of the developed/developing country distinction (Skovgaard, 2017b). The Indonesian Ministry of Finance has been involved in the implementation of recommendations from climate finance negotiations without taking the lead on either of these two issues. In terms of the overarching framing of climate finance, the Indonesian Ministry of Finance has emphasised efficiency, signalling Indonesian readiness for climate friendly investment to the market, carbon pricing as well as CBDR (Indonesian Ministry of Finance, 2009; interview with a senior Indonesian Finance Ministry official, 24 June 2015). The Ministry's responsibility for G20 has – together with the 2007 COP13 in Bali – increased its attention to climate change. In the G20 expert groups, the Indonesian Ministry of Finance officials have stressed efficiency over CBDR (G20 Climate Finance Study Group, 2014).

As a non-G20 country, **Denmark** is less relevant when studying direct influences. As regards the public agenda, a couple of articles addressed Prime Minister

[5] A media analysis of the Indonesian media coverage of the term climate finance has not been carried out.

Lars Løkke Rasmussen giving a presentation at the St Andrews meeting, and focused inter alia on the fiscal costs of climate finance to Denmark (Beder and Plougsgaard, 2009; Kongstad et al., 2009).

10.4 Summary

The case of the G20 addressing climate finance demonstrates both the potential of economisation and its limitations. On the one hand, it constitutes a clear-cut case of an economic institution framing a climate issue in economic terms that differed from how the non-economic institution (the UNFCCC) had framed it. This is evident in the emphasis on efficiency, reducing costs, leveraging private finance and other economic instruments. On the other hand, this economisation had a limited influence: the St Andrews meeting failed to overcome the fundamental fault lines between developed and developing countries, although it did create consensus on key issues that later appeared in the Copenhagen Accord. After 2009, its less ambitious knowledge output had an impact on a set of international institutions (mainly in terms of moving climate finance up their agendas) and domestically (mainly in terms of influencing cognitive ideas). More recently, the G20 interest in climate finance has been replaced by an interest in sustainable (private) finance, underscoring that economisation does not entail one given set of output. Interaction with other institutions, particularly the desire to influence the UNFCCC, was a major factor in inducing the G20 to address climate finance, as was entrepreneurship from the Mexican and especially UK Presidencies. The institutional worldview, interaction with other (mainly economic) institutions and to some degree also the membership circle have shaped the G20's economic approach to climate finance.

11

The OECD and Climate Finance

Development and Investment

The OECD's involvement with climate finance dates back to the 1990s and thus much further than that of the other international economic institutions. The OECD as an institution involves a wider range of actors, particularly domestic ministries, than the other two institutions, as exemplified by the involvement of development ministries in the OECD Development Assistance Committee (DAC). While it is still essentially an economic institution with the objective of improving the economic and social wellbeing of people around the world and with its economic worldview (Ruffing, 2010), it has addressed non-economic policy issues such as development and environmental protection to a larger degree than the other two institutions. Compared to them, its membership circle is much more restricted to developed countries, so much so that OECD membership has become synonymous with being a developed country.

As a knowledge-producing institution, the OECD has produced numerous reports and other publications on climate finance, which can be divided into two strands: a development strand within which the DAC has published statistics on the provision of development aid with climate objectives and an investment strand producing analyses of how to redirect investment to green purposes. This chapter outlines these two strands, and proceeds to analyse the factors that shaped them (institutional interaction, worldview and member states). Finally, the chapter discusses the consequences of OECD output for the international (especially the United Nations Framework Convention on Climate Change [UNFCCC]) and domestic levels (most salient regarding the development strand).

11.1 Output: The Investment and Development Strands

The OECD has addressed climate finance since the 1990s. Notably, in 1998 the DAC introduced the so-called Rio Markers for reporting aid projects related to biodiversity, desertification and climate change mitigation. In 2007, Rio Marker

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reporting became mandatory for member states and an adaptation marker became mandatory in 2010. The OECD involvement with climate finance can be divided into two strands: one based on the OECD's established expertise regarding development aid and one based more on its expertise on investment. Within both of these, formal OECD output is knowledge based, and includes both formal (numerous reports, climate finance statistics and reporting with the DAC as well as panel discussions) and informal (workshops and seminars) types.

In the development strand, the DAC monitors and provides statistics on the Official Development Aid (ODA) of member states based on reviews of their reports, and consists of representatives of the member states (mainly development and foreign ministries) as well as of OECD staff, particularly from the Development Co-operation Directorate. Not all OECD members are DAC members. At the time of writing, Chile, Colombia, Estonia, Israel, Latvia, Lithuania, Mexico and Turkey were OECD but not DAC members. Subsidiary bodies under the DAC such as the Network on Environment and Development Co-operation discuss issues relating to environmental protection and development aid, particularly issues concerning tracking development aid with an environmental objective and the difficulties with such tracking. The meetings of the DAC and its subsidiary bodies mainly serve to develop and disseminate knowledge, including best practices.

Concerning the cognitive issue of defining climate finance, the development strand has framed climate finance primarily as a subtype of development finance, and bilateral climate finance as a subtype of ODA. Given that the OECD does not address the issue of whether climate finance is new and additional to development aid, and the countries' reporting of their climate finance is very prone to overcoding (Michaelowa and Michaelowa, 2011a), the OECD figures of bilateral climate finance have been criticised for being too high (Roberts and Weikmans, 2017). This is true concerning figures for individual countries as well as for the OECD estimates of total amounts of climate finance provided by the OECD countries. Developed countries often base their individual biannual climate finance reports to the UNFCCC on the data reported to the DAC, and these reports have often been criticised for exaggerating the amounts provided, particularly regarding adaptation (Donner et al., 2016; Roberts and Weikmans, 2017; Weikmans et al., 2017). The OECD has cautioned that its DAC figures were intended to provide descriptive statistics to track the mainstreaming of the objectives of the MEAs adopted at the Rio Convention, not to measure progress concerning pledges or to compare countries (OECD, 2012a, 2018a; Weikmans and Roberts, 2018).

As a key example of the estimates of total flows, the OECD and the Climate Policy Initiative (2015a) estimated that total climate finance in 2014 amounted to USD 61.8 billion. Of this total, public climate finance amounted to USD

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43.5 billion, and public bilateral climate finance to USD 23.1 billion, consisting mainly of climate-related ODA reported to the UNFCCC but also of 'Other Official Flows' (public finance not classified as ODA because it is not primarily aimed at development or because the grant component is less than 25 per cent). The OECD was tasked with providing this report by the Presidencies of UNFCCC Twentieth and Twenty-first Conference of the Parties (COP20 and 21, Peru and France) in order to provide an up-to-date aggregate estimate of mobilised climate finance and an indication of the progress made towards the UNFCCC climate finance goal (OECD, 2015a). The report's finding that the USD 61.8 billion constituted the developed/Annex II countries' progress towards mobilising the USD 100 billion caused much criticism especially from UNFCCC negotiators from developing countries (Sethi, 2015). The negotiators argued that the actual figure was much lower, even as low as USD 2.2 billion USD (Dasgupta and Climate Finance Unit, 2015). In a 2016 report, the OECD Secretariat projected that public climate finance would reach USD 67 billion by 2020, and argued that the USD 100 billion target being met depended on whether the amount of private finance leveraged per unit of public finance increased from current levels (OECD, 2016).

In terms of generating climate finance and the normative ideas regarding this generation, treating climate finance as a type of development aid meant that the OECD helped maintain the current climate finance system in which developed countries determine their contributions individually. Thus, developed countries de facto determine how much they should provide individually and consequently also in total, and there is little scope for individual or collective targets for public climate finance. Although the OECD did not explicitly endorse this system, it participated in constructing it. The 'climate finance as ODA' framing was particularly pronounced in reports from the DAC and the Development Co-operation Directorate (but also involved other Directorates, especially the Environment Directorate) and reflected the preferences of the member states. In this respect, the OECD's avoidance of assessing whether climate finance was new and additional, both in the reports from the DAC and the OECD Secretariat's estimate of overall climate finance, is an example of output reflecting such preferences (Weikmans and Roberts, 2018). It also de facto framed development aid as a source of climate finance and implicitly defined the norm of new and additional climate finance as peripheral to the generation and estimates of climate finance.

The second strand – the 'investment strand' – frames climate finance as an instrument in the transition to low-carbon societies and as a way of redirecting investments from 'brown' to 'green' (Kaminker et al., 2013; Kato et al., 2014b; OECD et al., 2018; OECD Secretariat, 2013) and thus does not focus on the size of individual or combined climate finance contributions. The strand is based mainly in

the Environment (particularly the Climate Change Expert Group) and the Financial and Enterprise Affairs Directorates. These directorates work closely with the environment and the finance and economics ministries in the member states respectively. Importantly, this strand links climate finance to two key climate issues for the OECD, viz. fossil fuel subsidy reform and carbon pricing (Corfee-Morlot et al., 2012; Kato et al., 2014a), as well as OECD institutional investment policy (OECD Secretariat, 2010b). More recently, and in line with the G20 and the IMF (see Chapters 10 and 12), the OECD has also focused on making financial flows more green or climate friendly (Jachnik et al., 2019; OECD et al., 2018). Fossil fuel subsidy reform, carbon pricing and institutional investment are issues that speak more directly to the powerful OECD directorates that deal with economic issues and to the parts of the OECD governmental constituencies that come from finance and economics ministries. In this way, this is a rather clear-cut case of economisation in terms of the involvement of parts of the OECD Secretariat working solely on economic issues and the link to issues with strong economic dimensions. As mentioned in Chapters 1 and 7, carbon pricing is a textbook (mainstream) environmental economics solution to climate change, while institutional investment is an inherently economic issue. Even if fossil fuel subsidies can be framed in different ways with varying emphasis on their economic aspects, no framing ignores the economic aspects completely (see Chapter 4).

An important institutionalised forum within this strand is the Research Collaborative on Tracking Finance for Climate Action that constitutes a research network of representatives of OECD Directorates (Development Co-operation, Environment, Statistics and Financial and Enterprise Affairs), international and local research institutes and think tanks, multi- and bilateral as well as national development banks, private investors and financial institutions and government representatives (OECD, 2020c). The Research Collaborative organises formal and informal events as well as published publications (Jachnik et al., 2019), focusing on analysing how private finance can be mobilised by public finance and how to track such private finance. In this way, the Research Collaborative has worked to make it possible to include private finance towards the USD 100 billion target, without explicitly saying what its share should be vis-à-vis public finance.

The investment strand has increasingly overlapped with the development strand, especially when the Research Collaborative has analysed how to assess the amounts of private finance mobilised by public finance, and relies heavily on DAC methods for estimating private climate finance directly mobilised by development aid (OECD, 2017). The interaction with finance ministries and institutional investors has allowed the OECD to teach actors not traditionally interested in climate issues about their importance, and generally to 'push the envelope' within the scope of the OECD mandate (interview with senior OECD official, 30 April 2015). Thus, this

strand has addressed climate finance in a very broad sense, at times also including finance with a negative or no impact on climate change (Jachnik et al., 2019).

On a related note, in 2016 the OECD established its Centre on Green Finance and Investment, which institutionalised many of the OECD efforts in such investment, and which has a strong focus on a 'green, low-emissions and climate-resilient economy', thus emphasising climate mitigation and adaptation within wider environmental issues (OECD, 2019a). The Centre also organises the annual Forum on Green Finance and Investment, a key event in the field.

The OECD output in the investment strand originally framed the question of how climate finance should be generated as an issue of addressing climate change as efficiently and effectively as possible. Thus, it highlighted the need for maximising flows, which de facto meant maximising private flows. Normative ideas of equity, such as Common but Differentiated Responsibilities and Respective Capabilities (CBDR) and historical responsibility, were rarely mentioned, and only as part of descriptions of the UNFCCC commitments and principles (Corfee-Morlot et al., 2012; Jachnik et al., 2019).

Regarding the principles that should determine the allocation of climate finance, the OECD has mainly emphasised efficiency in its publications, devoting most of its attention to how climate finance might be mitigated most effectively at the lowest cost. Private mitigation finance has been heavily emphasised in this respect (OECD, 2014). Equity has been emphasised in relation to securing an even geographical distribution that guarantees different regions and kinds of developing countries (particularly Least Developed Countries, Land-Locked Countries and Small Island Developing States) their share of climate finance (Haščič et al., 2015). While the Environment and particularly the Financial and Enterprise Affairs Directorates may have been focused predominantly on mitigation (Kato et al., 2014a), the Development Co-operation Directorate has paid more or less equal attention to adaptation, especially as regards the development of the adaptation Rio Marker. However, altogether the development strand has de facto supported the climate finance system in which the decisions about the principles that should guide climate finance has been left to developed countries, while the investment strand has pushed in the direction of a more efficient use of finance for mitigation. Efficiency in the latter case implies spending money where investors obtain most value for money, that is, often emerging economies rather than Least Developed Countries or Small Island Developing States.

11.2 Causes

The initial causes of the OECD addressing climate finance (the first aspect of economisation) originated in different places: while its existing (intra-institutional)

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experience of development has played an important role, member states have also been a key driving factor (interview with senior OECD official, 25 May 2015). During the UNFCCC negotiations, most OECD member states have actively promoted a role for the OECD in monitoring climate finance, whereas most developing countries preferred institutions established in the UNFCCC. Developing countries have feared that the preferences of the OECD would be close to those of its member states and have been in favour of monitoring conducted by institutions in which they were represented such as the Standing Committee on Finance (SCF). Developed states, on the other hand, wanted to involve the OECD, since this would link development aid and climate finance – effectively designating climate finance as a type of development aid – within an institution which they controlled.

Furthermore, institutional interaction has induced the OECD to address climate finance. The OECD has been commissioned by other international institutions – including the G20 – to undertake research on the mobilisation and delivery of climate finance (G20 Study Group on Climate Finance, 2016a; Röttgers et al., 2018; World Bank Group et al., 2011). In the run-up to COP21, the Presidencies of COP20 and 21 (Peru and France) also tasked the OECD with providing an up-to-date aggregate estimate of mobilised climate finance and an indication of the progress made towards the USD 100 billion target. Through more indirect pathways, the UNFCCC process – both in preparation for COP21 and the efforts to implement the resulting Paris Agreement – also induced the OECD Secretariat to produce a range of reports and events on their own initiative (e.g. Jachnik et al., 2019; Kato et al., 2014a,b). Likewise, the OECD Secretariat has, especially as regards the investment strand, produced output addressing the Sustainable Development Goals (SDGs).

In terms of factors shaping the OECD output, the institutional worldview played a more significant role, particularly as regards defining climate finance in economic and development terms. The overarching worldview of the OECD is one framing issues in economic terms and highlighting economic instruments (Carroll and Kellow, 2011; Ruffing, 2010), which is evident in the OECD climate finance output. In the case of climate finance, the influence of the worldview included the emphasis on efficiency and the link with fossil fuel subsidy reform, carbon pricing and institutional investment, as well as the development strand's framing of public climate finance as a subtype of development aid. The differences between the two strands are rooted not only in the worldviews of the different directorates, rather than the worldview of the OECD as a whole, but also in the worldview of the representatives of the ministries that each directorate interacts with. One example of such representatives are development ministry officials in the case of the DAC. There are also framings specific to each strand, that is, public climate finance as development aid and the link to

economic instruments respectively. Due to the link to economic instruments, economisation was more pronounced in the case of the investment strand.

