WORLD BANK GROUP

Designing Fiscal Instruments for Sustainable Forests

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Designing Forestry Taxes to Promote Conservation

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Introduction

Generally, tax economists recommend that a uniform tax regime be applied to all economic activities to prevent distorting the allocation of productive resources across sectors. However, when certain activities have distinctive features, such as externalities or economic rents, there may be sound reason to introduce sector-specific taxes, subsidies, or tax expenditures. In forestry, positive externalities from forest conservation—carbon sequestration, biodiversity, watershed protection, and aesthetic and recreational benefits—justify subsidies to expand forestation. Since carbon sequestration has global benefits, it is appropriate for developed countries to compensate developing countries for preserving their forests. However, global transfers for this purpose are limited, and most developing countries lack the fiscal resources to provide adequate subsidies. Beyond expensive subsidies, countries should therefore also use the tax system to encourage conservation while still contributing a fair share of revenues to local and national treasuries.

Some extractive industries, such as petroleum and mining, generate economic rents from the exploitation of fixed natural resource endowments. Application of a rent tax, such as a cash flow tax, to these activities can generate revenues efficiently—that is, without discouraging investment. Some forms of forestry may also generate rents, particularly logging of old-growth forests (a fixed endowment). In managed forests, however, planted trees are an investment and their cultivation may therefore generate no rent. The major input into forestry—land—is generally in fixed supply and thus generates rents; however, the supply of *forested* land is generally not fixed, except in areas where land is unsuitable or too sparsely populated for agriculture or urban development. Legal and regulatory provisions, such as conservation set-asides, can also create a fixed supply of forested land that may generate rents for holders of logging rights.

Political and administrative considerations may also dictate a need for special forestry taxes, particularly where multinational enterprises are involved. The difficulty of enforcing the corporate income tax on multinational enterprises is well known.[1] Their ability to shift profits across borders may necessitate levying simpler taxes to collect a reasonable amount of revenue.[2] The ability to generate public revenue from forestry is likely to increase with the size of the

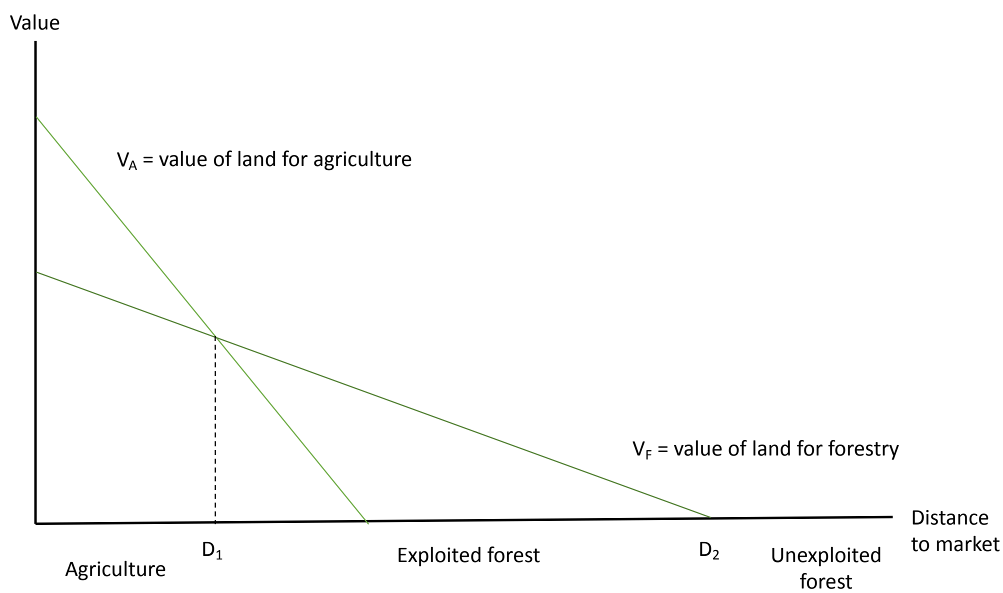
1 See, for example, the OECD Base Erosion and Profit Shifting project: http://www.oecd.org/tax/beps/.
2 Such as area fees on exploited acreage or stumpage taxes on the gross value of extracted logs.

(formal) forestry sector in the economy,[3] and political pressure is likely to be particularly high where foreign multinational enterprises are exploiting legacy forests.

Taxes and the Supply of Forested Land

As described above, the effect of taxes on forestry depends in part on the elasticity of the supply of forested land—that is, the ease with which forested land can be converted to other activities (and vice versa). The most common alternative activity for rural land is agriculture, although logging, extractive industries, and urbanization are also major drivers of land clearing. A simple Ricardian model of land use adapted from Hyde (2012) illustrates this matter (figure 3.1):[4] Land is differentiated by its distance to a market center, which is measured along the horizontal axis, while the vertical axis measures land value. Closer to the market center, the value of land for agriculture (V_A) exceeds that of land for forestry (V_F), but agricultural land value drops more quickly than that of forestry as a result of agriculture's more frequent market interactions for both inputs and outputs. Areas to the left of the intersection of the agricultural and forestry land value schedules (D_1, or the "extensive margin") are used for agriculture, while areas to the right of that intersection are forested. Areas to the right of the intersection of the V_F schedule with the horizontal axis (D_2) are too remote for exploitation and thus remain mature, natural forest.

