1. Environmental taxes and fees: wrestling with theory

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Since the publication of Pigou’s *Economics of Welfare* almost one hundred years ago, policymakers, scholars and environmental advocates have explored using economic instruments to internalize environmental externalities, particularly since the 1960s. Yet Pigou’s call for internalization set a high standard that may be difficult to meet in actual implementation. This chapter poses questions that probe the gap between the underlying economic theory of environmental taxes and their actual execution. In light of a possible gap, it offers a preliminary inquiry into whether governments should consider an enhanced role for environmental fees in the continued evolution of the theory of environmental economic instruments.

A complete analysis of environmental pricing instruments inevitably must draw upon multiple disciplines often beyond the reach of any one author, and it should consider the unique legal, environmental and political circumstances of each country, which are known best to those who work within each country. Hence, this chapter provides an analytical framework and identifies questions for research and debate. This inquiry into fees is not meant to suggest that fees should displace environmental taxes, but rather that an expanded concept of fees might offer an alternative.

1. IS THERE A NEED FOR NEW RATIONALES FOR ENVIRONMENTAL PRICING?

The threshold question is why one should consider an enhanced role for environmental fees when the academic literature over past decades has concentrated on environmental taxes as a key way to attach prices to negative environmental externalities. The answer lies in the potential gap between the economic theory and actual execution of environmental taxes. As is well known, the economic theory of environmental taxes originated with A.C. Pigou in 1920, when he proposed imposing ‘extraordinary
restraints’ on the private sector’s damaging acts to capture their external social costs (Pigou 1920, p. 149). His gloriously elegant economic theory that a tax can internalize the external costs of environmentally damaging activities, however, can encounter practical implementation problems, given the complexities of accurately calculating external costs (see, e.g., Preiss 2012; Fullerton, Leicester and Smith 2010, pp. 425–6), and the political challenges of enacting taxes that approach full internalization (OECD 2010, p. 96).

Recognizing the challenges of valuing externalities, Baumol and Oates in 1971 suggested a second-best approach that is also a very elegant economic theory (Baumol and Oates 1971). They proposed that environmental taxes should serve as regulatory substitutes. Under their approach, the tax rate would be set at a rate designed to achieve a specific emissions reduction goal (or standard). This standard-pricing approach took a step away from classic Pigouvian theory and it nourished the concepts of least-cost abatement and taxes as an alternative to regulation.2

The Swiss carbon tax presents an example of a standard-pricing approach. The government set a goal for the reduction of greenhouse gas emissions, imposed a carbon tax, and has increased the tax rate when reductions did not meet the target (Speck 2013, p. 174). The tax will rise to 60 Swiss francs (49 euros3) in 2014 (Office fédéral de l’environnement 2013), and the law sets a cap of 120 Swiss francs, so more increases are still possible (Speck 2013, p. 174). Nonetheless, in general practice it may sometimes be difficult to accurately calculate the standard-based tax rate and to shepherd a theoretically correct rate through the political process. In addition, environmental taxes may remain static even if they do not meet explicit or implicit performance requirements and hence stray from Baumol–Oates’ theory.

If a gap occasionally, or often, exists between the theory of internalization or standard-pricing taxes and actual execution, the next question is whether the existence of a gap bears significant implications for environmental taxes as an environmental policy instrument. This author’s assumption is that the gap warrants attention because the raison d’être of environmental taxes is that they operate as economic instruments and achieve their environmental purpose by implementing economic theory. Consequently, if implementation falls short of theory, it seems to follow that a significant question arises about whether their use is still warranted. However, the answer should not turn on this simple logic but rather on a more sophisticated analysis that draws on the expertise of different disciplines.

Environmental economists, who are the intellectual guardians of the economic theories behind environmental taxation, are best positioned to
determine whether the gap between Pigouvian and Baumol–Oates’ theories for environmental taxes and the actual translation into specific environmental tax instruments is troubling. They can determine how pervasive the gap is and whether ex post analyses can demonstrate that theoretically imperfect environmental taxes are nonetheless delivering significant levels of environmental protection. Political economists in turn can evaluate whether a real or perceived gap between theory and execution impairs the ability to convince policymakers that environmental taxes are a legitimate instrument for advancing environmental protection. This chapter poses these questions, but does not attempt to answer them. In wrestling with theory, it sets a framework for further research.

If the gap between theory and execution is significant from the economic and political perspectives, the analytical focus then turns to possible alternative responses.

