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# Policy Analysis in the Presence of Distorting Taxes

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## **Abstract**

*This article first describes the new literature in environmental economics on the so-called "double-dividend" and then explores its implications for a broad range of economic issues. This literature reveals that in a second-best, general-equilibrium setting, environmental measures raise costs and prices and thereby reduce the real wage. This rise in the cost of living reduces slightly the quantity of labor supplied in an already highly distorted labor market, giving rise to losses in social welfare that can be large relative to the basic gains from a cleaner environment. These losses can be offset to some extent by using revenues (if any) from the environmental programs to reduce existing taxes on labor. This same line of analysis applies to many programs and institutions in the economy that raise the cost of living: tariffs and quotas on imports, agricultural price-support programs, monopoly pricing, programs of occupational licensure that limit entry, and many others. Thus, traditional, partial-equilibrium benefit-cost analysis appears, in many instances, to have unwittingly omitted from the calculations a potentially quite significant class of social costs. © 2000 by the Association for Public Policy and Management.*

## **INTRODUCTION**

There has appeared in the last few years a challenging new literature on the design of policy instruments in a setting with preexisting distortions in the economy (distortions that result, for example, from income, payroll, or sales taxes). In the jargon of economics, such a setting gives rise to the search for "second-best policies" since such preexisting distortions sometimes undermine the case for the standard (or "first-best") measures that economists typically recommend when they ignore these distortions. Such second-best considerations are obviously not a new issue in economics, but this recent round of research has produced some striking and, in certain respects, troubling findings. In particular, this research has found that the costs associated with corrective taxes (and other regulatory measures) can be much higher in a second-best setting, so much so that in some cases the economic improvements from the traditional prescriptions can be offset by the exacerbation of the preexisting distortions. To take one example, it has been shown that for plausible values of the key parameters, a "perfectly" designed system of tradeable emissions rights—one that precisely internalizes the environmental externality by placing the costs of the environmental damages on the polluting source—may actually result in an overall loss in social welfare (Parry, Williams, and Goulder, 1999)! How can this be?

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The primary source of these findings has been a body of work in environmental economics that has been reexamining the traditional case for environmental taxes and various quantity instruments (like systems of tradeable emission permits) for mitigating the distortions caused by environmental externalities.<sup>1</sup> The analysis focuses on preexisting tax distortions in the economic system—particularly those in the labor market—and finds that emissions taxes or marketable discharge permits can increase the social costs (or “deadweight losses” as economists call them) stemming from these distortions.<sup>2</sup> Moreover, this increase in costs can be large relative to the welfare gains from the environmental improvement. As noted in the earlier example, gains from the reduction in pollution can be more than offset by welfare losses from the accentuation of preexisting distortions in the economy. More generally, the findings show that the levels of environmental taxes (or other measures) should be significantly lower when these “interactions” are integrated into the analysis than when they are ignored.

The purpose of this article is to explain to economists and policy analysts just what is going on here—and to explore its broader implications. Upon further reflection, it appears that the literature in environmental economics is really just the tip of the iceberg. The basic problem is one that infects any policy measure or institutional structure with an impact on the price of consumer goods, including tariffs and quotas in international trade, agricultural price-support and quota programs, airline safety regulations, occupational licensure measures, minimum-wage laws, monopoly pricing, and a host of other major features of the economic landscape. This body of findings presents some fundamental challenges to the design of a broad range of policy measures. In particular, it suggests that the scope of benefit–cost analysis must be expanded in some very basic ways. The full range of these implications is just beginning to become clear: It is something that policy analysts must think hard about.

To introduce the issue, it is useful to review briefly the way in which it has surfaced in the literature in environmental economics.

## THE DOUBLE-DIVIDEND DEBATE

The traditional treatment of environmentally damaging activities (a case of what economists call “detrimental externalities”) leads directly to the prescription for a corrective tax (or, alternatively, for a system of tradeable permits) to correct the allocative distortion. The familiar unit tax equal to marginal social damages serves to internalize the externality and redeploy economic activity in an efficient manner, or so the standard argument goes. In this literature, the issue of the revenues that such a tax generates was largely ignored. It was typically assumed that the revenues would be returned lump-sum to the economic actors (e.g., Baumol and Oates, 1998, ch. 4).