FIGURE 3.1
LAND USE MODEL



Use of the exploitable forest between D_1 and D_2 depends on the cost of enforcing property rights over private land. This cost is assumed to rise with distance to market, as enforcing property rights in remote areas is more difficult (figure 3.2). The intersection between schedule C and either land value schedule determines the maximum amount of land that can be privately

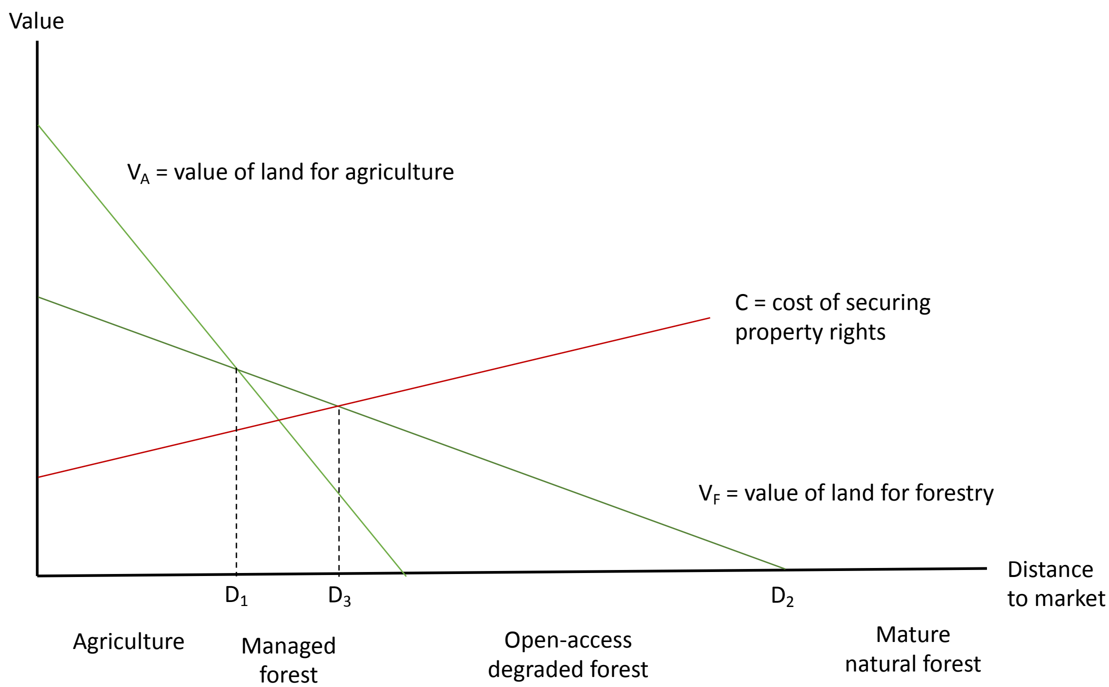
3 See chapter 2 for more details on the level of informal production and its impact on forestry revenue collection.
4 Ricardian models, which are based on the concept of "comparative advantage," allocate factors (such as land) among alternative activities (such as agriculture and forestry) depending on their relative productivity in those activities. In equilibrium, the marginal productivity of a factor is equalized across activities. The Hyde (2012) model derives from an early model by von Thünen (1826); see box 3.1 for more details.

exploited for either agriculture or forestry. To the right of these intersections, land and its products are nonexcludable; natural forests in this open-access range will be exploited by foragers and informal loggers, resulting in forest degradation.

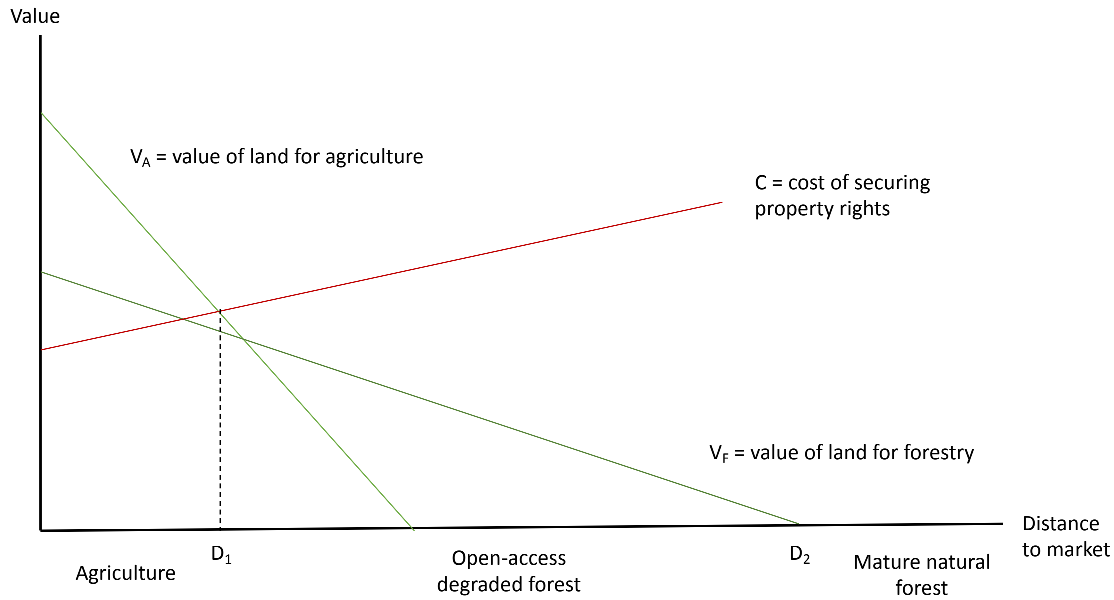
Consider two cases distinguished by strong (low-cost enforcement) versus weak (high-cost enforcement) property rights. In low-cost environments (for example, developed countries), schedule C intersects the V_F schedule to the right of its intersection with the V_A schedule (at D_3, or the “intensive margin”) (figure 3.2, panel a). The area between D_1 and D_3, where the value of forestry exceeds that of agriculture and the cost of enforcing property rights is less than the forestry value, will therefore sustain private, managed forests. Where property rights enforcement is costlier, including in many developing countries, the C schedule intersects the V_F schedule to the left of its intersection with the V_A schedule (figure 3.2, panel b). In this case, the cost of enforcing property rights exceeds the value of forestry throughout the range in which forestry value exceeds agriculture value, so managed private forestry is not a viable option. This case therefore only allows for agricultural land, open-access degraded forest, and mature natural forest. One action government can thus take to promote managed forestry is to improve property rights (for example, by cadastral development) and facilitate their enforcement (for example, by legal and judicial reforms).