One response might be to argue that environmental taxes should not be held to a higher theoretical standard than other types of taxes and other environmental policy instruments. Compared to other taxes, environmental taxes are somewhat anomalous. Pigou’s internalization and Baumol–Oates’ standard-pricing approaches impose a burden of exactitude on the tax rate, whereas other taxes are more likely to be set according to government discretion. Economists and policymakers consider whether other taxes stimulate or impair the economy or equitably distribute the burden of taxation across income levels, but there is much more debate and less of a precise theoretical basis for the ‘right’ level of taxation. Although Pigou and Baumol–Oates’ theoretical brilliance has boxed environmental taxation into a bit of a difficult corner not shared by other taxes, one could argue that some level of discretion should be afforded environmental taxes. Similarly, other environmental instruments often do not operate in a theoretically perfect manner. For example, within the sphere of environmental economic instruments, the European Trading Scheme for greenhouse gas emissions has illustrated the challenges of executing economic theory, yet policymakers have thus far remained committed to the scheme. The acceptance of flaws may be inevitable in the second- or third-best world, but it still begs the question, identified above, of whether the flaws excessively erode environmental taxes’ raison d’être.

Another approach is to continue to document and publicize the positive environmental impacts of environmental taxes that are less than theoretically perfect in order to reduce the significance of the gap between theory and execution. In addition, continuing ex post research can highlight the ways in which the design and implementation of environmental taxes can be improved to reduce the gap in the future.

A complementary alternative might be to add another component
to environmental pricing theory and rhetoric to supplement, but not replace, environmental tax theory. If it is difficult to achieve pure execution of theory, and if the gap between theory and execution is significant (both of which are threshold questions taken as assumptions for analytical purposes), should we further develop our theories to better suit the realities of the time and our experience to date? The remainder of this chapter explores the idea of expanding the use of environmental fees as a complement to environmental taxes in the environmental pricing toolbox.

2. ‘ECO-FEES’ AS AN ECONOMIC RATIONALE

Fees have been used in the environmental context for decades. However, they traditionally have taken the form of administrative charges that cover the cost of the governmental permitting or enforcement process and user charges, such as payments for municipal waste treatment (see, e.g., Määttä 2006, p. 17). The possibility explored in this chapter is whether one could view environmental fees more broadly as a charge for the use of the environment, rather than a charge for some specific, traditional government service. This chapter refers to this broader concept as ‘eco-fees’, although other terms, such as user fee, charge or levy could be used as well.6

2.1 The Distinction between Taxes and Fees

Exploring an eco-fee approach involves drawing a conceptual line between taxes and fees. Defining the line is particularly important because an eco-fee for the use of the environment would bring the environmental charge conceptually close to a tax that attempts to capture the cost of environmental externalities. Long-standing definitions of environmental taxes provide useful guidance.

When discussing environmental taxes, the Organisation for Economic Co-operation and Development (OECD) has defined taxes as ‘any compulsory, unrequited payment to general government . . . . Taxes are unrequited in the sense that benefits provided by government to taxpayers are not normally in proportion to their payments.’ (OECD 2001, p. 15.) Thus, a critical, traditional distinction between taxes and fees (or other charges) is that fees provide a benefit back to the payers. Although other features, such as whether the payment is compulsory and whether the payment is to ‘general government’, are also significant, the following analysis focuses on the benefit aspect. The issues, however, can be conceptually linked. For example, a payment dedicated to a particular purpose that relates to the
payers’ activities may be more likely to bear a linkage to a benefit to the payers.

Direct benefit to the payers is obvious with traditional environmental fees, where the payers receive in return a very identifiable, concrete service, whether it is the cost of processing a permit application or the cost of waste treatment. If, however, the government is charging for the use of the environment, as explored here, a fee approach requires finding that the use of the environment offers a benefit to the payers. This approach is conceptually different from taxes that try to execute Pigouvian theory and Baumol–Oates standard-pricing: those taxes rely primarily on the burden of the tax itself as the means to achieve the environmental goal. The theory and vocabulary of fees instead require supporting rationales that concentrate on the benefit to the payers. The distinction between taxes and fees is already murky (as also illustrated in discussion of legal distinctions below), but exploring this shadowy forest between taxes and fees can help determine whether there is a way to adjust the theoretical framework around environmental fiscal payments to include a broader fee concept.

2.2 Benefits That Might Justify an Eco-Fee

Under the ‘benefit’ (or ‘requited’) approach to fees, the economic rationale for fee-oriented environmental price signals needs to be framed in terms of a benefit to the payers. If a benefit is not present, then the payment is more likely to constitute a tax than a fee, leaving the proponent with the potential burden of justifying the validity of the environmental tax under the theories of Pigou or Baumol–Oates. Several possible alternatives are presented below to help explore the theoretical feasibility of this approach, and others might be possible as well.

2.2.1 Government as trustee of environmental resources

One possibility is to consider whether government can use its legal ownership stake in the environment to impose a fee. If so, then conferring the right to use that interest could provide tangible benefit to the recipient of the right, who would pay an eco-fee.