Although member state officials were involved in drafting much of the output, staff of the Secretariat attempted to push the envelope and as far as possible act independently of the member states. Nonetheless, the OECD bureaucracy had to ensure that the organisational output was acceptable to its principal. A key element of this is that the OECD is heavily involved in the day-to-day governance of climate finance (unlike the IMF and the G20); thus any figures published by the DAC would be used in discussions of whether developed countries are living up to their commitments. Hence, OECD output could have substantial consequences for its member states, and therefore the OECD member circle of developed countries are sceptical of output that goes against their preferences. Even though the output stemming solely from the OECD Secretariat is more independent of member states than that of the OECD as a whole, member state representatives are allowed to comment on it. Furthermore, the OECD Secretariat's budget is determined by member states, giving them the discretion to allocate funds between activities and parts of the Secretariat depending on how beneficial or counterproductive they think they are (Carroll and Kellow, 2011). All things considered, the autonomy of the OECD bureaucracy constitutes an important scope condition for the influence of its bureaucracy.

Finally, institutional interaction has been more influential in terms of inducing the OECD to address climate finance than regarding how it is has addressed it. The G20 has told the OECD Secretariat to analyse particular issues but has not said how the OECD should address the issue. The UNFCCC has been more influential in this respect, as the OECD output has addressed UNFCCC commitments (most notably the USD 100 billion target) and principles (e.g. CBDR). The former has played a much more central role in the OECD output, as is evident from the publications addressing how to reach the USD 100 billion target. Yet, the principles have often only been addressed in brief paragraphs or text boxes, which have acknowledged their importance without granting them a central place. Finally, the institutions that the OECD has interacted with in terms of producing joint publications or through workshops and seminars have also shaped the OECD output, inter alia through cognitive interaction. These institutions include (in the cases of both strands) multilateral development banks (MDBs), private research institutions and think tanks (most notably the Climate Policy Initiative [CPI]), and International Organisations such as the International Energy Agency (IEA) or United Nations Environment Programme (UNEP). In the case of the development strand, it also involves national development agencies, and in the investment strand, private actors such as banks and institutional investors. This interaction has mainly been

cognitive in terms of shaping how the OECD defines what key concepts are. As an important example of this, the OECD revised its guidelines for using the Rio adaptation marker so that they now are more similar to the guidelines used by the MDBs (UNFCCC Standing Committee on Finance, 2018).

11.3 Consequences

11.3.1 International Consequences

At the international level, the OECD has occupied a central position in a tight web of international institutions addressing climate finance, particularly those focusing on producing knowledge about climate finance. The central role of the OECD has meant that economisation in the shape of the OECD framing climate finance in economic terms has spilled over onto the agendas of other institutions. These institutions have influenced the OECD and have been influenced in return, predominantly via cognitive mechanisms. The **G20** has been cognitively influenced by the OECD (mainly the Secretariat) through the reports the OECD provided it as well as OECD Secretariat officials participating in G20 workshops, both of which were used by the G20 Study Groups as material for producing their own reports. These reports focused on OECD areas of expertise, specifically on climate finance tracking and fossil fuel subsidy reform (OECD Secretariat, 2011; World Bank Group et al., 2011). The fact that these reports have been utilised by the G20 meant that they have contributed to supporting the donor-driven climate finance system, in which the important decisions about climate finance have been made by donor governments individually (see Chapter 10). The OECD did not create this system, but its reports on how to make it work in an effective and efficient way have supported its operations by producing cognitive knowledge (domestic and international) actors have been able to utilise.

The influence on the **UNFCCC** is most direct in the case of cognitive influence on the SCF. First, there is the influence via the OECD member states that tend to rely on DAC data when they report their climate finance to the UNFCCC in their biannual reports. This influence is important not only at the level of the individual country but also because the SCF uses the climate finance figures in the biannual reports to estimate total flows of climate finance. The SCF also relies heavily on OECD DAC figures when it estimates the allocation of public bilateral climate finance for inter alia adaptation and mitigation, to different groups of countries (e.g. Small Island Developing States and Least Developed Countries, different regions) and for gender-oriented projects. Second, the SCF has also relied on OECD data on private investments mobilised by bilateral and regional institutions as well as on fossil fuel subsidies and investment in fossil fuels, recognising the OECD's expert

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authority regarding these subjects (UNFCCC Standing Committee on Finance, 2014; 2016, 2018).

Beyond the SCF, the responses from the UNFCCC to the OECD output have been more mixed. The question of what counts as climate finance has been a heated topic in the negotiations since before COP15, and the role of the OECD in this has been controversial (Weikmans and Roberts, 2019). Particularly the 2015 OECD and CPI report on climate mobilised developed countries, and its finding that USD 62 billion had been mobilised was criticised by negotiators from developing countries (Sethi, 2015). Much of the criticism concerned the CPI and OECD's reliance on inflated figures reported by developed countries and ignoring the question of additionality. While there was also contestation over these issues in the SCF, the SCF as a technical body was more prone to utilising OECD data (together with data from other sources) than the more political body of the UNFCCC climate finance negotiations. While there was some overlap in terms the officials involved in the SCF and the climate finance negotiations, the more technical mandate of the SCF (UNFCCC Standing Committee on Finance, 2020), this meant that the technical (cognitive) knowledge produced by the OECD was more acceptable to the SCF than to the UNFCCC climate negotiations. Normative influences were very limited, since climate finance was too politicised in the UNFCCC and the OECD was too much of a club for developed countries for the OECD to exert direct influence over how normative questions were addressed, although it implicitly supported the donor-driven system. Yet, incentive-based influences mattered in terms of the DAC figures showing how far developed countries contribute climate finance towards their UNFCCC commitments.

The network of institutions producing knowledge about climate finance also includes several institutions with which the OECD has co-produced output. In these cases, the interaction between the institutions consists of two-way cognitive learning processes influencing the OECD as well as the other institutions. These institutions include the **MDBs**, particularly the World Bank, which the OECD Secretariat has collaborated with on several of its reports and workshops (OECD and World Bank, 2016; OECD et al., 2018; World Bank Group et al., 2011). Beyond the World Bank, there has been a cognitive influence running in both directions between the OECD Secretariat and the MDBs as a group, in which they have collectively been developing their cognitive ideas about climate finance. This has been the case both as regards mobilising private finance (of which the MDBs have considerable practical experience) and tracking multilateral climate finance. Collaboration with the **IEA** is more limited than one might expect given the close relationship between the two institutions (also compared to the case of fossil fuel subsidies), but has nonetheless resulted in joint publications on climate finance by

the OECD–IEA Climate Change Expert Groups (e.g. Kato et al., 2014b; Vallejo et al., 2017).

The institutions providing knowledge about climate finance also include non-UNFCCC UN institutions, particularly United Nations Development Programme (**UNDP**) and **UNEP**. Both UNEP and UNDP have collaborated with the OECD Secretariat on publications, in the case of UNEP and the UNEP Finance Initiative[1] on (especially infrastructure) investment (OECD et al., 2018), in the case of UNDP on the relationship between climate finance and development.

Beyond intergovernmental institutions, the OECD has also had a considerable influence on **non-state actors and institutions**. Although environmental non-government organisations (NGOs) have voiced criticism similar to that of the UNFCCC negotiators from developing countries (Climate Action Network Europe, 2015a), and they have also relied on OECD DAC data and often utilised these data (Climate Action Network Europe, 2015b). Research institutions and think tanks such as the CPI, World Resources Institute or the Overseas Development Institute have also utilised OECD data, as well as collaborating with the OECD on some of its output, most notably the 2015 OECD and CPI report (interview with senior OECD official, 12 May 2015). Finally, corporate actors, in particular actors from the financial sector such as banks and pension trusts, have been influenced by output from the OECD investment strand. This includes participation in workshops and seminars arranged by the OECD Secretariat and drawing on OECD publications, and participating actively in OECD networks such as the Research Collaborative on Tracking Finance for Climate Action (OECD, 2018c, 2020c).

11.3.2 Domestic

Regarding the domestic level, the influence of the OECD has also mainly been cognitive and has involved government officials rather than non-governmental constituencies such as NGOs or the general public. This is evident in all the five countries studied, even the non-OECD countries India and Indonesia. The DAC reporting requirements have involved officials in each DAC country, setting in motion the production of knowledge about climate aspects of their own ODA and framing existing ODA projects as climate projects. DAC reporting not only affects their cognitive understanding of their own climate finance; it also provides them with knowledge about other countries' climate finance. All DAC countries, including the United States, the United Kingdom and Denmark, have treated climate finance as a subtype of development aid.

[1] A partnership between UNEP and the global financial sector.

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As regards both the development and investment strands, the OECD has played an important role as a provider of knowledge and ways of understanding climate finance. As regards producing data and statistics on public bilateral climate finance, the OECD enjoys a quasi-monopoly, which has meant that even those critical of the OECD data have to rely them, as is evident in the case of India (see later). This influence has also been important regarding climate-related investment, which is a new subject that people, including government officials, had little understanding of and regarding which only limited knowledge had been produced. OECD publications, workshops and seminars were among the first to address investment as a climate finance issue, at least beyond academia and think tanks. The OECD Secretariat's expertise on investment and development has played an important role for its authority on these issues in the eyes of government officials. Especially as regards investment, reframing particular kinds of already existing finance as climate finance has meant that actors, including government actors, already working with investment have been able to address it in a different way. All the five countries studied here have been active in the investment strand.

Neither of the strands has played a major incentive-based role, yet DAC reporting has provided opportunities for incentivising countries to provide more climate finance, as well as more climate finance in line with equity-based ideas such as prioritising vulnerable countries and adaptation. Such incentives may take the shape of reputational costs of not living up to climate finance commitments, hence reducing a state's credibility when future commitments (regarding climate finance or other issues) are negotiated (on reputational costs and benefits, see Abbott, 2014). The fact that there are no individual country obligations to provide a given amount of climate finance limits the impact of such reputational costs, yet the fact that countries over-code their climate finance indicates that they are concerned about being seen as providing sufficient amounts of climate finance. Furthermore, the amounts of public climate finance provided– according to the DAC (OECD, 2019b) – increased consistently during the period 2013–17, indicating that countries are responding seriously to the commitment of providing increasing amounts of climate finance, even though these amounts may not be sufficient to reach the USD 100 billion target.

The **United States** has consistently preferred the OECD to the UNFCCC as an institution for monitoring climate finance. The United States has also consistently reported to the DAC committee even when the Trump administration ceased to report its climate finance flows to the UNFCCC, and also referred to the OECD's figures and argued that they may underestimate actual flows (Sethi, 2015). Yet, the fact that US public climate finance has been shaped more by domestic than international politics (see Chapter 10) and that the United States interacts with

Table 11.1 *Climate finance and the OECD in the US media:* New York Times *and* Washington Post

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Articles referring to US climate finance *and* the OECD	0	0	0	0	0	0	2	0	0	0	0	**2**
All articles referring to climate finance (international and domestic)	5	5	4	1	3	1	12	1	3	6	5	**46**

a wide range of institutions regarding climate finance, many of them with headquarters in Washington, DC (the World Bank, the Inter-American Development Bank), means that OECD influence on US climate finance can be difficult to discern from other factors. On the public agenda, the OECD has not been linked to US climate finance, except for two articles in 2015 (see Table 11.1), which referred to the OECD and CPI report on progress towards the USD 100 billion target (Davenport, 2015; Porter, 2015). Importantly, the criticism of the level of US climate finance from officials and NGOs from European and developing countries (including India) was placed in the context of the report, thus adding to the normative pressure on the United States to provide more climate finance. This is an example of how OECD reporting makes it possible to criticise countries for not providing enough climate finance. In this way, the OECD makes it easier to hold countries accountable for equity-oriented normative ideas, although it is possible that another, more equity-oriented institution established in the UNFCCC would have taken its place had it not reported on climate finance. Furthermore, on a very fundamental level, the OECD has supported the CBDR-based normative idea that developed countries have an obligation to provide climate finance.

The **United Kingdom** is a prominent example of a country that has played an active role in international climate finance discussions, as well as having increased its public climate finance and reported the same climate finance data to the OECD DAC and to the UNFCCC (UK Government 2019). The UK has stressed normative ideas such as efficiency and the importance of leveraging private finance (Pickering et al., 2015b; Skovgaard, 2017b; UK Government, 2019). UK government representatives have also been highly active in the OECD investment strand, notably the

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Table 11.2 *Climate finance and the OECD in the UK media:* The Guardian *and* The Independent

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Articles referring to UK climate finance *and* the OECD	0	0	0	0	0	0	3	0	0	0	0	**3**
All articles referring to climate finance (international and domestic)	20	22	6	1	2	7	33	3	2	2	2	**100**

Forum on Green Finance and Investment, in which representatives of inter alia the Bank of England have presented their perspectives on green investment and finance issues. On the public agenda (see Table 11.2), a picture similar to the one of the United States emerges: it was not until 2015 that newspaper articles linked OECD data and UK climate finance. Furthermore, in these articles the OECD estimates of climate finance provided a context for NGOs to criticise the United Kingdom (and other developed countries) for not providing sufficient amounts of climate finance, including shaming the United Kingdom for not contributing as much as France and Germany (Mathiesen, 2015; Neslen, 2015).

A criticism of the OECD is that the DAC countries can provide as much climate finance as they wish to and also report as much as they wish to due to the limited scrutiny of the DAC figures, an issue often raised by the government of **India** (Dasgupta and Climate Finance Unit, 2015; Indian Ministry of Finance, 2019). Thus, the Indian government has been highly critical of the current system of donor-driven climate finance. Specifically, it has criticised both the OECD's estimate of global climate flows and the use of OECD DAC data to calculate individual countries' climate finance contributions (see inter alia Dasgupta and Climate Finance Unit, 2015; Indian Ministry of Finance, 2018). Nonetheless, India has as a partner country participated in meetings arranged by the DAC Environet Working Group climate finance meetings. A crucial factor explaining this difference is that the OECD's output on investment has been more aligned with the preferences of the Indian government (which is in favour of leveraging private finance, Indian Ministry of Finance, 2019) than the development strand output. On the public agenda, as in the United States and the United Kingdom, the OECD link between the OECD and climate finance in an Indian context has hardly featured before or after 2015, 2016 being the sole exception (see Table 11.3). Also similar to the US

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Table 11.3 *Climate finance and the OECD in the Indian media:* The Hindu *and* Times of India

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Articles referring to climate finance in an Indian context and the OECD	0	0	0	0	0	0	4	1	0	0	0	**5**
All articles referring to climate finance (international and domestic)	0	2	1	4	1	5	47	14	3	14	14	**102**

and the UK public agendas, it is the OECD's estimate of global climate finance on progress towards the USD 100 billion target that receives the attention, and the findings are used to shame developed countries for not living up to their promises (Mohan, 2015a). Yet, unlike the US and UK newspapers, the veracity of the OECD's figures are called into question, and the Indian government's claim that these figures are exaggerated is referred to (Byravan, 2015; *The* Times of India, 2015).

Like India, **Indonesia** is an OECD partner country, which has participated in a few of the investment and (to a lesser degree) development strand meetings but has been less vocally critical of the DAC estimates of climate finance. Both Indonesia and India have participated actively in the activities under the investment strand, including the Forum on Green Finance and Investment, since this forum is less controversial, as it has not interfered with the USD 100 billion target and other issues discussed in the UNFCCC.