But it then occurred to several observers that we should be able to do better than this (e.g., Oates, 1993; Pearce, 1991; Repetto et al., 1992). Since the existing tax system is itself the source of some serious distortions in the economy, why not use the revenues from the environmental taxes (or auctioned permits) to reduce the rates on other distorting taxes (particularly taxes on labor and capital)? This seemed to offer a way

<sup>1</sup> See, for example, Bovenberg and de Mooij (1994); Bovenberg and van der Ploeg (1994); Bovenberg and Goulder (1996, 1997); Parry (1995, 1997); Goulder, Parry, and Burtraw (1997); Goulder et al. (1999); Parry, Williams, and Goulder (1999); and Fullerton and Metcalf (1997). For surveys of this literature, see Bovenberg and Goulder (in press) and Oates (1995).

<sup>2</sup> Economists frequently use the term “deadweight loss” to refer to the magnitude of the welfare loss from a distortion in the economic system. An income tax, for example, distorts the choice between work and leisure. This results in a deadweight loss that can, in principle, be measured.

to kill two birds with one stone: We could, at the same time, both protect the environment and reduce some of the deadweight losses from the tax system. Some referred to this as a potential “double dividend” from green taxes.

But more careful analysis has revealed that this treatment is too simplistic. Once the preexisting distortions associated with the tax system are acknowledged, the basic linkages between the proposed environmental measures and existing taxes must be fully taken into account. The insight provided in the new literature is that this interaction of environmental policies with the existing system of taxes is typically the source of enlarged deadweight losses, largely from the market for labor. The labor market is a significantly distorted market in the sense that there typically exists a large wedge between the gross wage paid by firms and the net wage received by workers (with the difference going to income and social insurance taxes). This implies that the value of the extra output produced by the last unit of labor is substantially higher than its social cost (i.e., the value of time foregone in nonmarket activities, such as child rearing or leisure pursuits).

A new environmental tax increases the cost of production. To the extent that this is passed on in higher prices of goods, it will reduce the real wage received by households. In consequence, the return to work effort as compared with nonmarket activities falls, and *ceteris paribus*, a slight reduction in labor supply typically occurs. To the extent that higher production costs reduce the net income received by producers, they will tend to reduce output and their demand for labor. Thus, the environmental tax, by inducing a fall in the overall level of employment, generates a welfare loss in the labor market. Preexisting taxes, in short, have created a distorted labor market with too little work effort. And the additional costs of the environmental measures induce yet further reductions in labor supply.

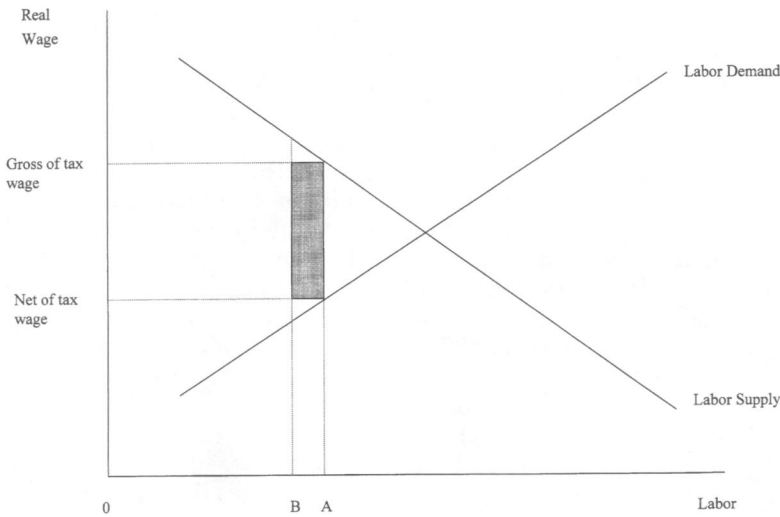
But surely a green tax on a polluting activity, operating only indirectly through a minor—indeed a tiny—effect on the real wage, cannot affect labor-market decisions sufficiently to offset much of the basic and direct welfare gains from internalizing the environmental externality. After all, macroeconomic simulations of the effects of environmental regulation on prices typically find only a very small inflationary impact.