In a number of countries, the government holds some environmental assets in a public trust for the benefit of the public. The government does not have unrestricted ownership of the asset, because it must manage the asset for the public, but at the same time the private sector is not necessarily unilaterally prevented from using it. The government as trustee is charged with the responsibility of managing the asset in a way that will protect the public interest (see generally Blumm and Guthrie 2012). For example, in the United States (US), some states hold navigable waters in
public trust (see generally Frank 2012, pp.671–3). This public trust can limit the private sector’s direct use of water but also limit activities that will more indirectly affect water.\footnote{7}

Under the public trust approach, one might argue that the government could attach an eco-fee to the use of environmental resources that it holds as trustee for the public. The private payers would obtain the right to use that resource in return for the payment, a clear ‘benefit’ in fee terminology. The government could charge according to its perception of the value of the right to use the public asset or according to the cost of any mitigation measures the government feels it should undertake.\footnote{8}

A fundamental issue under this approach is how far into the environment government can extend the reach of its public trust. Some have argued that the public trust doctrine covers air and, therefore, serves as a basis for government’s authority over and obligation to protect air quality, including the obligation to reduce greenhouse gas emissions (Wood 2012; McGinley 2013).\footnote{9} If so, governments holding the air in public trust\footnote{10} could use their authority as trustees to charge fees for greenhouse gas emissions that enter the atmosphere.\footnote{11}

This approach to showing a benefit under an eco-fee system would require significant legal research in each jurisdiction to determine whether government holds environmental resources in public trust and, if so, the scope of government’s obligations as trustee.

\subsection*{2.2.2 Government as the licensor of limited-entry industries}
Alternatively, government may control a field of limited entry where significant environmental assets are at stake. The government’s strong regulatory interest – not a quasi-proprietary interest – can cause it to impose significant licensing procedures and substantive requirements. In this instance, it could use its regulatory authority to impose an eco-fee, giving the payer the benefit of the right of access to a limited field. For example, the nuclear power industry is highly regulated, given the importance of the public interest. Government could attach a one-time eco-fee or ongoing eco-fees to the right to enter the field, a clearly identifiable benefit.\footnote{12} Such a fee would go beyond the traditional administrative permitting fee and could reflect government’s assessment of costs it may assume as a result of the activity, such as response measures in the event of an emergency.\footnote{13} The fee in essence would be a payment for the possibility that the licensed activity might use environmental resources.

\subsection*{2.2.3 Government as environmental regulator}
A third opportunity to apply eco-fees could arise when government uses its traditional power to regulate day-to-day commerce in order to protect
the environment, such as the regulation of pesticides or the regulation of greenhouse gas emissions. If government were to attach eco-fees to polluting activities, one would need to identify benefits that justify the fees. Unlike Pigouvian or Baumol–Oates’ taxes, the fees are not designed primarily to change the payers’ behavior, although the price increase may also have that effect (Opschoor and Vos 1989, pp. 14–15). The rationale for the eco-fees must instead link to specific benefits to the payers. Benefits are clear in the case of traditional fees, such as user charges where the government has assumed the responsibility of managing wastewater treatment plants. The following lines of reasoning might justify the use of fees for less tangible benefits, such as a fee on a manufacturer of pesticides or gas-guzzling cars, but each still involves a payment for use of the environment.

One could argue that the manufacturer or some other entity has no inherent right to pollute and, therefore, government is allowing the benefit of the use of the environment, which it might otherwise restrict. The eco-fees offer the payers the opportunity to conduct an activity that might degrade the environment.

Alternatively, one could argue that the government can impose eco-fees in return for its commitment to engage in related environmental mitigation or adaption measures, such as government investments in alternative vehicle technology research that could fairly directly benefit the manufacturers. In some cases, however, government might want to engage in broader mitigation efforts with less or no direct return for the payer, such as investments in public transit that would offset the increased emissions resulting from gas-guzzling vehicles. In that event, the right-to-pollute rationale would be more appropriate.

Finally, a very different approach would be to shift the focus from the benefit offered to the payers to the burden that the payers are putting on the environment. In this case, the regulated entities would pay fees that enable government to mitigate the damage caused by the regulated activities. For example, a fee on lead paint manufacturers imposed by the State of California was used in part to fund government programs that addressed the health risks of children exposed to lead paint. When deciding whether the payment was a tax or fee for California’s constitutional purposes, the California Supreme Court found that the payment was a ‘regulatory fee’ that was imposed under the government’s police power, not a tax. The court did not require a showing of benefit to the payers but rather focused on the fact that the government was trying to regulate the burdens on society imposed by the industry and would use the revenue to address those burdens. This broadening of fees to include payments directly tied to burden, not benefit, would be a step away from the...
OECD’s tax/fee distinction, which focuses on benefit, and it would bring the fee concept considerably closer to the Pigouvian internalization or a Baumol–Oates’ standard-pricing approach. However, it is one that might warrant exploration.