FIGURE 3.2
LAND USE MODEL WITH LOW AND HIGH ENFORCEMENT COSTS

A. LOW ENFORCEMENT COSTS



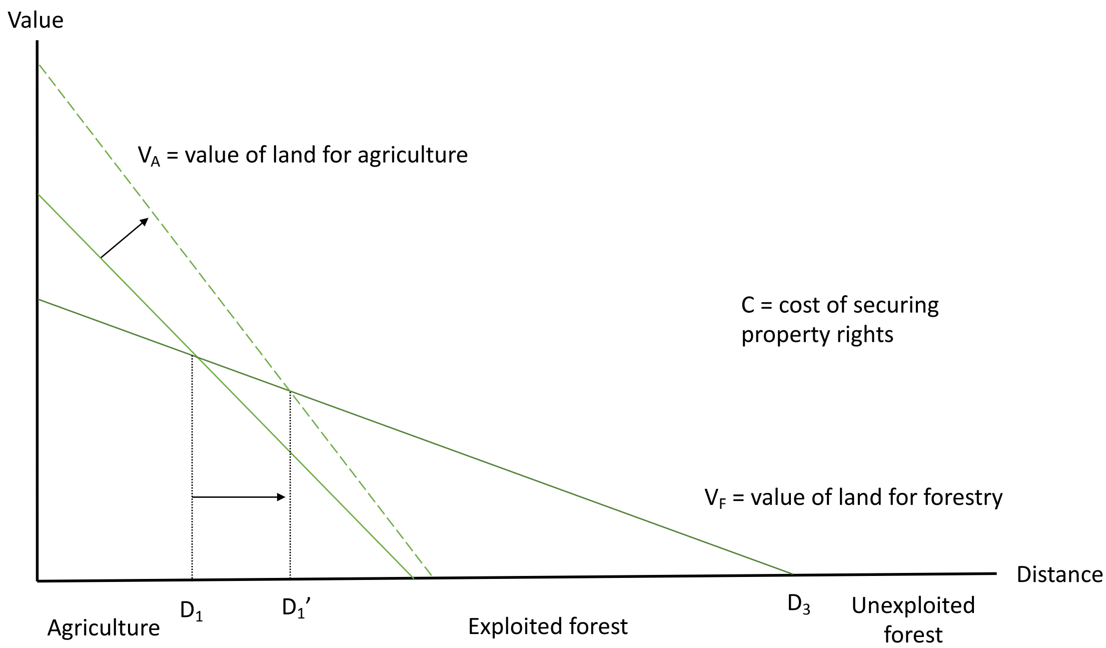
B. HIGH ENFORCEMENT COSTS



Fiscal policy plays a significant role in determining land use by affecting the location of the after-tax-and-subsidy V_A and V_F schedules, and thus the location of the extensive margin. In general, taxing (subsidizing) an activity shifts its net land value schedule downward (upward), thereby decreasing (increasing) the amount of land dedicated to that activity. An important example of this is fiscal subsidies to agriculture (figure 3.3); in many countries, agriculture receives significant tax breaks, including reduced (or zero) income and property tax rates and value added tax (VAT) exemptions on input and/or outputs, as well as outright subsidies.[5] Using a particular plot of land for agriculture may thus have a higher after-tax value than using it for forestry, even if forestry has a higher pretax value. Subsidizing agriculture encourages conversion of forested land, whether privately or communally exploited, into farmland, shifting the V_A schedule outward, moving the extensive margin from D_1 to D_1'. Determining an appropriate fiscal regime for forestry should therefore consider fiscal regimes for competing activities, and dismantling agricultural subsidies and tax breaks may be an important step toward encouraging reforestation (see also chapters 12 and 13).

5 These policies may be further complicated by market interventions, such as output price supports or ceilings.

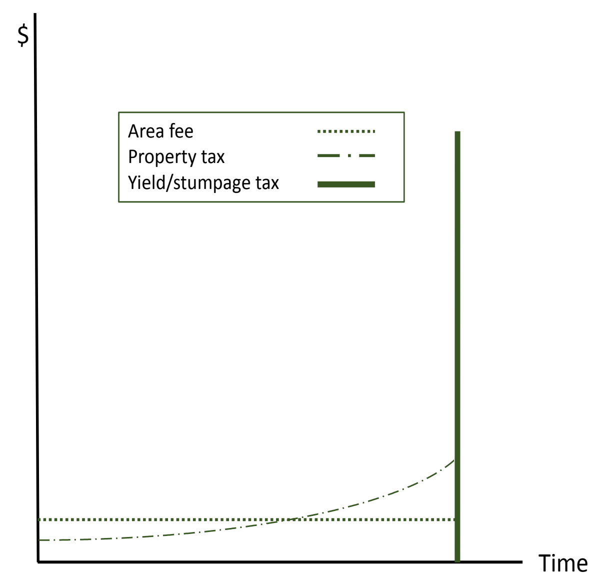
FIGURE 3.3
EFFECT OF AGRICULTURAL SUBSIDIES ON LAND USE



Forestry Taxes

In addition to standard income taxes, forestry companies are generally subject to two types of sector-specific taxes: (1) recurrent annual charges, such as property taxes and area fees, and (2) output-based taxes, such as stumpage fees and export taxes. These two types of taxes have distinct effects on the extensive and intensive margins as well as on the optimal "rotation period" of managed forests—that is, the maturity at which trees are harvested. They also have different risk profiles for forestry companies and government revenues. Whereas output taxes are deferred until harvest, area fees and property taxes generate revenue throughout the life of a forest concession (figure 3.4).