But this turns out to be wrong! Although the effect on labor supply may be quite small, it does not take much of a response in such an enormously important market—and one that is significantly distorted at the margin—to generate significant welfare effects. Existing estimates suggest that the combined impact of income, payroll, and sales taxes effectively reduces the net wage at the margin to some 40 percent or so below the gross wage (Browning, 1987). Moreover, labor income accounts for some three-quarters of national income. So even a tiny movement from A to B along the horizontal axis in Figure 1 in the labor market generates a welfare-loss rectangle whose area can be sizable. The results both from simple theoretical models and larger, more complex models of the economy (solved by numerical simulation) make it clear that this effect operating through labor market decisions cannot be dismissed as “second order” in magnitude.<sup>3</sup>

## A CLOSER LOOK

It is helpful next to provide in this section a more systematic treatment of the analytical approach used in this literature and a more detailed characterization of the findings.

<sup>3</sup> Much of this analysis has focused on the distortions operating through the labor market. But it is important to realize that other factor markets (like that for capital) are often seriously distorted. Interactions of environmental measures with other factor markets are important too. In this sense, the labor market in this literature may be viewed as a kind of proxy for all distorted factor markets.



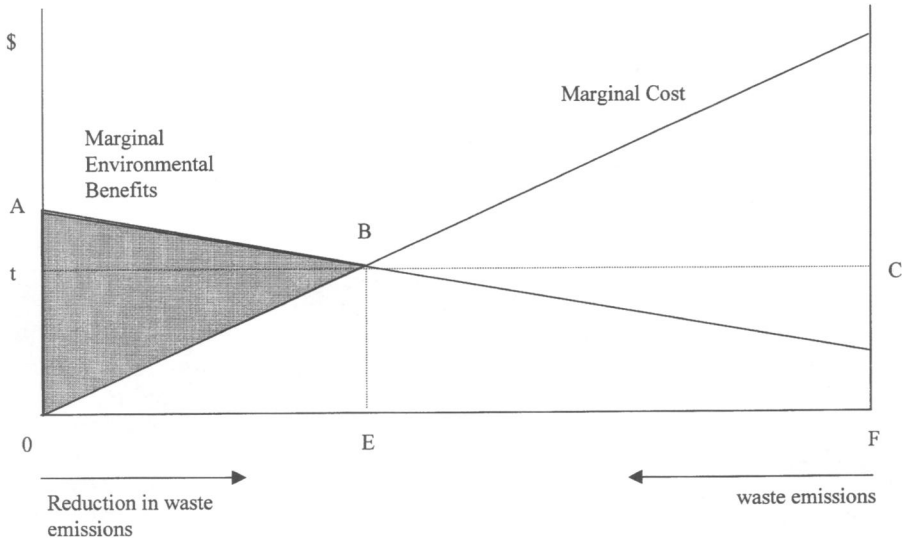
**Figure 1.** Distortions in the labor market.

The approach used in the analytical models is fairly straightforward (see, for example, Bovenberg and de Mooij, 1994, or Parry, 1995). Households have utility functions that contain, as arguments, consumption goods, leisure, and environmental quality, and they supply labor. Firms produce goods and, in the process, generate pollution that reduces environmental quality. In the simple models, the government employs two taxes: a tax on labor and a tax on pollution. The models are then used to study cases of “revenue-neutral” environmental taxes, where the revenues raised from unit taxes on pollution are used to reduce the tax on labor.

It is instructive to characterize the findings from this kind of analysis in terms of three distinct effects on economic welfare: the “primary welfare gain,” a “revenue-recycling effect,” and a “tax-interaction effect.” The first is simply the familiar welfare gain whose source is the benefits net of the (partial-equilibrium) costs from the environmental improvement. In terms of Figure 2, this gain is the well-known triangle (OAB) that results from internalizing the external effect (or social cost) from waste emissions, in this case with a unit tax on emissions of  $O_t$ . In a first-best analysis, with environmental tax revenues returned lump-sum, this is all there is to the matter.

In the presence of preexisting tax distortions, however, there is more to worry about. Now the revenues raised by the environmental tax (EBCF in Figure 2) can be used to reduce the rates on existing distorting taxes. In the simple analytical models, this means that they replace revenues from the tax on labor. Hence, there is a second source of welfare gain: The revenue-recycling effect. This gain comes from the small reduction in the wedge between the gross and net wage with a resulting increase in the level of employment.

But, as mentioned earlier, a third effect involves the way in which the environmental tax interacts with the existing tax on labor. In the analytical models (which typically assume the demand for labor to be perfectly elastic) the environmental tax discourages work effort by reducing the real household wage. This is the tax-interaction effect—and it reduces welfare.