Denmark is like the United Kingdom, a country that has increased its public climate finance and reports the same climate finance data to the OECD DAC as to the UNFCCC (Danish Ministry of Energy, 2017). Also similarly to the United Kingdom, the Danish government has stressed normative ideas such as efficiency and the importance of leveraging private finance (Danish Ministry of Foreign Affairs, 2017; Pickering et al., 2015b; Skovgaard, 2017b). In the investment strand, at the OECD meetings and forums Denmark has played a very active role considering its small size compared to the other countries studied, often highlighting Danish experiences with climate investment. The public agenda follows a pattern similar to that of the other countries, although the link between the OECD and Danish climate finance is also present beyond the peak in 2015 (see Table 11.4). The focus is also on NGOs shaming the government for not providing sufficient

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Table 11.4 *Climate finance and the OECD in the Danish media:* Politiken *and* Jyllands-Posten

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Articles referring to Danish climate finance *and* the OECD	0	1	0	0	0	1	4	1	0	2	2	**11**
All articles referring to climate finance (international and domestic)	0	1	4	61	28	45	18	19	48	60	26	**310**

amounts of climate finance and this finance not being new and additional climate finance (Hannestad and Bostrup, 2019). Yet, there are also references to the OECD's analysis of climate finance, including the shares of private finance (Thomsen and Hannestad, 2015).

11.4 Summary

The OECD's output on climate finance is mainly knowledge-based and can be divided into two strands addressing public climate finance framed as a subtype of development aid and as an investment issue respectively. In both strands, the OECD has emphasised economic normative ideas, particularly the importance of efficiency, and de facto, especially in the development strand, contributed to the current climate finance system in which the important decisions regarding allocation are reached by developed contributor countries. Since investment is more of an economic issue than development, it is unsurprising that economisation (in terms of framing) was more pronounced within the investment strand. In both strands, the OECD has played a role as a key (in the development strand the *key*) knowledge provider. Institutional interaction, especially with the UNFCCC, and member states has been an important factor in inducing the OECD to address climate finance, whereas member states and the institutional worldview have been important in shaping how the institution has addressed it. The OECD member states and the OECD bureaucracy's autonomy vis-à-vis them have acted as a scope condition for how far the OECD bureaucracy has been able to go. Importantly, the institutional worldview has differed to some degree between the directorates responsible for the two strands, as the directorates as well as the member state officials they have interacted with have differed and had different worldviews. Specifically, the

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development strand has mainly involved the Development Co-operation Directorate and development ministries, and the investment strand the Environment and the Financial and Enterprise Affairs Directorates and the environment and the finance (and economics) ministries. The OECD output has mainly been influential via cognitive mechanisms, and more pronounced at the international than the domestic levels. The UNFCCC has most notably been influenced by OECD reporting on the total and country contributions of climate finance (from the development strand), whereas the investment strand has influenced cognitive ideas about the role of investment at the domestic level as well as in international institutions including the G20, MDBs and the UNFCCC. Yet, the OECD's quasi-monopoly on public climate finance statistics has also led to important cognitive influences at the domestic level, which is evident in how their data have been used both by the government and by NGOs seeking to shame developed country governments for providing insufficient amounts of climate finance. The influence on the public agenda was most pronounced in connection with COP21 in 2015.

12

The IMF and Climate Finance

Carbon Pricing Rears Its Head

The IMF has not traditionally paid much attention to climate finance or to climate change in general but started publishing reports on climate finance from 2010. More recently, the Fund has paid more attention to climate change in general (IMF, 2019c, 2019e, 2019g; Lagarde and Gaspar, 2019). Thus, the IMF has not dedicated as much attention to climate finance as to fossil fuel subsidy reform and has also dedicated less attention to the subject than the G20 and especially the OECD. Nonetheless, the IMF output on climate finance provides an important insight into a case of economisation. The chapter starts with an outline of the IMF's relatively limited output on climate finance, which initially focused on the mobilisation of climate finance and later more broadly on fiscal policies. The way in which the IMF linked climate finance to fossil fuel subsidies and carbon pricing is indicative of its view that climate change is best addressed by pricing emissions. As I explain in the subsequent section, this approach is shaped by the Fund's worldview and its focus on fiscal policy, and its initial impetus to address climate finance has come from institutional interaction and policy entrepreneurs within the bureaucracy. Finally, the limited consequences of the IMF output at the international and domestic levels are discussed.

12.1 Output: Linking Carbon Pricing and Climate Finance

The IMF output on climate finance consists mainly of knowledge output in the shape of publications analysing climate finance and providing policy recommendations. Importantly, the IMF has not used its considerable arsenal of incentive-based instruments in the context of climate finance the way it has done with fossil fuel subsidies. The first publication was a staff position note published in 2010 advocating the establishment of a Green Fund (different from the Green *Climate* Fund established in 2010) which would use some of the Special Drawing Rights[1] (SDRs)

[1] Foreign exchange reserve assets belonging to the IMF member states and held by the IMF.

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of IMF member states as capital on its balance sheet, thus allowing the Green Fund to issue green bonds with SDRs as security (Bredenkamp and Pattillo, 2010). An IMF staff position note is an example of a working paper that has not been through the internal IMF approval procedure and thus does not constitute the official IMF position, but which nevertheless is often indicative of the perspective of IMF staff in general. A position note advocating a position conflicting with the official IMF line would not be published by the IMF. Had the IMF adopted the proposal, it would have constituted a radical break with the previous use of SDRs but also meant that the IMF would have had a very significant incentive-based instrument in its hands.

In June 2011, the Fund was one of the international institutions requested by the G20 to provide an analysis of climate finance. The request resulted in the IMF publishing two background papers on domestic sources of climate finance and international aviation and shipping as sources of climate finance (IMF, 2011a, 2011b) and a chapter in the report requested by the G20 (World Bank Group et al., 2011). The domestic sources included carbon taxes, emissions trading systems with auctioning, levies on electricity or petrol, as well as taxes on income, property, consumption or financial transactions (IMF, 2011b). Climate finance from these sources would be clearly distinct from development aid. The IMF argued in favour of carbon taxes as they, unlike non-carbon sources, would mitigate climate change besides providing revenue. The report on pricing emissions from shipping and aviation also highlighted the mitigation benefits of such pricing, especially as the emissions from international aviation and shipping were not subject to any regulation in 2011. The joint report to the G20 was drafted by the World Bank, the IMF, the OECD and a group of multilateral development banks (MDBs), with the IMF leading the drafting of the chapter on sources of public finance on the basis of its two background papers. In 2012, IMF staff wrote a chapter on how to best use using fiscal instruments to generate climate finance counting towards the USD 100 billion target climate finance (Mooij and Keen, 2012), published in an IMF report on the fiscal responses to climate change (Mooij et al., 2012).

Following a brief hiatus, the Fund again started paying attention to climate change beyond fossil fuel subsidies in 2015, mainly through knowledge but also declaratory output. Regarding the latter, Managing Director Christine Lagarde published a statement on the Fund's role in addressing climate change that repeated the earlier message that carbon pricing could generate climate finance (Lagarde, 2015). Furthermore, a report on policies supporting the Sustainable Development Goals (SDGs) highlighted the importance of financial instruments in shifting investment from 'brown' to 'green' sectors and in improving macroeconomic resilience to natural disasters – including climate related ones (IMF, 2019h). The latter topic was again addressed in 2016 in a report on how the IMF could enhance the resilience of small

developing states and a chapter in the IMF's flagship publication, the World Economic Outlook, on how resilience could be improved in sub-Saharan Africa (IMF, 2016a, 2016b). The focus on shifting investment and improving resilience reflects a wider trend also evident in the G20, the OECD and UN institutions such as UNEP (see Chapters 11 and 12). None of these publications focused specifically on climate change but dedicated considerable space to climate change as a factor exacerbating natural disasters. The IMF's role regarding such countries is particularly relevant as many of these countries are already heavily indebted (often to the IMF) and may need major financial support if natural disasters destroy large parts of society and the economy. Many of these tenets were repeated in the 2019 report on fiscal policies for meeting the objectives of the Paris Agreement (IMF, 2019c). While mainly focused on carbon pricing, this report stressed the importance of the USD 100 billion target, the importance of financial instruments and private finance for improving resilience, and the possibility of using the pricing of shipping and aviation emissions as a source of climate finance (se also Parry et al., 2018).

Since 2017, the IMF has published so-called Climate Change Policy Assessments of individual countries, and at the time of writing, Belize, Grenada and Saint Lucia have been the subject of such assessments (IMF, 2017a, 2017c, 2018b, 2019b, IMF, 2019d). One objective of these Policy Assessments is to enhance the countries' chances of attracting finance (IMF, 2019c). All five are countries vulnerable to climate change, and the Fund recommended mitigation policies – including carbon pricing – and adaptation policies – including risk management. Furthermore, the IMF stressed the importance of receiving external climate finance from private and public sources. Interestingly, most of the IMF publications issued on climate change in 2019, including opinion pieces by Managing Directors Lagarde and Georgieva[2] and a special issue of the IMF journal Finance and Development paid only limited attention to climate finance. Instead they focused on carbon pricing, financial markets and the risks associated with climate change (Georgieva, 2019; IMF, 2019a; Lagarde and Gaspar, 2019).

Fundamental to the IMF's approach has been the notion of pricing emissions, making it an ideal-typical example of economisation. Climate change has been defined as an externality which is best corrected through pricing either through carbon taxes or emissions trading systems chapter (World Bank Group et al., 2011). The primary objective of carbon pricing is, according to the IMF, not to raise revenue but to mitigate climate change. This framing of climate change is also evident in its output on fossil fuel subsidies (Coady et al., 2015, 2019; IMF, 2011b; World Bank Group et al., 2011, Chapter 2; see also Chapter 7 of this book). Defining climate change as an externality to be corrected by pricing the externality

[2] Kristalina Georgieva took over the position as the Managing Director of the IMF from Christine Lagarde in October 2019.

is a core tenet of neoclassical environmental economics, which defines environmental problems as economic problems – typically externalities – and pricing as the solution to such problems (Clements et al., 2013; Coady et al., 2015; see also Chapter 1 and 7). Fiscal policies rather than regulatory or industrial policies are defined as the instrument needed to mitigate climate change.

More recently, the Fund has also attended to adaptation, and argued in favour of addressing climate change impact through financial instruments such as disaster insurance (IMF, 2016a, 2016b). The inclusion of adaptation and the risks associated with climate change constitutes a widening of the economisation of climate change beyond 'just' correcting the externality. A similar development can be witnessed in the output of the G20 and the OECD (see Chapters 9 and 10), and reflects a wider development towards a focus on the risk associated with climate change in the literature on the economic dimensions of climate change (for an overview, see Krogstrup and Oman, 2019). Altogether, climate finance has been defined in a broad sense as encompassing private finance as well as public.

Regarding the issue of generating resources, at the beginning of the period studied, the IMF provided suggestions of how different sources – particularly carbon pricing – could be used to reach the USD 100 billion target (Mooij and Keen, 2012). The IMF operated with an estimate that if 10 per cent of the revenue from a USD 25 per ton carbon price (compared to the carbon prices of USD 35, 40 or 75 that the IMF would later use in its analyses; see Chapter 7) in developed countries was used for international climate finance, it would generate USD 25 billion towards the USD 100 billion target chapter (World Bank Group et al., 2011).

The estimate stemmed from the 2010 Report from the UN Secretary General's High-level Advisory Group on Climate Change Financing. The amount of USD 25 billion would constitute public finance provided according to an emissions-based burden-sharing key by developed countries. On a similar note, the IMF also proposed placing a price of USD 25 per ton on the emissions from international aviation and shipping, two sectors hitherto exempted from public regulation (and pricing) of their emissions (IMF, 2011b). If developing countries were compensated for the burden that would fall on them[3], such a price would generate an estimated USD 22 billion from developed countries towards the target. Finally, the IMF also specified the fiscal savings from phasing out fossil fuel subsidies (using the OECD data and thus not including externalities in the definition of fossil fuel subsidies) as a source of climate finance and estimated on the basis of OECD figures that if 10–20 per cent of the expenditure saved was designated as climate finance, it would could yield USD 4–12 billion dollars annually (IMF, 2011a). Altogether these estimates would add a little more than USD 50 billion, leaving the rest of the

[3] A global price on emissions from international shipping and aviation would be less effective if not implemented globally.

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USD 100 billion to be covered by voluntary contributions from developed countries and private finance.

Common but Differentiated Responsibilities and Respective Capabilities (CBDR) has been explicitly stressed when it comes to the importance of the incidence of global pricing of aviation and shipping emissions and to the earmarking of revenue from domestic carbon pricing (IMF, 2011b). Regarding emissions from shipping and aviation, CBDR has been a key issue in the global discussions of reducing these emissions. Such emissions cannot be allocated clearly between Annex II and non-Annex II countries, and consequently the non-Annex II countries objected to the regulation of these emissions that would subject them to the same rules as Annex II countries, hence contravening CBDR (Bows-Larkin, 2015; Romera and van Asselt, 2015). Given this context, not mentioning CBDR would have been controversial, and the IMF's solution was to stress that developing countries, particularly those with low incomes and high levels of vulnerability, should not take on a share of the burden of providing climate finance. In this way, the Fund addressed CBDR by calibrating the economic instrument of carbon pricing to avoid the burden falling on the poorest and most vulnerable, rather than saying that only developed countries should be subject to the regulation of aviation and shipping emissions.

Concerning allocations, the IMF has not focused as much on how climate finance should be allocated as on how it should be mobilised. The Fund's key objective has been to mitigate climate change while keeping costs low, and hence carbon pricing has been advocated with reference to its efficiency (IMF, 2011b; World Bank Group et al., 2011) . While efficiency has been the main priority, as mentioned earlier, the equity principle of CBDR has also been stressed (IMF, 2011a; Lagarde, 2015). The key priority regarding the use of climate finance has been mitigation, although recent publications have addressed adaptation (IMF, 2016a, 2016b, 2017a, 2017c, 2018b, 2019b, 2019d), and the staff position note proposing a Green Fund has operated with the notion of an even split between mitigation and adaptation finance (Bredenkamp and Pattillo, 2010). The IMF has not directly addressed the allocation between states, but has dedicated considerable attention to vulnerable states, both in its publications on improving resilience among small developing and states in sub-Saharan Africa (IMF, 2016a, 2016b), and its Climate Change Policy Assessments, which have only focused on highly vulnerable countries, particularly small island developing states (IMF, 2017a, 2017c, 2018b, 2019b, 2019d). On a couple of occasions, IMF staff have proposed channelling revenue from the issuing of SDR-backed green bonds or from the pricing of maritime emissions to the Green Climate Fund or a proposed Green Fund (Bredenkamp and Pattillo, 2010; Parry et al., 2018). These proposals have not been adopted but would have granted developing

countries considerable influence over the allocation of climate finance compared to the current system.

12.2 Causes

The initial cause of the IMF addressing climate finance (the first aspect of economisation) have mainly stemmed from institutional interaction, specifically the G20 requesting that the IMF and other International Organisations provide such analysis. It was in this context that the IMF produced most of its official publications (on domestic sources of climate finance, international aviation and shipping and public finance) focusing solely on climate finance. Once the task was completed, the IMF output on climate finance decreased in volume. Output from before and after 2011 was instead drawn up on the initiative of IMF officials acting as policy entrepreneurs (interview with senior IMF official, 25 March 2015). When IMF management, in the context of COP21 in Paris and the Paris Agreement, increased their attention to climate change beyond fossil fuel subsidies, the Fund's attention to climate finance also increased, constituting a less direct case of institutional interaction, this time from the UNFCCC (IMF, 2019c, 2019h). The UNFCCC also mattered indirectly in terms of setting the USD 100 billion target, thus providing the G20 with the impetus to task IMF and other institutions with analysing sources that could count towards this target. Furthermore, the climate finance chapter in the fiscal responses to climate change book (Mooij and Keen, 2012) were also explicitly written to address the USD 100 billion target.