FIGURE 3.4
TIME PROFILE OF FORESTRY TAXES



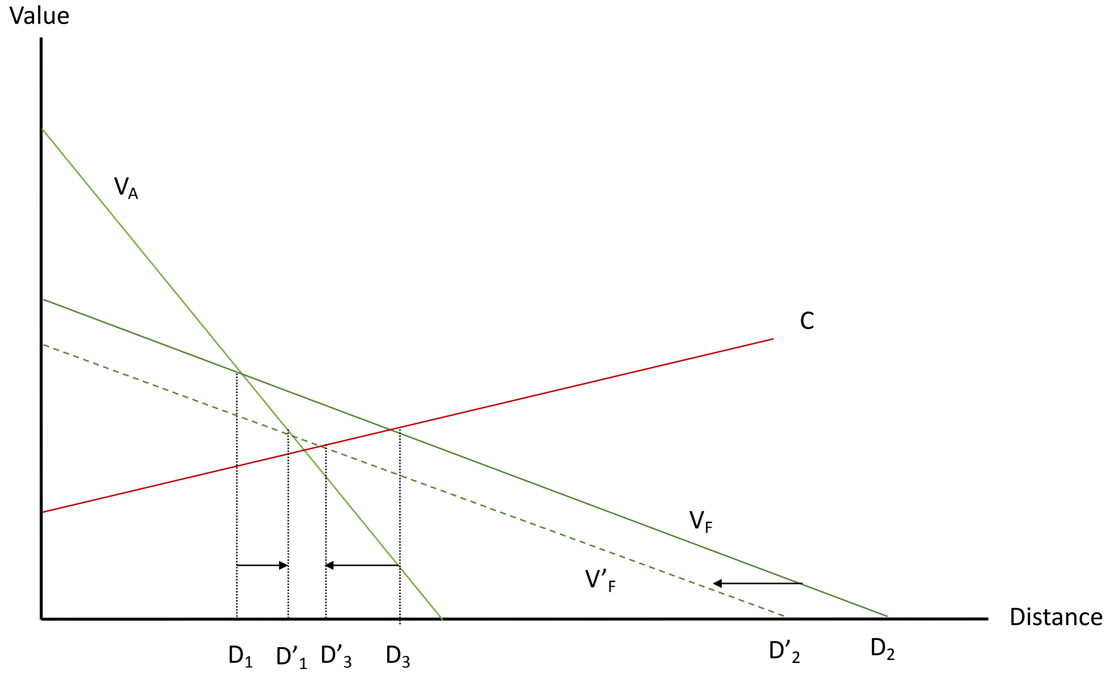
Recurrent annual charges

Recurrent annual charges can have various structures. Property taxes charge a percentage of the value of the property, either including or excluding the value of the trees. Area fees, by contrast, levy a fixed charge per acre or hectare. Clearly, levying a property tax on the value of land and/or trees requires that the property be regularly revalued. Area fees are therefore simpler to administer; nonetheless, they are generally set—possibly by competitive auction—based on some measure of the value of the forestry concession and need to be adjusted over time to preserve their real value.

Area taxes impose a fixed cost that forestry operators must pay regardless of how much timber they cut. All else being equal, imposing this cost shifts the V_F schedule downward, shrinking both the extensive and intensive margins for forestry (figure 3.5).[6] The total area of forested land shrinks from D_1–D_2 to D'_1–D_2, while the area of managed forest shrinks from D_1–D_3 to D'_1–D'_3, and the area of open-access, degraded forest expands from D_3–D_2 to D'_3–D_2. Several policies can counteract this effect: Conservation set-asides can fix the supply of forested land at D_1; however, this introduces a discontinuity in the value of land use at that margin. If there is little or no effective property tax on agricultural land (as is often the case in developing countries), then imposing the same property tax rate on agriculture shifts the V_A schedule downward by the same amount as the V_F schedule, restoring the extensive margin to D_1. Additionally, legal and institutional reforms could shift the cost schedule downward, shifting the intensive margin D_3 back to the right. Since open-access forest does not yield property taxes, this policy generates additional revenue.

6 Figure 3.4 assumes that no area fees are imposed on open-access forest and that the property tax rate on agriculture is independent of the area fee on forestry.

FIGURE 3.5
AREA-BASED TAXES AND LAND USE



The imposition of fixed costs tends to drive marginal players out of managed forestry, which may professionalize the industry, making sustainable harvesting more feasible (Karsenty 2010). However, the increase in informal activity may offset these effects. Area-based taxes, which must be paid irrespective of output, also tend to increase logging in low output-price states to cover fixed costs.