3. THE EFFECT OF THE BENEFIT RATIONALES ON THE DESIGN OF ECO-FEES

The benefit-related rationales for eco-fees carry implications for the design of eco-fees, in particular the level at which the fees are set and how the revenue is used. The following discussion explores some of the possibilities at a preliminary, conceptual level. However, it is subject to the important caveat that design choices may be heavily influenced by the law in any particular jurisdiction, which can introduce a series of nuances that lie beyond the scope of this chapter.

An eco-fee approach may give government more latitude to set the amount of the payment imposed on polluters than an environmental tax. While Pigouvian taxes theoretically should capture the value of externalities and Baumol–Oates’ taxes should set the price that will achieve an environmental standard, an eco-fee would usually correlate with the value of the benefit provided. These correlations may allow government more discretion. At the same time, the rationales for eco-fees could allow for the imposition of higher payments than traditional environmental fees, giving policymakers the ability to send a stronger price signal.

Table 1.1 summarizes the approaches government might take to setting the rate. Note, however, that setting the level of the eco-fees may not be entirely standardless. For example, if a fee is based on the public trust doctrine, the government is acting in its fiduciary capacity and may want to ensure that it receives a fair public return for the private sector intrusion on the public goods. Similarly, depending on the law of the particular jurisdiction, government may need to show under other rationales that the amount of the fee is somewhat proportional to the benefit (or burden under the last rationale). Nevertheless, from a purely theoretical perspective, governments may have a greater degree of discretion in deciding the rate for an eco-fee than for a theoretically correct Pigouvian or standard-pricing tax.

The benefit rationales may also significantly influence the question of whether the revenue from eco-fees is earmarked for an environmental purpose. Under the public trust approach, the trustee may have an obligation to use the revenue to protect the public asset held in trust. Under the licensing rationale, if the fees reflect government’s assessment of the
Table 1.1  Summary of environmental tax and eco-fee design components

<table>
<thead>
<tr>
<th>Theory</th>
<th>Triggering Event</th>
<th>Rate</th>
<th>Use of Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pigouvian tax (tax effects results; no private benefit required)</td>
<td>Environmentally damaging activity</td>
<td>External costs</td>
<td>Open-ended (Note: Pigou’s writing could also be interpreted to suggest earmarking)</td>
</tr>
<tr>
<td>Baumol–Oates’ tax (tax effects results; no private benefit required)</td>
<td>Environmentally damaging activity</td>
<td>Rate necessary to achieve standard</td>
<td>Open-ended</td>
</tr>
<tr>
<td>Public trust eco-fee (private benefit is access to public assets)</td>
<td>Intrusion into public asset</td>
<td>Governmentally determined value of public asset made available for private use</td>
<td>Possible fiduciary obligation to compensate public</td>
</tr>
<tr>
<td>Licensing eco-fee (private benefit is access to limited market)</td>
<td>Environmentally damaging activity</td>
<td>Cost government decides to impose to achieve desired level of funding for related environmental purposes</td>
<td>Monitoring, remediation, mitigation</td>
</tr>
<tr>
<td>Regulatory eco-fee (private benefit is right to pollute)</td>
<td>Environmentally damaging activity</td>
<td>Cost government deems appropriate</td>
<td>Open-ended – but perhaps stronger policy basis if dedicated to remediation</td>
</tr>
<tr>
<td>Regulatory eco-fee (private benefit is government mitigation program)</td>
<td>Environmentally damaging activity</td>
<td>Cost government decides to impose to achieve desired level of funding</td>
<td>Mitigation program</td>
</tr>
</tbody>
</table>

Note: The design components of fees may vary depending on a country’s law.

environmental costs it may assume as a result of the activities, the revenues presumably should be earmarked. Under the right-to-pollute rationale, government might argue that its allowance of activities provides sufficient benefit, leaving it free to use the revenue as it wishes, but as a matter of policy, the fees may be more attractive if the revenue is dedicated to
environmentally related programs. Finally, where the benefit takes the form of a governmental promise to engage in certain activities, earmarking is essential.

In sum, the eco-fee approach tends to suggest earmarking of the revenues (see Table 1.1). As the benefits to the private sector become more attenuated, earmarking can provide a more concrete benefit, particularly if government is also providing the private sector with some relief from costs it would otherwise have to assume. However, policymakers might have more freedom in how to use the revenue than with traditional environmental fees, such as fees for permit processing and waste management services.