Importantly, the member states of the IMF have not played an important role in getting the IMF to address climate finance, except for the fact that the G20 member states that requested the IMF to address the issue were also key IMF member states. Thus, they would know that the IMF would not turn down the G20 request, since the G20 members had a majority of the votes and 16 out of 24 Executive Directors. The level of IMF involvement has been circumscribed by the IMF's mandate, which does not include development finance the way, for example, the World Bank's does (interview with senior IMF official, 25 March 2015). In 2019, the IMF Executive Directors (representing the member states) agreed to increase IMF activities supporting countries' fiscal policies for mitigation and adaptation, yet with a number of Directors cautioning against moving beyond the Fund's mandate (IMF, 2019c). Rather, the IMF has been involved in aspects of climate finance that have touched upon its core area of fiscal policy, especially fossil fuel subsidy reform and taxation (domestic or on international shipping and aviation). In this way, relations with member states have been important in delineating IMF involvement in climate finance, since they have interpreted to which extent climate finance falls within the

mandate of the IMF. Although the IMF bureaucracy has often pushed the limits of its mandate, it has not attempted to do so in the case of climate finance, reflecting the belief among the Management that other institutions, especially the World Bank, are better suited to address the issue (interview with senior IMF official, 25 March 2015).

As regards the second aspect of economisation, how the Fund has addressed climate finance, the IMF worldview has been the most important factor. Not only has climate finance been framed in economic terms, rather than environmental or equity terms, it has also consistently been linked to IMF core tenets such as the need for carbon pricing and fossil fuel subsidy reform (two sides of the same coin to the IMF, as discussed in Chapter 7). Importantly, in its reports to the G20, the IMF recommendations were based on the notions that all public funds would stem from developed countries, and the revenue from carbon pricing would de facto be provided according to an emissions-based burden-sharing key. Both notions, especially the emissions-based burden-sharing have been highly unpopular with the IMF's most powerful member state, the United States. Other influential member states are also sceptical of solely placing the burden on developed countries (the EU, Japan), emissions-based burden-sharing (China) or both (Australia, Canada). Hence, the IMF bureaucracy has had a degree of autonomy that has allowed it to adopt positions that run against the preferences of key member states. This autonomy could be utilised to an even greater extent as regards reports and working papers published on behalf of the IMF staff rather than the IMF as an institution, as seen in the staff working paper advocating a Green Fund using the Special Drawing Rights (Bredenkamp and Pattillo, 2010). The use of SDRs as a source of climate finance was initially proposed by billionaire George Soros (2009). Importantly, the Fund's output on climate finance has constituted relatively free (and often low-key) exercises in how climate finance ideally should be addressed, rather than an aspect of its core output on financial stability. Institutional interaction has had less influence on how the IMF has addressed climate finance than on inducing it to address it. Yet, drafting reports together with World Bank officials and relying on OECD data and analysis have both shaped the IMF output on climate finance as has CBDR, a normative idea that the IMF was obliged to address because of the UNFCCC.

All things considered, member state relations have constituted a scope condition for the IMF worldview and for entrepreneurship from the IMF officials: the more autonomy the bureaucracy has enjoyed regarding a policy issue, the more influential these factors have been. The IMF has been able to go further concerning the aspects of climate finance related to its core area of expertise, fiscal policy, than to other aspects of climate finance (e.g. allocations between countries or the implementation of climate finance projects).

12.3 Consequences

12.3.1 International Consequences

The international consequences of the IMF's climate finance output have been limited both by the small size of this output and by the IMF's more isolated position in the institutional complex governing climate finance. The Fund occupied its most central position within this complex in 2011, when it – together with above all the World Bank – provided the **G20** with input for its discussions of climate finance. Yet, even at that time, the IMF's proposals for using fossil fuel subsidy reform and carbon pricing of domestic, aviation and shipping as sources had not been developed into concrete proposals by the G20 or other international institutions. Although international aviation will be subject to market-based instrument, this instrument will not provide climate finance for developing countries (ICAO, 2019). The main reason for this is that earmarking – especially for activities taking place outside the country where the revenue is collected – is politically and legally controversial (Esch, 2013; Romera and van Asselt, 2015). Likewise, the proposal for a Green Fund financed by SDRs was not developed into a concrete proposal for IMF policy. Nonetheless, institutions such as the UNDP (2012) did pick up and elaborate the notions of using revenues from pricing of international aviation and shipping and SDRs as sources of climate finance. More recent output on improving resilience through financial instruments is more in line with the emerging positions of other institutions and has also informed how they have addressed resilience especially in vulnerable countries. More specifically, the **OECD** and the **World Bank** have relied heavily on IMF analyses of the financial and economic situation of vulnerable countries, and recommended that the IMF play an active role as provider of resilience finance to such countries (OECD and World Bank, 2016). Likewise, the **UN Inter-agency Task Force on Financing for Development** has relied on the IMF's analysis of economic benefits of fiscal spending on resilience and recommended that the IMF be involved in how vulnerable countries improve resilience (United Nations, Inter-agency Task Force on Financing for Development, 2019).

The cognitive idea that carbon pricing, fossil fuel subsidy reform and climate finance are interconnected and the normative idea that this relationship should be strengthened, which the IMF has consistently stressed, has also gained momentum in the run-up to and following COP21 (see inter alia Bowen et al., 2013; The Coalition of Finance Ministers for Climate Action, 2019; UNFCCC Standing Committee on Finance, 2016, 2018). Arguably, the IMF output should be seen as an early forerunner of (among international institutions) and contributor to the framing of climate finance in particular (and climate change in general) as an economic issue to be addressed with economic instruments. Climate finance, in itself not an issue that can be framed as addressing the externality of climate

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change[4], has been framed as an issue of redirecting (predominantly private) finance both by the IMF and within the wider climate change complex. As discussed in Chapters 10 and 11, this approach is also common in the G20 and the OECD, and is based on the notion of addressing climate change through economic instruments addressing the barriers to climate action (especially de-risking) rather than climate change as an externality. The IMF did not invent this approach, but whenever it has expressed that finance should be redirected from brown to green, or that resilience should be addressed through financial instruments, it has contributed to the standing of this approach. The IMF's support for this way of addressing climate finance is important, as it has considerable expertise and authority, especially among international and domestic economic actors (Barnett and Finnemore, 2004, chapter 3). On a very fundamental level, since 2010, the IMF has supported the normative idea that climate finance is important, and that developed countries have an obligation to provide it, which is not a given for an institution often accused of furthering the economic interests of developed countries.

12.3.2 Domestic Consequences

The IMF's calls for using revenue from carbon pricing or fuel or electricity levies as a source of climate finance (IMF, 2011b) has not been heeded by developed states, inter alia because finance ministries are opposed to earmarking revenue and because the constitutions of some states prohibit it. Even the revenue from the auctioning of emission allowances to aviation in the EU Emissions Trading System (ETS), half of which should be earmarked for climate purposes according to the 2008 EU Regulation on aviation in the ETS, has been controversial and the revenue mainly spent domestically, underscoring the opposition to earmarking revenue for international public climate finance (Esch, 2013).

The consequences of the IMF's output are more pronounced concerning output focusing on individual countries, often with a more implicit climate finance focus. Crucially, the Climate Change Policy Assessments have contained very concrete policy recommendations that inter alia might help the countries in question attract public and private climate finance. These Assessments consist of technical assistance, provided on the request of the country that is being analysed. They will constitute one framework for the Fund's (and also the World Bank's) interaction with the countries in question regarding climate change, including collaboration between the Fund and the government on issues such as risk management (IMF,

[4] With the exception of the notion of framing the Clean Development Mechanism (CDM) as a way of paying the polluter not to pollute. Although the CDM builds on the Coasean notion of tradable permits to a certain extent, it differs from Coase's proposal (1960) on not allocating emission allowances to all polluters on an equal basis, but giving them to some developing country polluters on the basis of their deviation from a Business-As-Usual baseline. The CDM has generally been less politically and financially important than public and other kinds of private finance during the period studied.

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2019d). All in all, in the future, the Climate Change Policy Assessments will mean a closer IMF involvement with the implementation of climate finance. On a similar note, the integration of climate mitigation issues in Article IV consultations may provide a framework for systematically promoting mitigation policies in line with IMF recommendations on policy design. Whether mitigation issues are integrated in these consultations will depend on how much traction the country team believes these issues will have with the government in question (interview with senior IMF official, 19 May 2020).

Given that the IMF's output on climate finance has been limited, it is difficult to discern direct influences on the negotiation positions on climate finance or the provision or implementation of such finance in the United States, United Kingdom, India, Indonesia or Denmark. For instance, the Fund's argument for focusing on adaptation risk and resilience and on shifting private financial flows has resonated domestically, but given that such arguments have come from a range of different actors and institutions, it is difficult to discern how influential the IMF has been in this respect. Nor has the IMF influenced the position of the climate finance issues it has addressed on either public or policymaking agendas, inter alia because some of these ideas regarding generating resources had already been proposed in the 2010 UN High-level Advisory Group on Climate Change Financing report (United Nations, 2010) without much effect.

In the case of the **United States**, there has been limited cognitive and normative influence from the IMF on policymakers, in spite of the generally close interaction between the US Treasury and the IMF made possible by being headquartered in the same city. Fundamentally, much of the IMF output has been in direct opposition to US positions on climate finance, for example, the notions

Table 12.1 *Climate finance and the IMF in the US media:* New York Times *and* Washington Post

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Articles referring to US climate finance *and* the IMF	0	0	0	0	0	0	0	0	0	0	0	**0**
All articles referring to climate finance (international and domestic)	5	5	4	1	3	1	12	1	3	6	5	**46**

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Table 12.2 *Climate finance and the IMF in the UK media:* The Guardian *and* The Independent

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Articles referring to UK climate finance *and* the IMF	0	0	0	0	0	0	2	0	0	0	0	**2**
All articles referring to climate finance (international and domestic)	20	22	6	1	2	7	33	3	2	2	2	**100**

of burden-sharing and of using carbon pricing revenue as a source of climate finance. The idea of federal carbon pricing was largely abandoned by the Obama administration after the defeat of the Waxman–Markey proposal for an US emissions trading system in 2009 (MacNeil, 2016). Furthermore, the IMF has not been linked to climate finance at all in either the *New York Times* or the *Washington Post* (see Table 12.1).

The IMF has also not yet had a discernible impact on the **UK** position on climate finance. While the IMF has provided important data for G20 discussions of climate finance that have involved the UK (and the United States, India and Indonesia), this constitutes an influence on the G20 rather than directly on the United Kingdom. The United Kingdom is one of the countries which will have mitigation issues included in their Article IV consultations although at the time of writing these have been postponed due to the Corona pandemic. On the public agenda, the only references to the IMF in relation to UK climate finance consist of two brief references to a 2015 meeting on climate finance in the margins of the IMF and World Bank annual meeting in October 2015 (Editorial, 2015).

India and **Indonesia** have also interacted with the IMF concerning climate finance in the context of the G20. Beyond this, the limited IMF output on climate finance has had no discernible influence on climate finance in the two countries or on the negotiation positions. Indian media has mentioned the IMF only in the context of climate finance once, namely the aforementioned 2015 meeting on climate finance in the margins of the 2015 IMF and World Bank annual meeting (Mohan, 2015b).

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Table 12.3 *Climate finance and the IMF in the Indian media:* The Hindu *and* Times of India

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Articles referring to climate finance in an Indian context *and* the IMF	0	0	0	0	0	0	2	0	0	0	0	**2**
All articles referring to climate finance (international and domestic)	0	2	1	4	1	5	47	14	3	14	14	**102**

Table 12.4 *Climate finance and the IMF in the Danish media:* Politiken *and* Jyllands-Posten

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Articles referring to Danish climate finance *and* the IMF	0	0	0	0	0	0	0	0	0	0	0	**0**
All articles referring to climate finance (international and domestic)	0	1	4	61	28	45	18	19	48	60	26	**310**

In line with the other countries, at the time of writing, it is, in the case of **Denmark,** not possible to discern any IMF influence on climate finance, although this may change when the Article IV consultations with Denmark start including mitigation issues as planned. There have been no identified references to the IMF and climate finance on the Danish public agenda (see Table 12.4).

12.4 Summary

The IMF output on climate finance has been knowledge-oriented and relatively limited, underscoring that it has not been a key part of the IMF's portfolio. While the early reports from 2010–12 focused on generating climate finance, particularly through domestic and international (on aviation and shipping) carbon pricing, later output has also stressed shifting investment and improving climate resilience. The economisation of climate finance has been pronounced through all of this, with the

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Fund proposing economic instruments such as carbon pricing and insurance mechanisms, and emphasising efficiency as an objective. The IMF output has mainly been the result of institutional interaction with the G20 and officials acting as policy entrepreneurs, and has been shaped by its institutional worldview, which has been more limited by member state relations than has been the case regarding fossil fuel subsidies. Perhaps unsurprisingly, the low-key output of the IMF has only had limited consequences at the international level, and the analysis has not been able to identify any consequences at the domestic level thus far, although the integration of mitigation concerns into Article IV consultations and other bilateral interaction may change this.

13

The Alignment of the Economic Institutions on Climate Finance

Efficiency in Development and Investment, but Also Carbon Pricing

The involvement of economic institutions has played out somewhat differently in the case of climate finance compared to fossil fuel subsidy reform. All three institutions have framed climate finance in economic terms and stressed normative ideas such as efficiency. They have also linked climate finance to issues such as fossil fuel subsidies, carbon pricing, risk and investment to a larger degree than environmental institutions. This economisation has taken place within the climate finance system characterised by considerable fragmentation in terms of norms, institutions and actor constellations (Pickering et al., 2017). This system includes a much larger and diverse group of actors and international institutions than the fossil fuel subsidy reform system, and much more normative contestation regarding what the core issue is and what it is supposed to achieve. Although the three institutions share an economic framing of climate finance, they do not constitute a distinct cluster within the climate finance complex. Not only does the IMF mainly operate in isolation from the other two institutions, but the G20 and the OECD, despite interacting frequently, also have synergistic relations with other institutions, especially the multilateral development banks (MDBs).

The chapter proceeds by outlining the alignment of the institutions regarding types of output, scope and actors addressed and cognitive, normative and incentive-based dimensions, finding that while they have agreed on an economic framing of the issue, there has also been divergence between the institutions. This divergence is most notable regarding whether carbon pricing should constitute a source of climate finance, and to some extent also regarding how equity should be prioritised. Subsequently, this chapter explains this alignment in terms of economic worldviews and interaction pulling towards convergence. Divergence between the institutions has been driven by differences in worldviews (e.g. between the OECD Development Directorate and the IMF) and the degree of autonomy from member states. Finally, the consequences of the output are described, identifying more significant (cognitive) influences at the international level than the domestic level, but also incentive-based influences from the OECD and the G20.