To determine the effect of area-based charges on the optimal rotation age, a different type of model is required. Following Faustmann (1995), the optimal rotation period is typically estimated by equating the marginal revenue increment from allowing trees to grow one more period with the marginal costs incurred by doing so.[7] The classic result in a no-tax scenario is to harvest timber when its growth rate, which generally declines with tree age, falls equal to the opportunity cost of holding land, as represented by the interest rate:

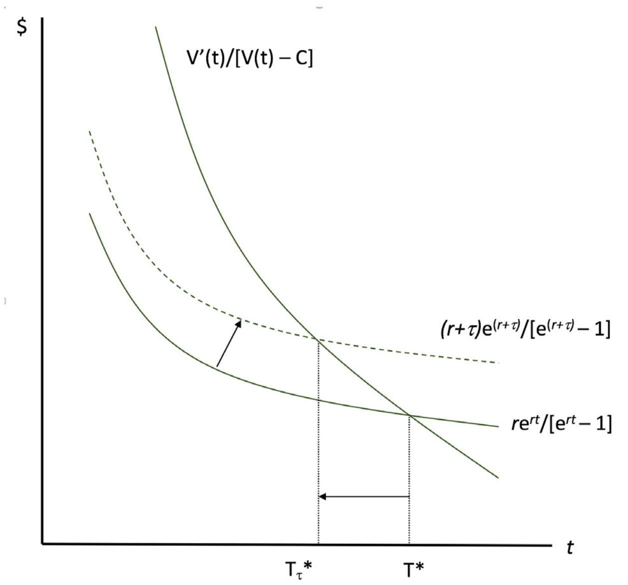
$$\frac{V'(t)}{V(t) - C} = \frac{re^{rt}}{e^{rt} - 1} \tag{3.1}$$

where $V(t)$ represents the value of timber as a function of time (maturity), C represents the cost of afforestation (in other words, planting), and r is the interest rate. Since $V'(t) > 0$ and $V''(t) < 0$ over the relevant range of tree growth,[8] the left-hand side of equation (3.1) goes to zero as t goes to infinity, while the right-hand side approaches 1. The marginal revenue curve thus intersects the marginal cost curve from above at T* (figure 3.6).

7 The major alternative to the Faustmann model of optimal forestry management is "maximum sustainable yield." Helmedag (2018) shows that the Faustmann model approaches maximum sustainable yield as the interest rate goes to zero.

8 The growth rate of saplings can be convex (both V' and $V'' > 0$), but as trees mature their growth rate tends to decline.

FIGURE 3.6
EFFECT OF PROPERTY TAX ON TIMBER VALUE ON OPTIMAL ROTATION PERIOD



Chang (1982) modifies the Faustmann model to incorporate the effects of various forestry tax regimes, including both area-based and output-based taxes.[9] Where the property tax is levied as a percentage of land value only and is fully capitalized into that value, it has no impact on the optimal rotation period, since the decline in land value (and hence the opportunity cost of holding land) just offsets the amount of the tax. However, a property tax levied on the value of the trees shortens the optimal rotation period by shifting the marginal cost curve upward (figure 3.6). The impacts from an alternative and more general land tax scheme on forest conservation is described in box 3.1.

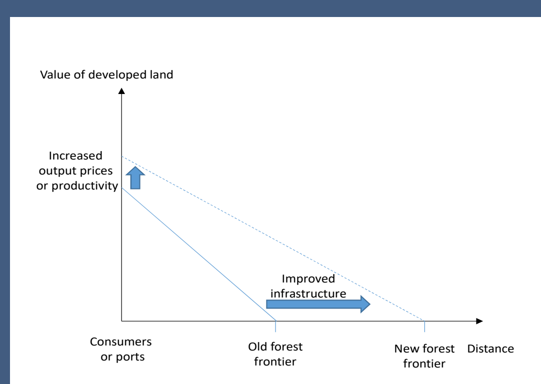
BOX 3.1 DEFORESTATION, FOREST PROTECTION, AND LAND RENTS: THE POTENTIAL OF LAND TAXES

MATTHIAS KALKUHL

There are two basic approaches to forest protection: regulation (like protected areas) and price-based instruments (like payments, taxes or subsidies to specific activities on land use). Land taxes, as a fiscal policy instrument, are related to both approaches: (i) They can absorb the land rent increase that is associated with forest protection and thus reduce public costs of protection; and (ii) differential taxes on developed or non-forest land can by themselves provide incentives to conserve land and reduce deforestation.

The analysis on policies to reduce deforestation has to start with understanding the key drivers of land use change, which builds on the framework developed in Kalkuhl and Edenhofer (2017) and Miranda et al. (2019). We denote all land that is not under agricultural use as undeveloped land, or forestland, ignoring here the possibility that forestland may also be used economically.[a] We consider the land rent as the rental value of a specific plot of land, independent of its use. The starting point for understanding deforestation is the hedonic pricing model, which dates back to von Thünen's (1826) model of circular spheres of land use. Land is only developed and cultivated if it is associated to a positive land rent. Land rents are primarily determined by (i) transportation costs to consumers (for instance, cities or international ports), (ii) the value of agricultural output, and (iii) the agricultural productivity.[b] As commercial agricultural products

FIGURE B3.1.1 NO POLICY



9 The Chang model also allows for partial pass-through of forestry taxes into product price. However, this analysis assumes forestry producers are price-takers on the global market.

FIGURE B3.1.2 PROTECTED AREA

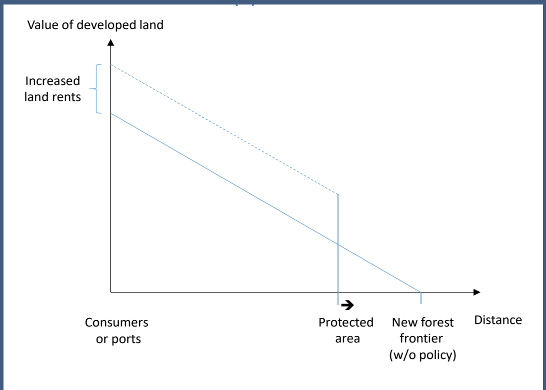
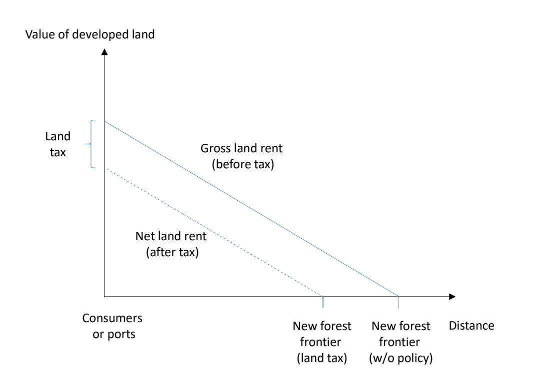