4. IMPLICATIONS OF A BROADER APPROACH TO FEES

4.1 A Shift in Theoretical Focus

As discussed above, an eco-fee approach would relieve analysts and policymakers of the obligation to design environmental taxes that meet Pigouvian or standard-pricing standards. Eco-fees could instead provide a form of rough justice, based on various rationales for why government has a right to charge for the use of the environment, often in return for using the revenue to protect the environment. Yet at the same time, the eco-fee approach would allow analysts and policymakers to venture beyond the boundaries of traditional environmental fees. The shift in design focus also carries significant environmental implications. The actual environmental return would come largely from the use of the revenue, but as recognized above, any price signal may also affect behavior, therefore potentially allowing eco-fees to serve two environmental functions.

4.2 A Shift in Public Perception

If the gap between the theory and execution of Pigouvian and standard-pricing taxes undercuts the political viability of environmental taxes (a threshold question posed in section 1 above), the design freedom that could come with eco-fees might be politically useful – a question again for political economists. It would also be important to consider whether eco-fees’ tendency to dedicate revenue to the related environmental problem is a politically positive or negative development. On the positive side, there is some evidence that using revenue from environmental fiscal instruments to address the environmental problem increases public support (Brett and Keen 2000, pp.336–7; Kallbekken and Aasen 2010, p.2184; Soares
2012, p. 110). On the other hand, such earmarking would shift the public discourse away from revenue-neutral environmental fiscal reform or the search for new revenue to reduce budget deficits during periods of fiscal austerity.

The choice of terminology may also affect the public debate about the enactment of measures and the measures’ ultimate effectiveness. For example, given the current toxicity of the word ‘tax’ in some countries, the eco-fee option might be more palatable. From an effectiveness perspective, there is the question whether ‘tax’ or ‘eco-fee’ (or some comparable term) sends a stronger behavioral message. A tax may carry a sense of penalty, while an eco-fee could suggest either a moral obligation to pay for and protect the environment or a license to pollute. If fees are preferable, which specific term (fee, eco-fee, charge, payment, levy or something else) is most effective? Political and behavioral economists are in the best position to evaluate the merits of these implications.

4.3 Legal Implications of the Tax-Fee Distinction

Whether payment obligations are legally characterized as taxes or fees can have significant legal consequences. The legal line between taxes and fees is often shadowy and can vary from jurisdiction to jurisdiction. The following discussion draws on US law to illustrate how one country draws legal lines between taxes and fees and the resulting legal implications. Although the law to date has developed largely around traditional taxes and fees, the legal implications are important when considering an expanded concept of fees and highlight the need to research the law in any particular jurisdiction.

4.3.1 Federal legislative and administrative procedures

The legal distinction between taxes and fees plays a significant role in determining federal legislative procedures for enactment. Federal taxes are subject to a procedural requirement that does not apply to fees. The US constitution provides that bills ‘for raising Revenue’ must originate in the House of Representatives (the ‘origination clause’). The House is the chamber of Congress elected based on population and therefore brings tax issues closer to the people, unlike the Senate where representation is equally divided among the states (see generally Kysar 2014). Taking a functional approach in interpreting the origination clause, the US Supreme Court has often reiterated that ‘revenue bills are those that levy taxes, in the strict sense of the word, and are not bills for other purposes which may incidentally create revenue’. The allocation of the revenue to a specific program has emerged as a
key factor in determining that a measure is not ‘for raising Revenue’. After stating that the origination clause applies to taxes ‘in the strict sense’, the Court in *United States v. Munoz-Flores* explained: ‘The Court has interpreted this general rule to mean that a statute that creates a particular governmental program, as opposed to a statute that raises revenue to support Government generally, is not a “Bill[ ] for raising Revenue” within the meaning of the Origination Clause.’ However, the dedication of the funds to a particular program may not be determinative. In 2013 a lower court decided that the regulatory purpose of a tax (in that case a federal tax on people who do not obtain health insurance) precluded the measure from being a tax for purposes of the origination clause even though the revenue was not dedicated to a specific program.

The analysis above suggests that eco-fees designed to raise revenue for a dedicated purpose might likely be designated as fees for constitutional purposes, that the legislative choice of words (tax or fee) is not constitutionally determinative, and even that taxes with a regulatory intent, such as standard-pricing taxes, might nonetheless be fees in the eyes of the law if the regulatory purpose dominates. Legal characterization as a fee would give legislators in the Senate the freedom to approve a measure prior to action by the House, thereby creating potentially significant political opportunities.