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13.1 How They Align

13.1.1 Types of Output

The three institutions vary considerably regarding the size of their output on climate finance. The OECD has produced numerous reports, meetings and workshops every year since the mid-2000s and enjoys a quasi-monopoly on climate finance statistics, whereas the output of the other two institutions has been less voluminous and regular. The OECD also stands out in terms of addressing climate finance along two distinct strands, addressing the topic as a development finance issue and as an investment issue respectively. The G20 and the IMF have been more unitary in their approach, while still addressing a range of issues covering development, adaptation, mobilising climate finance, leveraging private finance and reducing investment risk. The formal output of all three institutions has consisted mainly of (rather technical) knowledge. Besides the G20's unsuccessful attempt in 2009 to produce a commitment on climate finance covering its member states (which influenced the subsequent United Nations Framework Convention on Climate Change [UNFCCC] USD 100 billion target), formal G20 output has consisted of reports about how to address specific climate finance issues (adaptation, leverage, etc.). The OECD's main formal output has been knowledge about levels of climate finance, best practices and a new understanding of financial flows, especially in the context of investment. Moreover, the IMF's formal output has solely consisted of reports analysing how to address climate finance issues, particularly sources of climate finance. The OECD DAC's reporting on contributor countries' climate aid arguably provides incentives for delivering more climate aid by increasing transparency and possibilities for comparison between countries (thus allowing for countries with low contributions to suffer reputational costs). The G20 and particularly the OECD have also produced considerable informal output in the shape of arranging meetings and workshops for experts from different countries and institutions, in the case of the OECD also business, interest groups, think tanks, academia and civil society. These meetings have constituted venues for learning about new aspects of climate finance (e.g. investment, leveraging, risk), venues which have been important as many of the participants have not been familiar with climate finance or the climate negotiations, but have come from finance ministries or other economic institutions, the worldview of which has resonated with the institutions' framing of climate finance.

13.1.2 Scope and Actors Addressed

All three institutions have provided output aimed at global audiences. The G20 and the OECD have also provided output more specifically targeted at their member

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states, and the IMF has provided the Climate Change Policy Assessments of individual states. In particular, the 2009 G20 attempt to provide a climate finance agreement, but also the learning processes within the G20 study groups, have been aimed at G20 representatives of member states, often from finance ministries. Likewise, the activities of the OECD Development Assistance Committee (DAC), especially the informal deliberations, have been aimed at OECD member states and to some degree observer states. The OECD investment strand has been more focused on a global and public as well as private audience. Since most of the G20 and OECD publications have been intended for consumption by their member states as well as other actors, it is difficult to draw a sharp line between the output specifically aimed at their member states and that aimed at a global audience. The IMF, with its near-global membership, has provided output aimed at a global membership consisting of states as well as non-state actors, as well as at the G20 in the case of the reports requested by the G20. All three have addressed finance ministries to a larger degree than most other institutions in the climate finance system.[1]

13.1.3 Cognitive Dimensions

All three organisations have framed climate finance and climate change in economic terms, emphasising the economic consequences of climate change and the need for remedying them with economic instruments. Particular emphasis has been placed on linking climate finance to the issues of carbon pricing (especially by the IMF) and fossil fuel subsidy reform, two issues that in a range of other forums – especially the UNFCCC – have not been linked to climate finance until recently, and even then not to the same extent. Climate finance has also more recently been linked to the issues of investment and risk. Unlike for carbon pricing, addressing the risks associated with climate change (Campiglio et al., 2018)– both risks associated with fossil fuel and green investment and with the impact of climate change – does not address the root cause of climate change, but economic obstacles to mitigation and adaptation. Hence, addressing climate finance with reference to these risks constitutes a less ideal-typical case of economisation than addressing it with reference to the externality of climate change (see Chapter 1).

These four issues are all rather 'economic' in the sense that they fully (investment, risk) or partially (carbon pricing, fossil fuel subsidies) belong to the realm of economic policymaking. Linking them to climate change policy in general and climate finance in particular also entails an economic framing of the problem of

[1] The Coalition of Finance Ministers for Climate Action established in 2019 and at the time of writing consisting of nineteen finance ministries from developed and developing countries is the only dedicated forum for a discussion of climate change among finance ministers.

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climate change: it should be addressed with economic policy instruments affecting the cost–benefit calculations of actors making economic decisions (whether to invest in a project, buy a particular product, etc.). The economic framing has also included continuously stressing the importance of private finance, a source of climate finance that has been more controversial in the UNFCCC than in the three institutions, especially as concerns counting it towards the USD 100 billion target.

There is also a shared emphasis on mitigation rather than adaptation (also evident in the emphasis on carbon pricing and fossil fuel subsidies), although all three institutions increasingly address adaptation issues. The increasing attention to adaptation arguably reflects the overall trend in the climate finance system and was evident in the OECD (markedly with the Rio adaptation marker) at an earlier stage compared to the G20 and the IMF.

Nonetheless, there are important differences between the institutions. Notably, the OECD in its development strand has defined climate finance as a subtype of development finance, whereas the IMF has proposed measures that would clearly set climate finance apart from development finance, for example, domestic and international carbon pricing of domestic and international emissions, and the earmarking of domestic revenue. The G20 has occupied the in-between position (but closer to OECD), treating climate finance as more than a subtype of development finance but still with a significant overlap. The IMF has also emphasised the link with carbon pricing – particularly regarding emissions from the international shipping and aviation sectors – to a much larger degree than the other two institutions.

13.1.4 Normative Dimensions

In terms of normative ideas, the three institutions have all prioritised efficiency over equity norms such as Common but Differentiated Responsibilities and Respective Capabilities (CBDR) and vulnerability, and mitigation over adaptation. CBDR has not been central to any of the institutions' output, although the normative idea that climate finance is something developed countries should provide has been inherent to their output. As concerns the allocation of climate finance, although the OECD and the G20 have stressed adaptation finance and climate finance for the most vulnerable, the overall approach has been that efficiency is the key principle. The IMF has been less explicit regarding the allocation of climate finance but has more recently also stressed the importance of adaptation within the context of individual developing countries. The efficiency focus matches the institutions' economic worldview, since it highlights the importance of keeping economic costs low.

Yet, the institutions have diverged more regarding normative ideas than cognitive. Generally speaking, the IMF has advocated solutions rooted in a vision of how climate finance ideally should be addressed, whereas the G20 and the OECD have largely based their positions on the actual state of affairs and in the case of the OECD tried to forge ahead within the context of this state of affairs. First, in the 2010 reports to the G20, the IMF (implicitly) advocated a global burden-sharing key based on emissions, while the G20 and the OECD left it to the individual country to determine its contribution. Second, carbon pricing has been addressed in different ways: whereas the IMF outright advocated adopting it at the domestic and the international levels (especially the latter might infringe on the fiscal sovereignty of states), the OECD and particularly the G20 have stressed that adopting carbon pricing is inherently a national decision. The IMF advocacy of carbon pricing has been rooted in its framing of climate change as an externality that should be addressed by pricing the externality, a vision not shared with the G20 and the OECD (see Chapters 7 and 12 regarding the IMF's promotion of carbon pricing). Altogether, the output from the OECD and the G20 has been more closely aligned with the preferences of its member states than the output of the IMF. Thus, economisation has been more ideal-typical or 'pure' in the case of the IMF, and less 'contaminated' with member state preferences (as discussed in Section 13.2).

13.1.5 Incentives

The institutions have provided very few direct changes to the incentive structures to the actors involved in climate finance, be they contributors, recipients or a third kind of actor. The incentives provided by the institutions have not been in conflict at any point, and have to some degree been synergistic. The OECD DAC's monitoring of bilateral (and recently also multilateral) climate aid, incentivises countries to provide more climate finance (but also to designate more of their development finance as climate-related), as well as to prioritise vulnerable countries and adaptation. Such incentives may consist of reputational costs associated with not living up to climate finance commitments, which reduce the credibility of the states and developed countries as a group when future commitments (regarding climate finance or other issues) are negotiated. Yet, the absence of individual country climate finance targets limits the impact of such reputational costs. The 2009 G20 attempt to create a shared climate finance commitment for industrialised countries would have constituted an important change to incentive structures (in terms of developed G20 countries facing reputational costs if the commitment were not fulfilled), yet did not succeed. It was only influential in an indirect way through influencing the UNFCCC's Fifteenth Conference of the Parties (COP15) climate

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finance commitment, most notably the USD 100 billion target, which the developed countries may suffer reputational costs if they do not meet. The IMF's recent attention to climate measures in its interaction with individual countries via so-called Climate Change Policy Assessments and in the future also Article IV consultations) may affect the incentives of both contributors and recipients of climate finance, for example, by tying IMF finance to the Assessments or by contributor countries providing more finance to countries with positive Assessments. At the time of writing, five countries (Belize, Grenada, Micronesia, St Lucia and the Seychelles) have been the subjects of such Assessments.

13.2 Causes of Alignment

The institutions' economic framing of climate finance (the second aspect of economisation) can to a large degree be ascribed to their worldviews. This has been particularly evident in the case of the IMF, which has linked climate finance to carbon pricing because of IMF staff's fundamental understanding of climate change as an externality to be corrected (see also Chapters 7 and 12). It is also evident in the OECD's development strand, within which the Development Cooperation Directorate and the members of the DAC and its working groups defined climate aid as a type of development aid. In the OECD's investment strand, the Environment as well as the Financial and Enterprise Affairs Directorates, working with the environment and the finance (and economics) ministries respectively, framed climate finance as an investment issue in line with their worldviews. Even the G20, with its rotating secretariat and lower degree of institutionalisation has framed climate finance in economic terms in line with the institutionalised worldview of being an economic institution and of the finance ministry officials constituting the largest group of participants at its expert meetings. The OECD's greater experience in dealing with development aid compared to the G20 and the IMF, has shaped its worldview and hence its framing of climate finance as a development issue. The other two institutions had less experience of closely related issues but have relied on their past experience of dealing with economic issues, and both have addressed climate finance as an economic issue to be dealt with using economic instruments.

Policy entrepreneurs have been important in the case of the G20, in which the United Kingdom has been essential in ensuring that the forum has addressed climate finance. Subsequent Presidencies, including the 2012 Mexican and 2016 Chinese Presidencies, were also important in setting up expert working groups and in shaping their agenda. Entrepreneurship has played a less important role in inducing the IMF and the OECD to address climate finance, although IMF officials

have independently chosen to address climate finance in a number of IMF publications (e.g. Bredenkamp and Pattillo, 2010; Grippa et al., 2019). More importantly, as concerns how climate finance has been addressed, staff of both bureaucracies have attempted to forge ahead and have acted independently of the member states.

Relations with member states have been most important in terms of autonomy from the principals acting as a scope condition for International Organisation (IO) bureaucracies. The IMF bureaucracy has operated rather independently of the member states and has not been influenced by them, while the different OECD directorates have interacted closely with member state representatives (interview with senior OECD official, 30 April 2015). Hence, the IMF has had more autonomy than the OECD, and used this autonomy to adopt positions that has run against the preferences of key principals, including the United States and Japan, particularly by advocating a global burden-sharing of the provision of climate finance. Yet, the IMF staff has not gone as far as it did regarding fossil fuel subsidies, rather it has accepted that some aspects of climate finance have been beyond their mandate. Unlike the IMF, the OECD bureaucracy has been obliged to make sure all its output has been acceptable to its principal (the member states), which is a key reason for why the OECD's organisational output has been largely aligned with the member states. Differences in membership circles, how member state representatives arrive at decisions (voting or consensus) and which ministries represent the states have played less significant roles. Although the G20 has reflected the preferences of major emerging economies to a greater degree than the other institutions, the OECD has not to a larger extent reflected the interests of smaller developed countries, compared to the G20. Thus, the 'purer' economisation of climate change in the IMF output compared to the G20 and OECD output is due mainly to the greater autonomy of the IMF bureaucracy allowing for intra-institutional factors to play a role, not to the aggregated preferences of its member states.

The interaction with other institutions has played a more important role. This interaction, especially between the three institutions has led to more synergistic relations. The G20 has influenced the IMF in particular to address climate finance (the first aspect of economisation), yet not how the IMF should address it (the second aspect of economisation). While the OECD agenda has also been influenced by interaction with the G20, particularly being commissioned to analyse climate finance, this influence has been less decisive: the OECD has published many reports on climate finance which were not commissioned by the G20 and these reports are not significantly different to those commissioned by the G20. In return, the input from the IMF and especially the OECD has constituted an ideational influence on G20 output, especially its more technical dimensions. As regards other institutions, the three institutions have interacted to

a large degree with the same institutions, particularly the World Bank and other development banks, but also the United Nations Development Programme (UNDP) and United Nations Environment Programme (UNEP). Arguably, the interaction with a similar set of institutions has pulled in the direction of ideational convergence among the institutions regarding how climate finance was addressed. This dynamic is particularly evident in more recent developments towards focusing on sustainable investment broadly speaking, an issue on which the three institutions adopt very similar positions. While the differences in autonomy of the IMF and the OECD have led to diverging positions, the institutions have not been in conflict, but rather occupied different positions within the climate finance complex (i.e. co-existence), the IMF playing a much less active role than the OECD.

13.3 Consequences of Alignment

The output of the three institutions has had a more easily discernible impact at the international level compared to the domestic level.

13.3.1 International Level

The three institutions have interacted with a range of other institutions, with considerable overlap between them in terms of which institutions they have interacted with. Arguably, the most important influence on another institution has been the influence of the G20 on the UNFCCC, when the discussions within the G20 in spite of the disagreements helped make an agreement on climate finance possible at COP15. The G20 process established an understanding among emerging and developed country finance ministries, which influenced how climate finance was addressed in the UNFCCC (interview with senior Indian Finance Ministry official, 3 November 2014). The G20 process meant that the G20 representatives involved in the drafting of the Copenhagen Accord (a small group of countries in which G20 countries constituted the majority) knew what would be acceptable to the other G20 countries' finance ministries, making an agreement easier. The understanding included that private finance would count as climate finance (accepted by the emerging G20 countries) and that there should be a collective climate finance target (accepted by developed G20 countries). The increased credibility of negotiation offers constitutes an incentive-based influence.

Cognitive influences constitute the most widespread kind of influence, adding to the degree of synergy in the climate finance system. The OECD has had an important cognitive influence on the UNFCCC, particularly the Standing

Committee on Finance, which has used OECD estimates of finance flows in its reports. These OECD estimates as well as other OECD climate finance have also been used by other international institutions, including think tanks, research institutions and non-governmental organisations. Regarding the recent trend of focusing on investment, all three institutions have influenced the World Bank and other MDBs, as well as UNEP and UNDP. Beyond this, the cognitive influence of the IMF has been rather limited at the international level beyond the G20. Collaboration on producing publications and participation in workshops and seminars have been important channels for G20 and especially OECD cognitive influence on international institutions including the MDBs, UNEP, UNDP and other economic, development and environmental institutions. By defining the terms of the workshops and especially in the case of the OECD also producing much of the data material and analyses discussed, the two institutions have been able to encourage and shape the other institutions' output on climate finance.

As regards more normative interaction, the three institutions have addressed the key normative issues in climate finance in a way that reflects their character as economic institutions, and have hence increased the degree of divergence on normative issues in the climate finance system. This is evident in their strong emphasis on efficiency, which sets them apart from the UNFCCC. The three institutions have been able to cluster together with other economics-oriented institutions such as the MDBs and the Financial Stability Board on these normative issues, but have differed from environmental and development institutions, especially those within which developing countries have significant influence. In terms of agenda-setting, only the G20 has had an influence on the institutions it requested to provide an analysis of climate finance (beyond the IMF and the OECD mainly the MDBs but also the Bank of International Settlements and other economic institutions).

13.3.2 Domestic Level

The influence on the domestic level is more difficult to discern, inter alia because there has been less direct interaction with this level. The most important influence has been the institutions' contribution to a climate finance system in which the most important decisions regarding climate finance allocation are made by the contributor countries with developing countries having few possibilities for influencing these decisions. The Copenhagen Accord is an important element of this system, and hence the G20 influence on the Copenhagen Accord has contributed to shaping this system.