FIGURE B3.1.3 LAND TAX POLICY



need to be transported to consumers, transportation costs increase in distance to consumers and land rents decrease accordingly (figure B3.1.1). Without any policies, all land with positive rent is cultivated; primary forestland prevails where the land rent drops to below zero. The intersection with zero is the forest frontier. Any reduction in transportation costs, for example, through improved infrastructure, shifts outward and flattens this downward sloping curve. Besides transportation costs, prices of agricultural goods and productivity levels lead to an upward shift of the land rent curve. The forest frontier shifts further and forest area decreases.

Regulatory approaches like the establishment of protected areas can prevent the expansion of the forest frontier. In figure B3.1.2, the protected area leads to a lower amount of developed land compared to the no-policy case. Lower land supply, however, leads to lower agricultural production, which drives up output prices and thus land rents. Owners of developed land thus receive a windfall profit from forest protection—see, for example, Chamblee et al. (2011), Kiker and Hodges (2002), Lynch and Duke (2007), Nunes et al. (2012), Phillips (2000), and Wu and Lin (2010). A tax on developed land that equals this land rent increase can capture this windfall profit without distorting agricultural production and conservation decisions. The land tax is therefore a policy that can be highly beneficial in countries where the fiscal system is very expensive—for instance, because of large informal sectors or tax evasion.[c]

While a land tax can complement regulatory approaches to capture increased land rents, land taxes can provide by themselves incentives to reduce land conversion. This is depicted in figure B3.1.3. A unit tax on developed land reduces land rents uniformly and therefore shifts the forest frontier closer to the consumers—less agricultural land is used. Contrary to regulatory approaches, land taxes conserve land and generate public revenues. They can therefore create a double dividend if other distortionary taxes are reduced.

If specific land use types, like forests, create positive externalities as a result of carbon storage, biodiversity conservation, and other ecosystem services, a Pigouvian subsidy that equals marginal social benefits would be an efficient instrument to incentivize an optimal allocation of such land use types.[d]

However, because total land is fixed in its supply, neither a land use–specific tax nor a subsidy affects the total supply of land—just the allocation between different land use types. For example, a tax on developed land affects only the allocation between developed land versus non-developed land, not the total amount of land. A subsidy on non-developed land works the same way and could achieve the same allocation. Taxes and subsidies on land are therefore equivalent. This equivalence does not hold for most other environmental problems, where a subsidy on a clean substitute is less efficient than a tax on pollution as the subsidy increases total demand above the efficient level. While a pure tax on developed land can achieve the same allocation as a pure subsidy on non-developed land, any combination of taxes and subsidies that has the same price differential between developed and non-developed land will do so as well—with different fiscal implications. This creates an additional degree of freedom to shift the costs of conserving non-developed land between landowners and taxpayers without affecting the total land allocation. Taxes on agricultural land have therefore been suggested as an instrument to generally reduce economic incentives for deforestation (Angelsen 2007; Binswanger 1991; Kalkuhl and Edenhofer 2017).

Lastly, an important caveat of taxes is that they are rather unspecific with respect to preventing conversion of highly valuable ecosystems or biodiversity hotspots. While land taxes on agricultural or non-forest land can generally reduce pressure on such systems, protected areas or additional subsidies or payments for ecosystem services can better target specific locations. A combination of location-specific policies and land taxes can be a way to conserve high-value ecosystems, to reduce land consumption in general and to capture some of the windfall profit for land-owners resulting from increased land rents.

a. This perspective is most appropriate for biodiversity and carbon-rich primary forests. Our framework and model can easily be extended to also consider economic rents in forest areas.
b. Idiosyncratic plot-specific characteristics are ignored here as they average out in the aggregate.
c. Land taxes are relatively simple to enforce and collect and therefore are associated with lower administrative costs compared with other fiscal instruments applied in the forest sector, such as excise taxes, which may be easier to evade (Norregaard 2013). However, the effectiveness of land taxes depends on the ability of administrators to enforce the policy, which may require improvements in governance and the rule of law, including strengthening of the tenure system and rights.
d. Pigouvian taxes and subsidies correct for externalities, such as environmental damages and benefits. Without the tax, these externalities are not included in market prices or cost calculations of private firms. By incorporating these costs into the price of goods and services, Pigouvian taxes (subsidies) reduce over- or underconsumption caused in part by distorted market prices. Pigouvian taxes (subsidies) should be set equal to the marginal environmental damage (benefits) from producing an additional unit of a good or service with negative (positive) externalities at the optimal provision level, where its marginal social benefits equal its marginal social costs.

Recurrent taxes on timber value shorten the harvest rotation period and should therefore generally be avoided. Environmental services, particularly biodiversity, tend to increase with forest age, so internalizing the positive externalities from carbon sequestration calls for lengthening the rotation period (Kula and Gunalay 2012). Recurrent taxes on timber value provide the opposite incentive. Forestry companies are particularly sensitive to such taxes since they cascade on the value of previous years' growth (Chang 1982). Imposition of such taxes is often associated with "cut and run" behavior, discouraging replanting. Adjusting the property tax annually for growth of the timber stock also adds to administrative complexity and is thus particularly ill-suited to developing countries.