The tax/fee distinction is also relevant to other federal legislative and administrative procedures. Under federal congressional procedures, tax proposals are referred to the congressional tax-writing committees in each chamber, and environmental proposals are referred to the committees that have jurisdiction over environmental protection. Thus, the tax/fee distinction will determine which committee has jurisdiction to review a legislative measure (Milne 2008, pp. 143–4). A more expansive approach to fees could open up opportunities for action by committees with jurisdiction over environmental measures. Once a measure becomes law, the Internal Revenue Service ordinarily is responsible for administering tax provisions, whereas other agencies, such as the Environmental Protection Agency, have jurisdiction over environmental matters. Thus, more expansive use of environmental fees would put more revenue responsibility in the hands of environmental agencies. In addition, a law’s designation of a specific agency as responsible for administering a payment scheme may influence whether it is legally characterized as a tax or a fee.

### 4.3.2 State procedural limits on new taxes

The tax/fee distinction may also be legally relevant to state procedural requirements. For example, California’s constitution requires that a two-thirds majority of both chambers of the legislature approve a ‘tax’, unlike a fee which is only subject to approval by a simple majority. California’s
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constituent explicitly excludes reasonable charges for benefits, government services and regulatory costs, as well as charges for the use or transfer of state property. Consequently, eco-fees that meet these criteria would avoid the supermajority requirement.29

4.3.3 States’ power to impose costs
The federal government’s constitutional power to regulate interstate commerce under the ‘commerce clause’ means that states cannot adopt measures, including revenue-generating mechanisms, that interfere with interstate commerce. Constitutional law may look more favorably on state pricing instruments that have fee-like attributes.

Recent US Supreme Court cases have looked at various factors to determine whether a state tax violates the commerce clause, including whether the interstate company’s payment was related to services that the state government provided for that company and therefore did not unduly interfere with interstate commerce.31 This factor means that constitutionally justifiable state taxes on interstate commerce are likely to bear more of the characteristics of user fees, even when the instrument is clearly a tax.32 In striking down annual flat taxes on interstate trucking, the Court found that the flat taxes ‘do not even purport to approximate fairly the cost or value of the use of Pennsylvania’s roads’.33 However, earmarking the revenues may not be necessary.34

If states want to maximize their power over interstate commerce, the eco-fee approach (or a tax structured approach like an eco-fee) may be appealing, particularly if the revenue is earmarked for a related state expenditure. This approach, however, would still entail the potentially difficult question of how to define the cost fairly allocable to the payers and the range of purposes for which the government can use the revenue under commerce clause jurisprudence.

In sum, the law of any particular jurisdiction will significantly affect the extent to which a fiscal instrument will qualify as a fee rather than a tax and how far one can stretch the meaning of a fee. The tax/fee distinction in turn can affect legal procedures for enactment, design requirements and issues of the authority of different levels of government to impose fees.

5. A ‘CARBON POLLUTION FEE’ PROPOSAL

A bill introduced into the US Senate in 2013 provides a contemporaneous example of how the fee issue has entered the political landscape and the potential challenges of distinguishing between a tax and a fee. The Climate Protection Act of 201335 calls for a ‘carbon pollution fee’ that would
impose a price on fossil fuels equal to US$ 20 per ton of carbon dioxide content and an equivalent fee on imported carbon pollution-intensive goods.\textsuperscript{36} The fee operates much like a carbon tax, but it would be imposed through the Clean Air Act, not the Internal Revenue Code, and it would be administered by the Environmental Protection Agency, not the Internal Revenue Service. Revenue would be used for a variety of purposes, including a per-capita rebate to US citizens, deficit reduction, climate change adaptation, transition relief for energy-intensive industry and low-income individuals, and research.

The proposal illustrates some of the substantive complexities and procedural implications of the tax/fee distinction. Although the fee looks much like a carbon tax, one could argue that the fee is a payment for the use of the environment under one or more of the rationales described above. In addition, the placement of the fee within the environmental legal regime of the Clean Air Act gives it a strongly regulatory nature that might overshadow its revenue-raising features. However, some of the uses for the revenue lend a tax flavor to the extent that they fund rebates to US citizens, which could be akin to environmental tax reform, and deficit reduction – putting squarely on the table the question whether dedication of the revenue for a related purpose is legally essential to the definition of a fee. From a procedural perspective, the proposal has been referred to the Senate Committee of Environment and Public Works, implying a procedural judgment that the measure is a fee, not a tax. Perhaps not coincidental to the design of the measure, the bill’s sponsor, Senator Bernie Sanders, is a member of the Committee and the bill’s co-sponsor, Senator Barbara Boxer, is the Committee’s chair.

Although Congress has not acted on this proposal, it shows how some policymakers have an interest in extending the use of environmental fees in ways that bring them much closer to traditional environmental taxes, and the potential political opportunities that fees might offer.