In terms of more direct influences, the OECD DAC output has constituted an incentive to provide more climate finance and to do so in line with equity normative

ideas such as prioritising vulnerable countries and adaptation. Furthermore, its data has been used in (by NGOs) and among countries to highlight and criticise the provision of climate finance of individual governments. The IMF has a less direct influence on recipient countries that have been the subject of Climate Change Policy Assessments. These assessments may in the future influence how much climate finance they receive and for which projects.

Cognitive and normative influences are more salient for all three institutions, especially the G20 and the OECD. Through meetings and workshops the two institutions have been able to influence the participants' understanding of climate finance, especially as many of them have come from finance ministries and thus have been new to the topic and more susceptible to the framings of climate finance promoted at the meetings. The engagement with finance ministries has also meant that the two institutions have exerted an (albeit limited) agenda-setting influence over these finance ministries.

13.4 Summary

The mainly knowledge-based output of the three institutions has involved economic framings of climate finance. These framings emphasise the economic consequences of climate change and economic instruments such as carbon pricing, fossil fuel subsidy reform, investment and risk, and in normative terms prioritise efficiency over equity. The G20 and the OECD have been closely aligned with the IMF occupying a more distinct space. The differences between the institutions have mainly concerned normative issues such as the role of carbon pricing and burden-sharing among developed countries, supported by the IMF but not the other institutions. In spite of this divergence, the overall relationship among the institutions has been mainly synergistic. The economic framings have been driven by their economic worldviews, and also to some degree by policy entrepreneurs within the institutions and interaction with other institutions. Interaction with other institutions, especially the UNFCCC, has also been instrumental in inducing the institutions to address climate finance. Relations with member states have been important mostly in terms of acting as a scope condition for IO bureaucracies. The influence of this output has been most pronounced in the case of the OECD DAC, which has produced data on public climate finance that have constituted a cognitive influence on the international (including the UNFCCC) level and on the domestic level, as well as incentive-based influence on the latter. Other kinds of influence have been mainly cognitive and normative and easier to discern at the international level compared to the domestic.

Part V

Conclusions

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14

Conclusions

The politics of climate change have intersected with economic politics at least since the 1960s. Yet, in recent years, as the political attention to climate change has increased, this intersection has grown in importance, and climate concerns have been addressed by the institutions created to deal with economic issues. An environmental economist, William D. Nordhaus, received the Nobel Memorial Prize in Economics Sciences, and the Directors of the Bank of England and the IMF have declared climate change a major economic threat (Carney, 2015, 2019; Georgieva, 2019; Lagarde, 2015). More curiously, an article by IMF officials proposed utilising the capacity of whales to be carbon sinks and that the IMF help governments 'integrate the macroeconomic benefit that whales provide in mitigating climate change, as well as the cost of measures to protect the whales, into their macro-fiscal framework' (Chami et al., 2019, p. 37). The notion that environmental protection is not only compatible with economic objectives, but also fundamentally constitutes an economic issue to be addressed with economic instruments, is becoming increasingly widespread. What I refer to as the economisation of climate change consists of two aspects: economic institutions addressing climate change (the first aspect) and the issue being framed as an economic issue (the second aspect). In Chapter 1, I argue that it is difficult to imagine a transition to a low-carbon, climate-resilient world in which the international economic institutions maintain their power and central roles *and* do not give serious consideration to climate change.

To understand how far and in what way international economic institutions give serious consideration to climate change, this volume has explored how such economisation has played out as regards fossil fuel subsidies and climate finance. These two issues are essential components of the political efforts to address climate change. More precisely, the volume has analysed how the economisation of these issues have played out at the international level, more specifically with regard to the G20, the IMF and the OECD. The two issues are to a large degree defined in terms

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of their relevance both to climate change policy (*climate* finance and *fossil fuel* subsidies) as well as to economic policy (climate *finance* and fossil fuel *subsidies*). Yet, these two dimensions can be highlighted in different ways, and in the output of the institutions studied here, the issues have mainly been framed as instruments for addressing an environmental problem primarily understood in economic terms. Beyond economisation itself, the study of the economisation of the two issues has provided knowledge about the factors that stimulate economic institutions to address climate issues and shape economisation, as well as about the consequences of economisation at the international and domestic levels. Importantly, relations with member states have mainly played a role as a scope condition for factors such as institutional worldview and entrepreneurs within the institutions, which – together with institutional interaction – have been important for inducing the institutions to address the issues and how they addressed them.

The analysis demonstrates that the G20, the OECD and the IMF are capable of giving serious consideration to climate change issues, but also that there are limitations to economisation and its consequences. Comparing climate finance and fossil fuel subsidies allows for a comparison of two issues that are similar in many ways but differ in the three institutions going further regarding fossil fuel subsidies than regarding climate finance, as outlined in the following section. The key conclusions of the analysis are that economic institutions are capable of taking climate issues seriously, but that this is contingent on the issue at hand, pre-existing efforts within other institutions and the autonomy of the institutions vis-à-vis member states. The section is followed by a broader discussion of the institutions addressing climate change including other climate change issues. The subsequent section addresses the broader theoretical implications of the findings, regarding economisation and the role of international (economic) institutions, while the final sections outline the prospects for future research, policymaking and practice.

14.1 Summary of the Findings: Economisation Comes in Different Shapes

The defining year was 2009 for both issues, the year of the Pittsburgh commitment, the failed attempt to adopt a G20 commitment on climate finance and the fifteenth Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC COP15) in Copenhagen. This was the year of the most high-level involvement within the G20 concerning both issues, and after 2009, the issues have mainly been addressed on a technical level. Although the overall trend is one of increasing output regarding both issues (on the expert level), the G20 and the IMF have since about 2011 produced less output on climate finance, particularly public climate finance. Thus, there is an overall pattern of high-level involvement

Table 14.1 *Institutional output*

	G20	OECD	IMF
Fossil fuel subsidies	2009: norm of fossil fuel subsidy reform Post-2009: reporting, peer reviews	Knowledge, defining what constitutes fossil fuel subsidies	Fossil fuel subsidies defined as including non-pricing of externalities Incentives for countries under IMF programs to reform subsidies
Climate finance	2009: Attempted agreement at St Andrews (incentive-based) Post-2009: reports and workshops on specific climate finance issues	Development strand: climate finance as subtype of development aid (quasi-monopoly on bilateral climate finance data) Investment strand: climate finance as investment issue	2010–12: Generating climate finance, including through carbon pricing Post-2015: shifting investment and improving resilience (also in country assessments)

followed by technical output, which has gradually increased in volume and to some degree also in political priority.

Fossil fuel subsidies and climate finance have both been addressed by the institutions in ways that frame their environmental impact in economic terms. Yet, the institutions have varied considerably in terms of their output (see also Table 14.1): the **G20** went from addressing both fossil fuel subsidies and climate at the level of state leaders and finance ministers in 2009 to addressing it in technical working groups. This development also includes a change from mainly regulatory and declaratory output (notably to the commitment to fossil fuel subsidy reform) to more knowledge-oriented output. While its 2009 attempt to commit to the norm of fossil fuel subsidy reform was successful, the attempt to provide agreement on climate finance was not, although the latter influenced the subsequent climate finance provisions of the Copenhagen Accord. This difference in successful agreements is reflected in the G20's subsequent output, in which the climate finance output focused on providing knowledge and a shared understanding of technical issues, while the fossil fuel subsidy output focused more on states' adherence to the Pittsburgh commitment, including far-reaching peer reviews. The G20 did not address the issues of what constitutes fossil fuel subsidies and climate finance as explicitly as the OECD and the IMF, but de facto left them to member states and other institutions (e.g. OECD in the case of the fossil fuel subsidy reviews).

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The **OECD** has been very prolific in terms of regularly producing knowledge about both fossil fuel subsidies and climate finance in the shape of reports, data, meetings and workshops. While there have been important normative dimensions to OECD output on both issues (e.g. promoting the norms that countries should reform fossil fuel subsidies and developed countries provide efficient climate finance), the cognitive aspects of this output is the most important. These cognitive aspects have particularly concerned defining what constitutes fossil fuel subsidies and climate finance, in the former case including a range of policies under its definition. In the latter case, the OECD has implicitly defined public climate finance as a kind of development aid and linked (public and private) climate finance to investment.

The **IMF's** output went much further regarding fossil fuel subsidies than climate finance. Technical reports on the scope of fossil fuel subsidies, how to reform them and how to mobilise climate finance constitute the bulk of the IMF's output. Yet, unlike the other two institutions, the IMF produced important distributive output in the shape of incentives for countries under IMF programmes to reform their fossil fuel subsidies. As regards cognitive output, the IMF's most important output was its definition of fossil fuel subsidies as including non-priced externalities. Both this definition and the IMF output on mobilising climate finance through carbon pricing had significant normative components focused on 'getting prices right' through pricing externalities. Specifically, the IMF provided knowledge about fossil fuel subsidies as macroeconomic distortions and about the possibilities for mobilising and using climate finance through economic instruments such as carbon pricing and de-risking. The linking of the two issues to carbon pricing is key to the way the IMF has framed the issues in terms of Pigouvian environmental economics, the most ideal-typical case of economisation of the book.

The three institutions primarily addressed their membership circles, in the case of the IMF all countries, in the case of the OECD developed countries and the G20 twenty of the largest economies. Yet, the G20 and to a lesser degree the OECD also produced output intended for a global (state and non-state) audience, for example, publications on how to leverage private climate finance. Their audience was more overlapping in terms of whom they interacted with in the different countries: all three institutions interacted regularly with finance ministry officials, the OECD also with development and environment ministry officials, the G20 also with officials working directly for state leaders, and the IMF with central bank officials.

The differing approaches to climate finance and fossil fuel subsidies among the three institutions underscore that economisation of climate change does not entail one singular way of addressing these issues (or other issues). On both issues, the

IMF framed carbon pricing as the solution to climate change, unlike the other two institutions, which treated carbon pricing as one instrument among many. The IMF's approach to carbon pricing did not only entail giving polluters an economic incentive to reduce their emissions, but also that they should bear the social costs of their pollution, an approach more in line with Pigou's (1932) work on pricing externalities than Coase's (1960) on creating markets for externalities (see also Chapter 1). The G20 and the OECD were more closely aligned and adopted positions on the two topics more in line with the approach of domestic economic actors (e.g. finance ministries) in their member states. These two institutions treated fossil fuel subsidies as more of an economic problem than climate finance, which both institutions to a large degree framed as a subtype of development aid or increasingly as an issue of investment (the latter being in line with the IMF's current approach). The investment approach constitutes a, less 'pure' different approach to economisation than the externality oriented, Pigouvian and Coasean approach that dominates neoclassical environmental economics. Although it is also rooted in mainstream economics, it is finance rather than environmental economics. Furthermore, the investment approach does not address the causes of climate change but rather the impact of climate change and climate change policies on the risks associated with investment (Hong et al., 2019, 2020; Krueger et al., 2020).

The IMF's definition of fossil fuel subsidies as including the non-pricing of externalities puts it at times at odds with the OECD, underscoring that different kinds of economisation may lead to non-synergistic relations between institutions. Nonetheless, the overall picture is one of predominant synergy among the institutions, which treated both issues as primarily economic issues to be addressed in ways maximising economic welfare and efficiency, and which could be measured in economic terms and addressed with economic instruments.

Regarding the *causes* (see also Table 14.2**)** shaping how the institutions addressed the two issues, factors stemming from within the institutions rather than their environment – specifically their worldviews and entrepreneurs – played key roles. The worldviews were important in shaping how the institutions framed both issues as economic issues to be addressed with economic instruments. They were particularly influential in the case of the IMF, which has a more entrenched economic worldview, due to a more 'purely economic' mandate and staff training than the other two institutions, and unlike the G20 it has a bureaucracy within which the worldview is strongly institutionalised. Perhaps unsurprisingly, the IMF also adopted a 'purer' (in terms of relying on neoclassical environmental economics) kind of economisation than the other institutions, due to differences in worldviews as well as fewer extra-institutional constraints to the influence of the worldviews and entrepreneurs, as discussed later in this section.

Table 14.2 *Important causal factors*

	G20	OECD	IMF
Fossil fuel subsidies (factors *inducing* the institution to address the issue)	Entrepreneurship (US Presidency); institutional interaction (UNFCCC inaction)	Institutional interaction (G20 commitment)	Entrepreneurship (IMF staff)
Fossil fuel subsidies (factors *shaping* how the institution addressed the issue)	Worldview Membership circle (including large emerging economies) Entrepreneurship (US; in 2009) Institutional interaction (with OECD, IEA, World Bank and OPEC; post-2009)	Worldview (experience with subsidies) Autonomy (scope condition for intra-institutional factors)	Worldview (neoclassical economics) Autonomy (scope condition for intra-institutional factors)
Climate finance (factors *inducing* the institution to address the issue)	Institutional interaction (desire to influence UNFCCC) Entrepreneurship (UK, Mexican Presidencies)	Institutional interaction (UNFCCC) Member states (preferring OECD over UNFCCC)	Institutional interaction (G20) Entrepreneurship (IMF staff)
Climate finance (factors *shaping* how the institution addressed the issue)	Worldview Institutional interaction (economic institutions) Membership circle (including large emerging economies)	Worldview (experiences with development aid, investment) Autonomy (scope condition for intra-institutional factors)	Worldview (neoclassical economics) Autonomy (scope condition for intra-institutional factors)

Policy entrepreneurs within the institutions, from IMF and OECD staff to the US and UK G20 Presidencies, were important in ensuring that both issues were on the agenda of their institution and also in promoting particular framings of the issues. For instance, the US G20 Presidency was important in placing the norm of fossil fuel subsidy reform on the G20 agenda and getting the G20 to commit to this norm, and IMF staff was important in promoting the definition of fossil fuel subsidies as including the non-pricing of externalities. Entrepreneurship has been more important as regards fossil fuel subsidies than climate finance, which is one of the explanations for the institutions going further (also compared to institutions not studied here) regarding the former rather than the latter.

Concerning extra-institutional factors, relations with the member states, including both the degree of autonomy of International Organisation (IO) bureaucracies, decision-making procedures, which countries are members and the ministries that represent them have played indirect roles. The high degree of autonomy of the IMF bureaucracy meant it was able to go against the preferences of powerful member states (Bauer and Ege, 2016), even the United States in the case of climate finance, in a way the OECD Secretariat was not. Thus, autonomy from the collective principal acted as a scope condition for the institutional worldview and the entrepreneurship of IO staff. The differences in autonomy explain why the IMF was able to address the two issues in ways that were more purely economic and less influenced by member state preferences.

Differences in membership, the ministries involved and decision-making procedures play less important roles in explaining differences between the institutions. There is relatively little correlation between the aggregated preferences of the member states (taking into consideration the differences in decision-making rules) and the differences in positions of the institutions. Although the G20 reflected the preferences of major emerging economies to a greater degree than the other institutions, the IMF (especially as concerns climate finance) went against the preferences of the United States and also Japan, the countries with the largest vote shares. The institutions are rather similar in terms of interacting with finance ministries, although OECD interaction with development ministries regarding climate finance played a role. Hence, interaction with finance ministries played a role for their approaches, including the economisation of the two issues, but does not explain the difference between them.

Another extra-institutional factor, institutional interaction, played a more substantial role. Particularly the G20 and the OECD interacted closely, with the G20 inducing the OECD to move particularly fossil fuel subsidies up its agenda, and the OECD shaping how the G20 addressed both issues by providing reports and other analyses for G20 meetings. The only case of the IMF interacting closely with

another institution was in 2010, when the G20 induced the IMF to address climate finance, by requesting reports on mobilising climate finance which in return influenced G20 output. As regards other institutions, the three institutions interacted to a large degree with the same institutions, particularly the World Bank, other development banks and think tanks. Such interaction with a similar set of institutions pulled in the direction of convergence among the institutions. Finally, the perceived deadlock within the UNFCCC regarding climate finance spurred G20 member states to place the issue high on the G20 agenda.