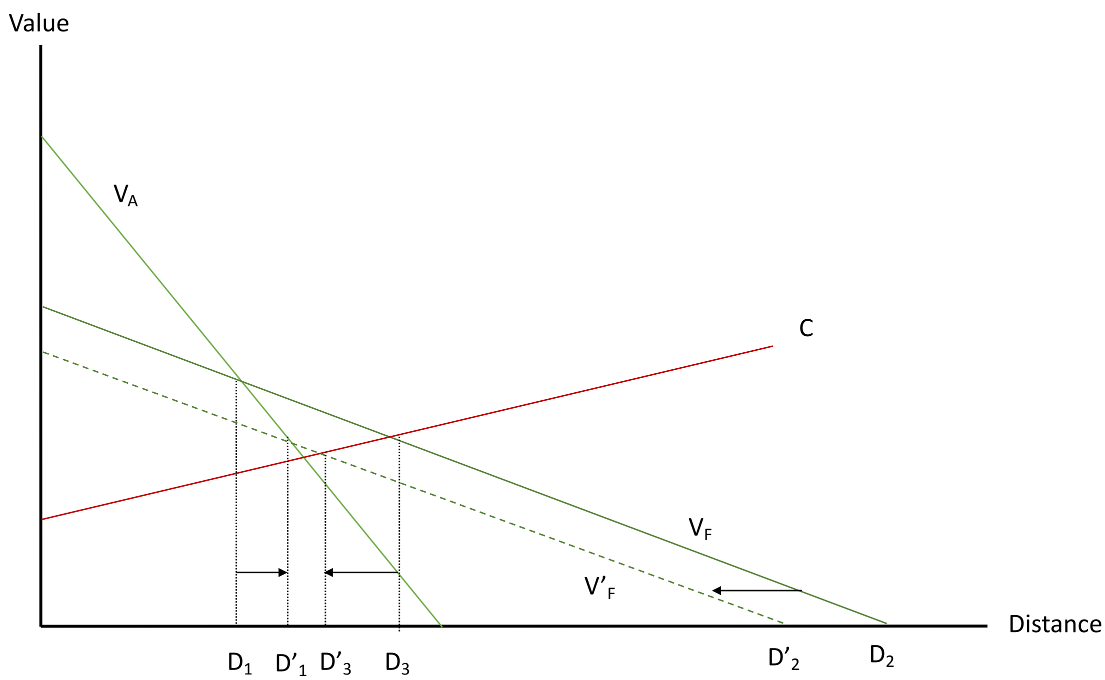
Logging licenses may be allocated by competitive auction, in which case the resulting license fees will ex-ante have the character of a tax on logging rents. Forestry companies will be willing to bid up to the amount of rents (economic profits in excess of companies' discount rates) for the concession. With a small number of bidders, however, the risk of collusion to underbid will be high. Ex-post, the license fee will have the character and effect of an area fee as described above.

Output taxes

Various types of output-based taxes are levied on forestry. Royalties or yield taxes take a percentage of the market value of harvested wood. Stumpage fees approximate a yield tax by levying a fixed charge on the volume of wood extracted, which often varies by species in accordance with the value of wood. Stumpage fees are thus less vulnerable to under-declaration of timber value. However, their rates must be regularly adjusted to maintain real value as well as their alignment with market values. The relative administrative burden of the two types of output taxes is therefore unclear. An export tax is a yield or stumpage tax levied only on exported timber.

Like property taxes, output taxes shift the V_F schedule downward, impacting both extensive and intensive margins and reducing total forestation (figure 3.7). In contrast to property taxes, however, output taxes expand the area of unexploited forest (D_2 to D'_2), provided that they can be levied on informal logging. This may be difficult, although imposing output taxes at chokepoints such as sawmills may facilitate this.

FIGURE 3.7
OUTPUT TAXES AND LAND USE



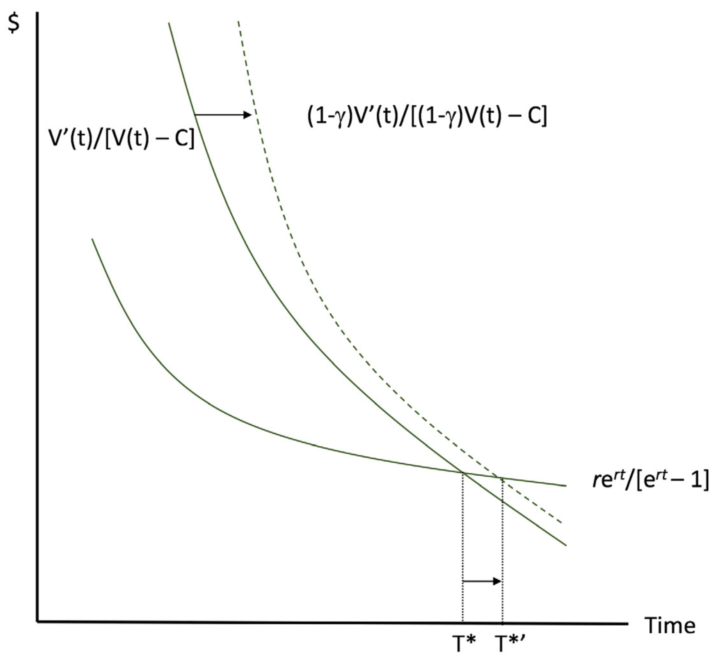
In further contrast to property taxes, output taxes extend the optimal rotation period by shifting the marginal forestry revenue curve outward (figure 3.8). Imposing an output tax at rate γ reduces net proceeds from timber sales to $(1-\gamma)V(t)$ without reducing costs (C) accordingly, such that

$$\frac{(1-\gamma)V'(t)}{(1-\gamma)V(t) - C} > \frac{V'(t)}{V(t) - C} \tag{3.2}$$

while output taxes have no effect on the opportunity cost of holding forested land. The optimal rotation period thus increases from T^* to $T^{*\prime}$, which as previously noted benefits the environment. This analysis suggests that a policy of charging lower output tax rates on sustainably harvested timber should only be undertaken if the benefits of SFM outweigh those of the longer rotation period incurred by charging higher rates.