6. CONCLUSION

The discussion above started with the premise that environmental taxes may not always achieve the economic ideals of Pigou and Baumol and Oates. Having explored the possibility of expanding the concept and use of environmental fees, it is useful to return to the basic question. As we move forward, should we accept imperfect execution of environmental taxes and continue to present environmental taxes as a mechanism for imposing costs on polluters in a more generalized, less perfect sense – or should we shift on occasion to a fee approach that conveys the notion that government is giving
a benefit for which polluters should pay? The theoretical roots of the tax approach leave it open to challenge, but the tax approach is now familiar. The fee approach can avoid the potentially abrasive ‘tax’ language, convey a sense of public command over natural resources, and imply a greater public commitment to setting aside funds to protect the environment.

This discussion highlights the need for answers to questions from different disciplines to help determine whether pursuing the concept of a broader definition and more expansive use of fees is warranted:

- For economists, given the difficulties of fully executing the Pigouvian and Baumol–Oates’ theories, do we need to look for other theories of environmental pricing, or are Pigouvian and Baumol–Oates’ approaches still defensible?
- For political and behavioral economists, are ‘fees’ more appealing and effective than ‘taxes’ and if so, what specific terms – eco-fees, eco-charges, environmental fees, or something else – are most effective with the general public and policymakers? Or do ‘fees’ legitimize pollution in a way that will inhibit change?
- For lawyers, to what extent does the law of different jurisdictions allow for a broader interpretation of fees, and are the procedural and substantive ramifications positive or negative?
- For those involved in public finance, would a trend toward more earmarking, which might come with fees, be a useful development or would it threaten the integrity of the budget-making process?
- For those concerned about environmental policy from any perspective, would a greater use of fees, with the earmarking that might go alongside, yield a better environmental result?

This chapter does not propose answers. It instead seeks to press for answers as we move into the next century of experiences with environmentally related market-based instruments and continue to wrestle with theory.

NOTES

* The author thanks Scott Sakowski, Zephyr Jost and Andrew Homan for their comments and research.

1. Literature and practice have also focused heavily in recent years on the use of tradable permits, market-based instruments that take a quantity-based approach. This chapter, however, considers only market-based instruments that take a price-based approach. For a discussion of the evolution of the theory of environmental taxes, see Milne and Andersen 2012.
2. According to one analyst, governments have tended to design environmental taxes based on pollution-reduction targets (Vollebergh 2012, p. 15).

3. Using September 2013 currency values.

4. One example of *ex post* analysis is the COMETR project’s study of the effects of environmental tax reform in Europe (Andersen and Ekins 2009).

5. This analysis does not attempt to trace the usage of and basis for various terms (tax, fee, charge, levy) in different countries over recent decades, a topic left to continuing research.

6. This analysis does not address the situation where government holds outright ownership of an environmental asset that it can sell or lease. In that case, government’s revenue takes the form of a sales price or lease payment, not a fee. For example, in the US, the State of Alaska leases access to oil reserves in Prudhoe Bay. Its constitution requires that 25% of the revenue be held in the Alaska Permanent Fund for the benefit of current and future generations in recognition of the long-term public interest at stake when a finite, public natural resource is consumed (Westin and Bach 2009, pp. 32–3).

7. *See Just v. Marinette County*, 201 N.W. 2d 761 (Wis. 1969); *see generally* Scanlan 2000, pp. 157–63.

8. If the government determines that value according to the harm of the activity to the public asset, the calculation would assume a Pigouvian internalization flavor. The underlying rationale, however, is quite different from a Pigouvian tax, because the payment as a matter of policy is designed as a right to use rather than as a price incentive unattached to legal rights to use.


10. Note that the public trust doctrine may apply differently at different levels of government. For example, in the US, the doctrine is primarily a matter of state law. *See PPL Montana, LLC v. Montana*, 132 S. Ct. 1215, 1234–5 (2012); Frank 2012, pp. 680–1. Recent litigation dismissed a claim asserting that the federal government has an obligation to reduce greenhouse gases under a federal public trust doctrine: *Alec L. v. Jackson*, 863 F. Supp.2d 11 (D.D.C. 2012). From an environmental perspective, a federal right would be preferable for a natural resource that crosses state boundaries, such as air.

11. This example raises interesting issues about which governments can assert quasi-legal interests in the atmosphere when the atmosphere (and its pollutants) functions on a trans-boundary basis. It also leads to questions about the rationales for a fee regime versus a cap-and-trade system. A public trust eco-fee theory posits that the government has a quasi-ownership interest in the atmosphere itself. A cap-and-trade system posits that the government can create quasi-property instruments (tradable allowance) that allow polluters to emit into the atmosphere. In the first instance, the government has the quasi-ownership interest, which it is ‘selling’. In the second, the government creates a new form of quasi-property (the allowances) using its regulatory power and that property becomes the means to the end.

12. This rationale also links to the compulsory-versus-voluntary distinction between taxes and fees. When an actor voluntarily chooses to enter a line of business, the payment obligation seems more voluntary than compulsory and hence more like a fee.