The identifiable *consequences* (see also Table 14.3) of the economisation by the three institutions are more pronounced as regards the international level than the domestic one. Besides influencing each other, the three institutions also influenced a range of other international institutions. Especially regarding fossil fuel subsidies, the G20 was crucial for getting the norm of fossil fuel subsidy reform on the agenda of other international institutions, including Asia-Pacific Economic Cooperation (APEC), the North American Leaders' Forum and the Sustainable Development Goals (SDGs), and for the creation of the Friends of Fossil Fuel Subsidy Reform. The three institutions, especially the OECD, provided important new knowledge about both issues, knowledge that was used by institutions including the UNFCCC (particularly climate finance), the SDGs (particularly fossil fuel subsidies), the World Bank and other multilateral development banks (MDBs), United Nations Environment Programme (UNEP), United Nations Development Programme (UNDP) and a range of other economic, development and environmental institutions. Furthermore, without the IMF's output, carbon pricing and the non-pricing of externalities would not have been linked to fossil fuel subsidies in a very ideal-typical case of economisation.

Influences on incentive structures are rather absent among the international influences, except for the important influence of the G20 on the UNFCCC Copenhagen Accord provisions on climate finance in 2009. The G20 process established an understanding among the finance ministries of both developing and developed countries, which meant that the G20 representatives involved in the drafting of the Copenhagen Accord[1] had an understanding of what would be acceptable to the other G20 countries. The understanding included the climate finance target, that private finance would count as climate finance and that developed countries had an obligation to fund adaptation and made reaching an agreement easier. This agreement, together with other output from particularly the G20 and the OECD, helped establish and maintain an international climate finance system in which key decisions regarding the allocation of climate finance was left to the contributor countries. The more recent focus on investment has contributed to

[1] The Copenhagen Accord was drafted by a small group of countries in which G20 countries constituted the majority.

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Table 14.3 *Important consequences of the institutions' output*

	G20	OECD	IMF
Fossil fuel subsidies (international level)	Promoted norm of fossil fuel subsidy reform Induced other economic institutions to address fossil fuel subsidies	OECD's definition influenced how fossil fuel subsidies are addressed (including within G20 peer reviews and the SDGs).	Limited influence, except for its definition being considered in G20 and SDG processes
Fossil fuel subsidies (domestic level)	Promoted the norm of fossil fuel subsidy reform, consequently most countries had to address it. Self-reporting and peer reviews forced G20 members to consider the norm's relevance to domestic policies (United Kingdom) and increased knowledge about countries' subsidies (the United States and Indonesia).	OECD Secretariat most influential when chairing G20 peer reviews, yet difficult to distinguish OECD influence from the G20's	Definition of fossil fuel subsidies used by opponents of fossil fuel subsidies (the United Kingdom and Denmark) Countries under IMF programs induced to reform subsidies (Indonesia)
Climate finance (international level)	Helped clear the way for climate finance provisions in the Copenhagen Accord Moved climate finance up the agendas of other institutions	Cognitive influences on UNFCCC Standing Committee on Finance (regarding bilateral climate finance estimates), G20 and MDBs (regarding investment)	Limited influence (mainly on G20 in 2010–12)
Climate finance (domestic level)	Contributed to climate finance system driven by the providers of finance Influenced cognitive ideas about climate finance among domestic economic institutions	OECD data used by governments and NGOs to normatively shame developed country governments for not providing enough public climate finance	Not discernible (but future integration of climate change in Article IV consultations)

the wider trend of focusing on such finance among international institutions also including UNEP and UNDP.

The domestic consequences are more difficult to discern. The IMF has played a very significant role in making countries under its programmes reform their subsidies, although this incentive-based influence was motivated by the Fund's dislike of subsidies in general for economic rather than environmental reasons. The institutions in general played more of a discernible role regarding fossil fuel subsidies, getting the hitherto overlooked subject on the policymaking agenda in countries including the United Kingdom and providing knowledge about how to reform such subsidies to countries which undertook reforms, including India and Indonesia. The G20 voluntary peer review of fossil fuel subsidies– which also involved the OECD and initially also the IMF – held the participating member states accountable for the norm of fossil fuel subsidy reform. Yet, with the exception of the IMF programmes, the institutions helped prepare the ground for and shape the content of fossil fuel subsidy reform but with actual reforms being directly driven by domestic rather than international factors.

Concerning climate finance, the domestic influences are generally difficult to pinpoint, and perhaps the most significant consequence comes in the shape of contributing to a climate finance system in which the important decisions regarding climate finance allocation are made by the contributor countries. In this context, the OECD's data on climate finance has constituted an incentive and a normative pressure to provide more climate finance inter alia via other governments and non-governmental organisations (NGOs) shaming developed countries for not providing sufficient amounts of climate finance. All three institutions, especially the G20 and the OECD, yielded cognitive and normative influence through meetings and workshops enhancing the participants' understanding of climate finance. This was relevant as many of them came from finance ministries and were new and more susceptible to new framings of climate finance, especially as regards defining climate finance in terms of investment.

14.1.1 Comparing Climate Finance and Fossil Fuel Subsidies

All things considered, the institutions' economisation of fossil fuel subsidies has had more far-reaching consequences both at the international and domestic levels than the economisation of climate finance. But what are the factors that explain this difference? The causal factors influencing how the institutions addressed the two issues overlap and are similar to some degree. Yet, the output of the G20 and the IMF has gone further on fossil fuel subsidies than on climate finance. This difference explains an important element as to why the subsidy output had a greater

impact than the climate finance output: the Pittsburgh commitment and the IMF's programmes and its definition of fossil fuel subsidies do not have equivalents as regards climate finance. The output of the G20 and the IMF constitute more far-reaching action than the two institutions engaged in regarding climate finance, although the G20 attempted (but ultimately failed) to produce a similar agreement on climate finance in the run-up to COP15. OECD output was more voluminous concerning climate finance in terms of data and the number of reports, but it is difficult to discern whether it was more substantive in terms of content.

However, while it is possible to explain the difference between the consequences of the fossil fuel subsidy output and the climate finance in terms of the G20 and the IMF, going further regarding the former issue than the latter, this explanation begs the question of why they acted as they did. Some of the factors studied in the analysis, relationships with member states and institutional worldview, are more or less constant between the two issues. Regarding the other factors studied, institutional interaction mattered in terms of the institutional environments the three economic institutions operated in when they addressed the issues. Climate finance was already an established issue by the time the institutions started addressing it, unlike fossil fuel subsidies which were included on international and domestic agendas mainly because of the G20 commitment. Consequently, regarding climate finance, the institutions were forced to operate in a system in which other international institutions (particularly the UNFCCC) were already addressing the issue and in which particular equity normative ideas were already institutionalised and promoted by a range of actors. Importantly, the fact that climate finance was already being addressed in these institutions as an issue of environmental protection and development (including Common but Differentiated Responsibilities and Respective Capabilities [CBDR]) rather than an economic one, also mattered, especially since countries were quite polarised on this issue.

Altogether, there was less scope for framing climate finance as an economic issue compared to fossil fuel subsidies. Hence, promoting efficiency-oriented normative ideas was an endeavour that, although to some degree successful, could lead to competition with other institutions and opposition from developing country member states, as evident in the case of the G20. Fossil fuel subsidies were an issue the economic institutions were able to address without infringing on the turf of other institutions. In fact, one driver of the G20 influencing the issue was the UNFCCC's complete inability to do so. This distinguishes it from climate finance, which was addressed within the UNFCCC, although the deadlock during these negotiations was one of the main reasons why the G20 took up the issue. The UNFCCC's established role regarding climate finance also made developing countries more sceptical of letting economic institutions address the issue, as they feared this would undermine the equity-oriented discussions within the UNFCCC.

In addition, entrepreneurship in the case of fossil fuel subsidies within the G20 was driven by the United States rather than the United Kingdom (as was the case with climate finance), and within the IMF by a more institutionalised group of officials. Yet, the influence of the entrepreneurs regarding fossil fuel subsidies is not sufficient to explain the difference between the output of the institutions regarding the two issues and the consequences of this output.

Rather, an important part of the explanation can be found beyond the factors inherent to the analytical framework, namely in the characteristics of the two policy issues (Biermann et al., 2009b). Crucially, the different fiscal impacts mattered, with climate finance constituting expenditure to the countries providing it, and fossil fuel subsidy reform constituting a way of reducing expenditure. Consequently, fossil fuel subsidy reform fit with economic institutional worldviews (and mandate in the case of the IMF) with an emphasis on reducing fiscal deficits, as is evident in the IMF pressing countries under IMF programmes to reform their subsidies. The framing of fossil fuel subsidy reform as a policy instrument that reduced emissions *and* saved public money *and* removed macroeconomic distortions also resonated strongly in finance ministries. Climate finance did not provide such a fit, which meant it was more difficult to integrate in the everyday operations of the institutions, especially the IMF, although the recent focus on climate resilience in country consultations might lead to such integration. In this way, economic institutions may generally favour limiting rather than expanding policies that constitute expenditure, as both climate finance and fossil fuel subsidies do, but when one of the policies is an anti-climate policy and the other a climate policy, this disposition is only climate-friendly in the case of the anti-climate policy (fossil fuel subsidies).

Altogether, the key conclusions of the analysis are that economic institutions are capable of taking climate issues seriously, but that the degree to which they do so and how is contingent on the issue at hand, pre-existing efforts in other institutions, and the autonomy of the institutions vis-à-vis member states. The concept of economisation is essential for understanding this dynamic, particularly how the institutions address climate issues in economic terms. Yet, economisation can take different shapes depending on which strand of mainstream economics it draws on and its degree of interdependence from other concerns such as member state preferences.

14.2 Limitations to Economisation

This book has found that the economic institutions have contributed to the fight against climate change. Although their impact has varied from being a driving force (G20 and fossil fuel subsidies) to supporting roles (IMF and climate finance), one

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conclusion is that their involvement has constituted a positive force for addressing climate change. However, there are important limitations to such a positive impact. First, the analysis shows how economisation may work under conducive circumstances, but also how it can be limited when such circumstances are not in place (e.g. when the IMF paid limited attention to climate finance since it was considered beyond its mandate). It is far from certain that economisation will work in other circumstances.

Second, another concern relates to their involvement adding to the fragmentation of the climate complex. Such fragmentation concerns the number of institutions involved and their relations (nested or distinct), the alignment of norms within the complex and which states are members (Biermann et al., 2009a). The institutions' contribution to fragmentation is evident as concerns climate finance, where they have added to the number of institutions, promoted normative ideas such as efficiency often at odds with UNFCCC norms (e.g. CBDR), and diverged from the UN institutions in terms of membership and decision-making procedures. Regarding the latter issue, as discussed in the following paragraph, the institutions grant developed countries more influence than the UNFCCC does. Unsurprisingly, the involvement of economic institutions contributes more to conflictive fragmentation when they address an issue already being addressed by other institutions than when they address a 'new' issue such as fossil fuel subsidies.

Third, while it may be beneficial for the climate to involve powerful institutions in climate policymaking, it may also have negative repercussions for justice concerns. As discussed earlier, the institutions have emphasised efficiency over equity, especially as regards climate finance. While the increased involvement of economic institutions may enhance the efficiency of climate finance measures (especially mitigation) it may also downplay the equity of such measures. For instance, the institutions have prioritised mitigation over adaptation (although they pay increasing attention to the latter), financing measures in emerging economies over Least Developed Countries (due to efficiency) and avoiding issues of historical responsibility and equal per capita emissions. Yet, regarding fossil fuel subsidies, the institutions have emphasised that reforms should prevent 'adverse impacts on the poorest' (G20 Heads of State and Government 2009b), thus adding a justice-oriented normative idea to a policy discussion that hitherto had been very efficiency oriented. In terms of procedural justice, the membership and decision-making procedures of the institutions also allow richer countries a greater say within the institutions than the poorest and most vulnerable countries. The OECD covers only developed countries, the G20 only twenty of the largest economies (and thus only developed and emerging countries) and voting within the IMF is determined on the basis of the level of income. Unsurprisingly, their output tends to reflect the

preferences of richer and developed countries rather than those most affected by climate change, which are for the most part residents of developing countries.

Furthermore, when assessing their roles it is important to look beyond the cases of climate finance and fossil fuel subsidies. Climate finance, fossil fuel subsidies and climate change in general constitute only a small corner of the activities of the three institutions, but many of their activities that do not have an explicit climate focus still have an impact on the climate and on resilience to climate change. This includes output addressing energy, trade, development and economic growth in general. The question is how and how far the institutions address climate change within these policy areas, in other words how far the climate has been integrated within them (on climate policy integration and environmental policy integration; see inter alia Adelle and Russel, 2013; Nilsson and Pallemaerts, 2009; Tosun and Peters, 2018). A 'silo' approach where climate change is addressed solely within its policy domain separate from other issues is unlikely to bring about the transition to a low-carbon society (Boas et al., 2016; Jordan and Lenschow, 2010; Tosun and Peters, 2018). Although it is beyond the scope of this book to provide a full survey of the climate policy integration of the three institutions, even a cursory overview reveals that there are limits to such policy integration.

The institutions pay increasing attention to climate issues across policy domains, as witnessed in how they address energy. For instance, since 2014, the G20 state leaders and energy ministers have consistently framed being 'clean' or low-carbon as a necessary feature of future energy (Downie, 2015; G20 Energy and Environment Ministers, 2019; G20 Energy Ministers, 2015, 2016, 2018; G20 Heads of State and Government, 2014). Yet, this framing has not prevented the G20 energy and environment ministers from – even in 2019 – defining gas as potentially playing an important role in supporting the transition to low-emission societies (G20 Energy and Environment Ministers, 2019; G20 Energy Ministers, 2016). Furthermore, the G20 has continued to focus primarily on economic issues without integrating climate change into these issues, but treating it as a distinct (and less important) issue (G20 Heads of State and Government, 2017, 2018, 2019). The Trump administration's refusal to address climate change within the G20 has further limited the integration of climate change into other G20 policy areas. The OECD (which has a division of labour with the International Energy Agency [IEA] according to which energy is mainly an IEA responsibility) has increasingly addressed energy through a climate framing stressing the necessity of a transition to low-carbon energy.

Nonetheless, climate change, including the risk climate change poses to the economy both in terms of climate impact and of stranded fossil fuel assets (Campiglio et al., 2018), is only beginning to be integrated into the core activities

of the institutions. In December 2019, the IMF Executive Board agreed with the suggestion of the IMF bureaucracy (specifically Managing Director Georgieva) that climate change could have macro-critical (essential to economic stability and growth) implications (Bretton Woods Project, 2019; IMF, 2019f). Consequently, the Fund – which has considerable power to influence all states through Article IV consultations and conditionalities – plans to integrate discussions of the fiscal and macro-economic consequences of both climate mitigation policies and climate change impacts into its consultations with states (IMF, 2019f). The Fund has already integrated mitigation policies into some of its Article IV consultations. The OECD also increasingly treats climate change as a cross-cutting priority, yet it is only to a limited degree addressed among the ten key actions proposed by Secretary General Gurría in his 2020 report (OECD, 2020b). The G20 is a clear laggard in this respect, inter alia due to the climate scepticism of the Trump administration.