**Figure 2.** Primary welfare gain.

The effect of the environmental tax on economic welfare thus depends on the net impact of these three effects. The findings from the theoretical models (and many of the numerical simulations as well) indicate that, in general, the cost of the tax-interaction effect dominates the benefits from the revenue-recycling effect. That is, the welfare loss from the reduction in work effort from a reduced real wage is larger than the welfare gain from a reduced tax rate on labor. The implication is that the overall welfare (or efficiency) gain from taxing waste emissions is something less than the primary welfare gain associated with a first-best analysis.<sup>4</sup> Of course, environmental taxes can produce important benefits in terms of improved environmental quality and incentives for the development of cleaner production methods. However, these benefits generally do not include a reduction in the overall economic costs of the tax system—in other words, the double-dividend hypothesis is typically invalid.

This result should not be so surprising from the perspective of the earlier literature in public finance on optimal (or Ramsey) taxation (see Sandmo (1976) for a survey). This literature has established the principle that, on efficiency grounds, broad-based

<sup>4</sup> In the case where the environmental tax is “small,” the tax-interaction and revenue-recycling effects exactly offset one another. Other qualifications are important to this result. For example, it can be reversed if output from the polluting industry is a sufficiently weaker substitute for leisure than other goods (as may be the case, for example, with pollutants in the agricultural sector). In addition, the models in this literature typically assume that environmental effects are separable in the utility function from leisure. In consequence, they effectively abstract from any feedback effects from improved environmental quality on labor/leisure decisions (e.g., health effects). A further noteworthy point is that the existing models may significantly understate the welfare gains from revenue recycling and hence the potential for a double dividend. Lowering tax rates on income, in addition to reducing the labor market distortion, decreases the effective subsidy for tax-favored expenditures, such as health insurance and mortgage interest. Some preliminary estimates by Martin Feldstein (1999) suggest that the welfare gains from reducing tax-favored expenditures may be as important as the welfare gains from increasing labor supply.

taxes generally are to be preferred to more narrow ones. Excess burden results from individuals and firms shifting away from taxed activities. There is typically much greater scope for such substitution when the tax base is narrow (for example, a polluting input in a specific industry) than when it encompasses a broad range of activity (such as a tax on all labor income or on general consumption). Replacing revenues from labor taxes with revenues from more narrowly focused taxes opens up a wider range of substitution possibilities for consumers and firms, and this typically raises the excess burden of the tax system.

The recent literature suggests that in a second-best setting, the optimal tax on waste emissions is somewhat less than the marginal social damages to the environment. Just how much less depends on the level of environmental damages, the way in which the revenues are recycled, and various parameters (notably the elasticity of labor supply). Table 1 shows some findings from a study by Lans Bovenberg and Lawrence Goulder (two of the major contributors to this literature). They make use, first, of a relatively simple model that can be solved by hand and, second, of a more complex model (solved by numerical simulation) that incorporates a more detailed treatment of the tax system. For both models, they have estimated the Pigouvian tax and optimal second-best taxes on carbon emissions for a variety of cases.<sup>5</sup> Column 2 gives the Pigouvian tax, which (reassuringly) is simply equal to the marginal environmental (social) damages in column 1. Column 3 shows that the optimal tax (as calculated from the analytical model) is somewhat less than the Pigouvian levy (on the order of 10 to 20 percent less); this assumes that the revenues are recycled in the form of a reduction in the personal income tax (PIT). The results from the numerical model suggest a somewhat larger divergence of the optimal, from the Pigouvian, tax; here the extent of the difference depends on whether the recycling takes an “optimized” or more realistic form of replacement of personal income taxes.<sup>6</sup> In the latter case, column 5 indicates that the optimal tax may fall far below the Pigouvian rate—in one instance by over 50 percent. But most striking is column 4, where the revenues are recycled in the form of the lump-sum rebate that appears in the academic literature. For this case, the optimal tax is zero for marginal environmental damages of \$50 per ton or less. A positive tax for this range of cases would actually reduce welfare; this occurs because there is effectively no revenue-recycling effect (i.e., reduction in the tax on labor) to offset any of the tax-interaction effect.