13. If the fee represented merely payment for access to a limited market without linkage to governmental remediation obligations, government could be susceptible to the argument that it is using its permitting power to extort. The fee would have a stronger rationale if it were based on the public costs associated with the grant of permission, such as the environmental costs government might choose to assume.
14. The question of which governments have this power may vary from country to country. For example, under the US Constitution, states retain the residual ‘police powers’ to protect the common welfare. However, the federal government has the right to regulate interstate commerce. See, e.g., National Federation of Independent Business v. Sebelius, 132 S. Ct. 2566, 2577–80 (2012).

15. For examples of case law finding that the private sector has no inherent right to pollute, see Mobil Oil Corp. v. Superior Court, 59 Cal. App. 3d 293, 305 (1976); Communities for a Better Environment v. South Coast Air Quality Management District, 226 P.2d 985, 995 (Cal. 2010).

16. Alternatively, the benefit might be regulatory forbearance. If the government were to impose the fee in lieu of regulatory action, such as a direct regulation limiting the environmentally damaging activity, the benefit could take the form of that regulatory forbearance. This approach raises questions of the extent to which government would need to, and can, agree to limit its regulatory authority.

17. The US Supreme Court used a similar rationale when it evaluated public access exactions associated with the development of land. It reasoned that if government could have denied an application, it can (under certain circumstances) instead attach a mitigating condition to the grant of the application. See Nollan v. California Coastal Commission, 483 U.S. 825 (1987). A recent case explored the application of this concept to development impact fees: Koontz v. St. Johns River Water Management District, 133 S. Ct. 2586 (2013).

18. Sinclair Paint Co. v. State Board of Equalization, 937 P.2d 1350 (Cal. 1997) (deciding whether the fee was subject to California’s constitutional supermajority requirement for taxes).

19. One could argue, however, that the government still has substantial latitude. The public doctrine in the US allows private sector interferences with assets held in trust to some extent, with courts playing the key role in defining what is a permissible intrusion (Scanlan 2000, pp.163–5; Sax 1970, pp.488–9). If government charges for an interference that it could have allowed without charge, it arguably may not have a fiduciary duty to determine the exact value of the private-sector benefit it is providing. However, one commentator has suggested that transfers of property held in public trust for less than fair market value might be an indicator of potential abuse that would warrant closer judicial scrutiny (Sax 1970, p. 562). Legal fiduciary obligations would depend on the law of each country.

20. For example, the California constitution explicitly imposes a reasonableness requirement (article XIII A, section 3).

21. Under traditional trust theory, trustees should hold any assets in trust for the beneficiaries. In the case of the public trust doctrine, the beneficiaries are the general public. If one defines the general public broadly, one could argue that government could have the freedom to use the fees for any public purpose, but the intuitively stronger argument would seem to be that the government, as trustee of specific environmental resources, should use the revenue for purposes related to those resources. The answer will depend on the legal requirements of any particular jurisdiction.


24. United States v. Munoza-Flores, 495 U.S. 385, 399 (1990). For examples of taxes deemed not to be subject to the origination clause because they served a non-tax purpose, see Twin City Bank v. Nebeker, 167 U.S. 196, 203 (1897) (tax on banks to support currency system); Millard v. Roberts, 202 U.S. 429, 436 (1906) (a tax on property to pay for railroad construction projects); Millard v. Roberts, 202 U.S. 429, 436 (1906) (a monetary assessment for a violation of criminal law paid into a victims’ fund). See also Kysar 2014 (dedication of revenue serves as judicial proxy for origination clause purposes).
25. Sissel v. US Department of Health and Human Services, Civil Action No. 10–1263 (BAH) (D.D.C., June 28, 2013), 2013 WL 3244826. The court found that Supreme Court precedent could be interpreted to mean that the use of the revenue was not dispositive.

26. Such regulatory fees would deviate from the OECD’s definition of the tax/fee distinction cited above, because they would not require a benefit.

27. The US Supreme Court recently found that a ‘penalty’ for failure to purchase health insurance was legally a tax, in part because it was administered by the Internal Revenue Service. National Federation of Independent Business v. Sebelius, 132 S. Ct. 2566, 2596 (2012).


33. Ibid. at 290.

34. Evansville–Vanderburgh Airport Authority District v. Delta Airlines, Inc. 405 U.S. 707, 720 (1972). In that case, half the revenues from a US$ 1-per-passerenger airport fee went to the state aeronautical fund and half to the airport’s municipality or airport authority. For the half not dedicated to the fund, the Court only required that the payments not exceed the airport costs. Ibid.


36. The fee would increase by 5.6% annually until the twelfth year.

REFERENCES