From a conservationist viewpoint—as well as that of forestry operators—output-based taxes are thus preferable to property taxes or area fees. Governments, however, are likely to prefer the latter insofar as recurrent charges generate revenue earlier in the production cycle and, since they fluctuate much less with output and market prices, are less volatile.

FIGURE 3.8
OUTPUT TAXES AND OPTIMAL ROTATION PERIOD



Under an export tax, output taxes are limited to wood delivered to customs for export, leaving domestic consumption exempt. In very low capacity environments, this is often the only administratively feasible way to tax timber extractions. The goal of this policy is often to encourage domestic value added by imposing a higher export tax rate on unprocessed logs or even exempting processed wood exports altogether. Since wood is exported only if the world market price exceeds the domestic price that would prevail under autarky, export taxes have the effect of lowering the domestic price of wood products below the world price. This can stimulate the domestic wood processing industry; however, export taxes frequently cause distortions that lead to waste and even negative value added. Sawmills in low-income countries tend to have high wastage rates, so more wood is lost in processing than would be the case for exported logs. If the export tax rate on unprocessed wood is sufficiently high, however, it may be more profitable for forestry companies to process the wood domestically in order to avoid the export tax, even if the resulting wastage generates less total income (private profits plus government revenue) for the country in question.[10] Wherever feasible, output taxes should thus be levied on all timber, whether exported or domestically consumed.

Income tax

In addition to sector-specific taxes discussed above, forestry operators are usually subject to business income taxes. The distinctive features of managed forestry—notably the great length of the investment cycle from planting to harvest, which can span multiple decades—create special income tax design considerations. Unless sold as standing trees, timber proceeds are generally taxed on a realization (rather than an accrual) basis, meaning that income is not recognized until the trees are harvested. These proceeds, net of costs, may be taxed either as ordinary income or as capital gains. Where the (long-term) capital gains tax is lower than the ordinary income tax rate, capital gains treatment generally confers a tax benefit. The U.S. federal individual income tax, for example, accords capital gains treatment to timber income as an investment incentive to promote afforestation (Pierce 2003).

10 For example, see Krelove and Melhado (2010).

Subjecting timber income to a reduced capital gains tax generally implies that capital investment incurred in creating the timber asset is also deducted at that lower rate. The very long investment cycle may greatly erode the tax value of capitalized costs if they are not carried forward with interest. However, operators managing timber stands of staggered maturities should be able to realize the tax value of capital depreciation on an ongoing basis. Nonetheless, operators with ordinary income as well as capital gains will prefer to maximize the value of their current deductions taken at the (higher) ordinary income tax rate rather than capitalize and carry them forward against future timber proceeds. Careful policing of operating and capital expenditures will therefore be necessary.

Conclusion

The preceding analysis suggests several ways in which tax policy can be used to promote forest conservation under conditions that do not allow for adequate subsidies for forest management, such as payments for ecosystem services.

Governments need to eliminate direct and indirect subsidies that encourage the conversion of forestland. First, tax expenditures for agriculture, the dominant force driving deforestation in most countries, should be sharply reduced. Farmers should be subject to normal levels of property and income taxes, and VAT exemptions for farm inputs should be eliminated. Where other activities such as urban development spur deforestation, any tax expenditures for those activities should also be reduced. If tax expenditures for competing activities cannot be eliminated for political or administrative reasons, an alternative policy to level the playing field is to extend them to the forestry sector as well, although this has obvious fiscal costs.

Output-based taxes generally provide better environmental incentives than recurrent charges. Two major types of sector-specific tax apply to forestry: recurrent charges (property tax, area fees) and output-based taxes (yield or stumpage taxes, export tax). Of these, output-based taxes impose less risk on forestry operators since they do not apply until the time of harvest and vary directly with output price. Both types of tax reduce the amount of land allocated to forestry at both the extensive and intensive margins. However, by reducing the return to logging, output-based taxes can also expand the area of unexploited natural forest.[11] Output-based taxes also have the beneficial effect of extending optimal rotation period, enhancing positive environmental externalities. Assuming full tax capitalization, area fees and property taxes on land value do not affect rotation period. However, property taxes on timber value reduce the optimal rotation period and should therefore be avoided; timber taxes cascade on the value of old growth and have been known to encourage cut-and-run behavior. Setting area fees via competitive auction will restrict them to the amount of rents available in the forestry sector; however, where administrative capacity is limited, or the number of bidders is small, collusion to underbid is a risk.

Also, general business taxation can be designed to improve conservation incentives. Forestry companies are typically subject to income taxation, where sector-specific considerations also apply. Where the (long-term) capital gains tax rate is lower than the income tax rate on ordinary income, classifying timber as a capital asset may provide an incentive for forest management (as in the United States). This will also, however, reduce the tax value of capital depreciation, particularly if forestry companies have insufficient annual capital gains to realize

11 This may require that output taxes be applied to informal logging, which may be difficult. Chapters 2, 6, and 7 describe potential fiscal policy instruments that may be able to reach the informal sector.

those deductions immediately. Another means of alleviating the burden of income taxation on forestry concerns is to transform the income tax into a rent tax: by expensing capital investment and carrying any (capital) losses forward with interest while denying a deduction for interest payments. This policy could be tricky to apply to multinational enterprises, however, since it creates discontinuities between domestic and foreign affiliates whenever the latter are subject to income taxation.

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