Altogether, the three institutions have hardly embarked on paradigm changes. Rather, they have addressed climate change issues according to core ideas and largely within predefined policy domains (although there is increasing climate policy integration). This verdict corresponds to similar findings regarding how the IMF has addressed inequality (Clift and Robles, 2020). While shifts to de-growth or post-growth paradigms seem extremely unlikely for institutions established predominantly to improve growth, there are attempts to reconcile sustainability with economic growth in other corners of global governance and academia. These attempts exist as more or less strong or weak versions of concepts such as ecological modernisation, green growth, the Green Economy and the Green New Deal (Eckersley, 2004; Jacobs, 2012; Klein, 2019; Meckling and Allan, 2020; Mol and Spaargaren, 2000; Tienhaara, 2014). Common to these approaches is the importance of integrating environmental objectives into all aspects of economic policymaking, and in the stronger versions also to de-prioritise growth and elevate justice-oriented political objectives such as interracial and gender justice to top priorities (Eckersley, 2004). Yet, these notions have rarely been integrated into the output of the three institutions, even though the OECD (2011b) has stressed the importance of green growth. The OECD has defined green growth as 'fostering economic growth and development while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies' (OECD, 2011b, p. 114), that is, a weaker version stressing that environmental protection can enhance growth. Thus, unsurprisingly the three institutions do not support radical change, but wish instead to address climate change within existing economic paradigms. As discussed in Section 14.4, future research could explore to which degree these paradigms would constitute stumbling blocks for the transition to sustainability, even if they bought the world badly needed time to transition.

14.3 Theoretical Implications

The perspectives and findings outlined in this book have wider theoretical implications. Beyond having contributed to the literature on international environmental governance and on the international economic institutions, the book contributes to more general theoretical discussions. By developing and exploring the concept of economisation in the case of the international economic institutions, the book contributes to the literature on environmental-economic relations (see Ekins, 2000; Grubb et al., 2014; Katz-Rosene and Paterson, 2018; Newell and Paterson, 2010; Stevenson, 2019) and on international institutions and organisations (see e.g. Barnett and Finnemore, 2004; Biermann, Siebenhüner, et al., 2009; Gutner and Thompson, 2010; Young, 2001). Regarding the former, by developing and applying the concept of economisation, including its causes and consequences, the book has shown that it is possible to reconcile economic and environmental objectives in economic institutions, albeit in a way that is predicated on core economic tenets. As discussed in Section 14.2, there are also limitations to this approach in terms of economisation being contingent on other factors, for example, the downplaying of justice concerns, fragmentation at the international level, and perhaps most importantly the absence of more widespread and paradigmatic change.

Importantly, the findings of the book underscore that economisation does not entail one, monolithic approach. Rather, as demonstrated in the divergence between the IMF and the OECD regarding the definition of fossil fuel subsidies, the economisation of a subject may result in diverging, even conflicting approaches. Furthermore, much of the recent focus on climate finance as investment draws from a different, but not conflicting strand of mainstream economics, namely finance, rather than neoclassical environmental economics. The former kind of economisation (framing in terms of investment) may be less ideal-typical than the latter kind (based on neoclassical environmental economics), but still constitutes economisation. The diverging approaches are not surprising given that mainstream economics differ on a range of issues, even if they agree on fundamental tenets such as economic growth and stability constituting the key objectives and all kinds of costs and benefits being measurable in economic terms (see Chapter 1). The finding that economisation does not inevitably produce one kind of output, but rather acts as a framing device making certain kinds of (economics-based) output possible, leaves room for the role of the individual economic institution as well as for individual agency. Thus, it matters which institution undertakes the economisation, but there is also scope for individual actors within the institution to shape the economisation.

In spite of economisation not leading to one fixed output, the consequences of economisation are rather similar in terms of stressing the economic impact of policy problems, framing them in economic terms (e.g. as externalities) and economic solutions (taxes, positive economic incentives such as risk reduction). As regards climate change, economisation has already played a role beyond the institutions studied here in terms of finance ministries, central banks and other economic institutions promoting carbon taxes, emissions trading, fossil fuel subsidy reform and the incorporation of climate risks in financial risk assessments (Campiglio et al., 2018; Carney, 2015; Skovgaard, 2017c). Economisation has arguably also taken place within a range of other fields, including education, health, energy, science and sustainability (see also Alvial-Palavicino and Ureta, 2017; Bina, 2013; Schimank and Volkmann, 2012; Wilshusen and MacDonald, 2017). Given the power of economic institutions and discourses, economisation holds major (within established paradigms) transformational potential. While such transformational potential may be beneficial for bringing about the transformations urgently needed to mitigate and adapt to climate change and other environmental issues, economisation has tended to downplay concerns about social justice and inequality (Momani and Hibben, 2018; Stieglitz, 2002). Thus, economisation is not only much stronger on the environmental aspects of sustainable development compared to social ones, but it also hardly constitutes radical change, as discussed in Section 14.2.

The literature on economic–environmental relations has long argued that environmental (and other kinds of) policymaking predicated on economic principles have been successful inter alia due to support from powerful economic actors and resonance with economic discourses (Bernstein, 2001; Newell, 2012; Newell and Paterson, 2010; Wilshusen and MacDonald, 2017). The concept of economisation contributed to this literature by focusing more explicitly on the role of economic institutions, including the agency of individual institutions and actors within them. The book has also identified factors that may enable economisation, including entrepreneurship, autonomy from principals, and economic (fiscal) benefits and costs, as well as factors that may hinder economisation, including economic (fiscal) benefits and costs and the policy issue already being addressed by other institutions.

The concept of economisation also contributes to ongoing debates about similar dynamics, including whether the world is characterised by the climatisation of other policy domains (Aykut and Castro, 2017). While economisation, climatisation (Aykut and Castro, 2017), securitisation (Buzan et al., 1998), marketisation (Massey, 1997) and financialisation (Epstein, 2005) are not mutually exclusive concepts, they draw attention to different aspects of political phenomena. It is possible that the world is experiencing climatisation within some policy spheres

and economisation of climate change within others. Yet, unlike climatisation the concept of economisation not only allows for comparison with other policy issues experiencing similar economisation dynamics (e.g. gender and education), it also draws attention to economic institutions and framings which historically have been very important. In a time when the role of economics, economic thinking and economic institutions are being intensely debated, the concept of economisation can bring the dual dynamic of economic institutions addressing an issue and framing it in economic terms into the spotlight. The focus on the agency of individual institutions means that economisation (in the sense used here) is not portrayed as a development progressing due to its own inherent dynamics (the way some accounts of marketisation and economisations do, see, for example, Bina, 2013; Çalışkan and Callon, 2009, 2010; Massey, 1997; Schimank and Volkmann, 2012; Wenzlaff, 2019). Rather, it is the agency of economic institutions and actors that can drive economisation forward or block it.

The second broader theoretical strand that this book has contributed to is the literature on international institutions and organisations. First, the book has added to the literature on institutional output by constructing a framework for studying the causes and consequences of institutional output that included institutional interaction as well as more 'traditional' factors such as institutional worldview, entrepreneurship and membership relations. While the latter factors (worldview, entrepreneurship and membership relations) are often included in studies of institutional output (Biermann et al., 2009b), the inclusion of institutional interaction means that each institution is not treated as an isolated entity, but that the influences from its institutional environment are also studied. Expanding the focus beyond the individual institution draws upon and contributes to the literature on institutional complexity or polycentricity of global climate governance (for institutional complexity see Biermann et al., 2009a; Keohane and Victor, 2011; for polycentricity see Jordan et al., 2018; Ostrom, 2010) as well as institutional interaction (Oberthür and Stokke, 2011; Stokke, 2001, 2012). Thus, the framework allowed for studying intra (worldview, policy entrepreneurs) and extra-institutional factors (relations with member states, institutional interaction) as well as the relationship between these factors, an approach that could be useful for the study of other institutions and issues.

Second, the book has contributed to the literature on international institutions and organisations by demonstrating the importance of the intra-institutional factors of institutional worldview and entrepreneurs operating within the institutions. The importance of such factors may have been well established by inter alia Barnett and Finnemore (2004) and Jeffrey Chwieroth (2010), but by showing that autonomy constituted an important scope condition whereas membership was less important,

the book has developed our understanding of the circumstances under which worldviews and entrepreneurs play a role. Third, the book has contributed to this literature by studying how institutions address issues beyond their normal portfolio, and by identifying scope conditions (autonomy, economic consequences of the policy at hand, the degree to which the issue was already addressed by other institutions) for how far they could go regarding new issues. In this way, the book contributes to the literature on how international institutions deal with new issues (e.g. Hall, 2016; Nielson and Tierney, 2003; Park, 2010).

14.4 Future Research

The findings open up new pathways for future research. While this volume has focused on the economisation of just two issues at the international level, analysis of how economisation has played out at the domestic level, within other institutions at the international level and regarding other issues would be fruitful. Such research could enhance the understanding of the extent of economisation, particularly which policy issues that have been subject to economisation and which policy issues have not. This kind of research could also further explore the causes and consequences of economisation, particularly whether the same causal factors have played similar roles regarding other issues and institutions at the international level, and which causal factors enable, hinder and shape economisation at the domestic level. In the latter respect, it would be highly relevant to include economisation at the international level as a factor, and thus expand on the domestic consequences of the international economisation undertaken in this book.

In empirical terms, future research should also focus on non-environmental issues such as gender. Gender is, like climate change, an issue historically seen as non-economic and even as standing in opposition to economic paradigms, Nonetheless, in 2015, the IMF identified gender (and climate change and inequality) as an emerging structural issue (IMF, 2015b), and has argued in favour of women's economic participation referring to its inherent value and its positive impact on growth (IMF, 2020a). Likewise, the G20 and the OECD have also addressed gender issues, including the OECD providing reports to the G20 on the economic benefits of gender equality (OECD and International Labour Organization, 2015; OECD et al., 2014). All three institutions have focused on economic aspects of gender issues, such as pay gap, economic empowerment and entrepreneurship. Future research could focus on the economisation of gender issues by these three institutions or by other, public or private, international or domestic economic institutions.

In more strictly theoretical terms, the concept of economisation needs further development. Especially the relationship between, on the one hand, economisation and, on the other, the concepts of depoliticisation (Burnham, 2001; Hay, 2007) and politicisation (Zürn, 2014) could benefit from further development. Is the economisation of climate change studied in this book inherently a case of depoliticisation? Arguably, this would be the case only if the issue had been previously politicised, as was partially the case with climate finance during the UNFCCC negotiations. The economisation of a hitherto depoliticised issue would hardly constitute depoliticisation. Perhaps the more important questions are how to conceptualise (de)politicisation when an issue already addressed within one (non-economic) set of institutions and framed in one (non-economic) way is economised? What kinds of conflicts or synergies would we expect, and under what conditions would economic institutions and framings prevail? Arguably, the economisation of climate change and other issues provide ample empirical material for exploring these questions. Likewise, there is ample material for studying the relationship between climatisation (Aykut and Castro, 2017) and economisation: These two concepts are different heuristic lenses for studying developments that may be distinct or overlap, for example, the efforts to make investments climate-friendly, which can be understood both as an instance of climatisation and of economisation. Since the different concepts capture different dynamics, the question of which concept to employ largely depends on the theoretical interest that motivates the inquiry. Yet, future research could explore which of the two concepts that are most theoretically enlightening, and which best capture current developments in climate politics. On one level, economisation has the advantage of being a broader concept that can be used to understand developments outside environmental politics, such as gender or education.

Moving away from economisation, future research could also draw on and further develop the analytical framework for studying the role of intra- and extra-institutional factors determining institutional output. Particularly the question of the relationship between the different sets of factors could be explored further. The analysis found that member state relations (autonomy of the bureaucracy, membership circle) acted as a scope condition for intra-institutional factors (entrepreneurship, institutional worldview), but what kind of relationship exists between institutional interaction and these intra-institutional factors? More specifically, to what extent does it matter if the institutional worldview of the institution in question, fits or conflicts with the worldviews of the institutions it interacts with? Moreover, to what extent can entrepreneurship shape institutional interaction, for example, by establishing particular kinds of interaction, and how far can institutional interaction shape the possibilities for entrepreneurship, for example, by

opening up windows of opportunity? These questions and others could be developed further theoretically and tested empirically on a wider set of cases.

14.5 Recommendations for Future Policy and Practice

The present book has studied the economisation of climate change in two cases, as well as its limitations. Fundamentally, the analysis indicates that economic institutions are capable of taking environmental issues seriously, but they do so according to their own economic worldview and often struggle to integrate these environmental concerns into their wider practices. These findings matter, as economic institutions – both at the international and domestic levels – are much more powerful than environmental ones.

Perhaps the most instructive set of recommendations emerge from the comparison between fossil fuel subsidies and climate finance. That the economisation of fossil fuel subsidies had more far-reaching consequences than the economisation of climate finance was due to the latter issue already being addressed by a set of international institutions and having negative economic consequences for a large number of actors (in contributor countries), whereas fossil fuel subsidies have fiscal and macroeconomic benefits. This tells us that while economisation may be worth pursuing when the issue has not already been addressed by other institutions and the issue fits with an economic agenda, it can be counterproductive if other institutions address it and the economic 'fit' is less evident. In the case of climate finance, economisation added to the fragmentation of the international climate finance system in terms of institutions, norms and actor constellations. In terms of fit with an economic agenda, issues such as carbon pricing, fossil fuel subsidies and the integration of climate concerns into long-term policymaking, are conducive to economisation because they overlap more with the economic institutions portfolio and fit with environmental economics as well as economic priorities such as removing market distortions and reducing public expenditure. The emphasis on reducing expenditure also means it may be more fruitful that these institutions address anti-climate policies (besides fossil fuel subsidies policies such as agricultural subsidies and spending on road or aviation infrastructure) than climate policies.

In this respect, it is important that economisation implies prioritising efficiency and effectiveness over equity. Hence, it makes less sense that economic institutions address issues with important equity dimensions such as biodiversity, climate refugees and the role of indigenous peoples. On a related note, while the urgent state of climate politics may mean that it is better to prioritise immediate and effective action over concerns of equity and justice (be it procedural or in terms of outcomes), this is inherently a political choice. The trade-off between on the one

hand equity and on the other effectiveness and efficiency is very much salient in the case of economisation because of the power and centrality of economic institutions at the international and domestic level. This book has shown that these institutions can be part of the solution, but likely at the expense of equity concerns. Making the right choices regarding this trade-off requires an acute awareness of the implications of economisation. In this respect, the differences between the different kinds of economisation rooted in different strands of mainstream economics also play a role. More Keynesian approaches may be suitable for times when economic stimulus is needed, for example, following the Corona pandemic, whereas carbon pricing may be easier to adopt once the need for economic stimulus is over, and governments need new, sustainable sources of revenue. Specific kinds of economisation may also be more conducive for alliances between economic and environmental actors, for example, economisation rooted in Pigouvian economics may be conducive to alliances between environmentalists, economic experts and finance ministries in favour of carbon taxes, while more Keynesian kinds of economisation may be conducive to alliances between environmentalists, trade unions and industry associations in favour of green recovery packages. The latter kind of alliance may be more relevant in the immediate aftermath of the pandemic, the former more in the longer run.

The political nature of the choice of whether to pursue economisation or not underscores the importance of bringing the political sphere back in and of *politicising* the question of economisation. In other words, the meta-question of whether and how to economise should not be left to the economic institutions, but should instead be subject to public debate about collectively binding decisions concerning the common good (Zürn, 2014).

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Index

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