This last result is of much more than purely academic interest for it immediately calls to mind the use of systems of tradeable emission permits where, to set the system in motion, the permits are simply given away. Under the Clean Air Act Amendment of 1990, for example, the United States is cutting aggregate national sulfur emissions by 50 percent under a program where the initial emissions allowances were simply distributed free of charge to sources. A similar emissions permit program is being

<sup>5</sup> The Pigouvian tax (named after the British economist A.C. Pigou) is a tax per unit of an activity equal to the marginal social damages. In the environmental context, this will typically take the form of a tax per unit of waste emissions equal to the monetary value of the damages to the environment resulting from the marginal unit of emissions. It is straightforward to show that, in the absence of other distortions, such a tax can completely remove any distortions in resource allocation stemming from environmentally damaging activities (such as the production of certain goods and services). See, for example, Baumol and Oates (1998). For this reason, it is sometimes referred to as a “first-best” tax (i.e., a tax that eliminates the sole distortion in the economic system). Ignoring preexisting distortions, environmental economists have typically made the case, in principle, for the Pigouvian tax as a measure to induce the socially efficient level of polluting activities.

<sup>6</sup> The “realistic” case uses a benchmark approximating the actual U.S. tax system that includes a variety of distorting taxes on intermediate and final goods; in contrast, the “optimized” case assumes a counterfactual benchmark where these taxes are eliminated and replaced by revenues from the personal income tax.

**Table 1.** Differences between Pigouvian and second-best taxes (all rates in dollars per ton).

| Assumed marginal environmental damages | "Optimal" Pigouvian tax | Optimal tax implied by analytical model (PIT replacement) | Optimal tax from numerical model          |                                      |                                      |
|--|-------------------------|---|---|--------------------------------------|--------------------------------------|
|  |                         |   | Realistic benchmark, lump-sum replacement | Realistic benchmark, PIT replacement | Optimized benchmark, PIT replacement |
| 25                                     | 25                      | 22  | 0   | 7                                    | 17                                   |
| 50                                     | 50                      | 45  | 0   | 27                                   | 41                                   |
| 75                                     | 75                      | 67  | 13  | 48                                   | 64                                   |
| 100                                    | 100                     | 89  | 31  | 68                                   | 85                                   |

Source: Bovenberg and Goulder (1996).

proposed as a means to meeting the U.S. pledge to limit future carbon emissions. The problem with these programs is that there is no revenue-recycling effect.<sup>7</sup> As recently shown by Parry, Williams, and Goulder (1999) and Parry (1997)+, even for "ideal" systems that set the quantity of permits by a Pigouvian rule, it is possible that for reasonable values of the key parameters, the adverse tax-interaction effect will be larger than the primary welfare gain from reducing pollution. Thus, the loss in welfare from reduced work effort can more than offset the gains from a cleaner environment. Such a system of tradeable allowances—a system strongly supported by environmental economists as a major step forward in the use of market incentives for environmental protection—could possibly reduce social welfare.

One lesson that emerges from the new literature is the potential importance of revenue recycling. From the second-best perspective, a system of tradeable allowances set in motion by an auction of the permits to sources should be much preferred to one in which the permits are distributed to the sources without charge. The former generates revenues that can be used to reduce other distorting taxes, while the latter does not. This admittedly raises some tricky matters of political economy. One of the attractions of marketable permits in the policy arena has been the receptivity to them of polluting firms, who would much prefer to receive a free allotment of valuable tradeable permits than to be subject to a tax on their emissions or, alternatively, to be forced to compete in an auction for the permits. But, in a second-best setting, such provisions for the free distribution of permits may compromise the welfare-improving potential of the system. Moreover, even if the program generates revenues through an auction of permits or some schedule of charges, there is no guarantee that the newly generated revenues will be employed to reduce rates on other distorting taxes.<sup>8</sup>

<sup>7</sup>This is not quite accurate. Emissions permits create rents for firms. These are reflected in higher profits (subject to corporate income taxation) and in additional taxes when distributed to households in the form of dividends or capital gains. As a result, about a third of these rents may accrue to the government in the form of tax revenues. Grandfathered emissions permits can produce a complete revenue-recycling effect equivalent to that under an emissions tax only in the limiting case where rents are 100 percent taxed.

<sup>8</sup>In fact, environmental programs that generate revenues often contain provisions that direct the revenues into some kind of trust fund that must be used for environmental enhancement. Of course such spending may produce a significant efficiency gain—but only if the social benefits per dollar of additional spending are well in excess of a dollar.

A further important point from the recent literature is that the relative importance of the tax-interaction effect is sensitive to the level of environmental regulation. When marginal environmental benefits in Figure 2 are more modest relative to marginal control costs (as is thought to be the case for carbon emissions), then the Pigouvian level of emissions reductions will tend to be relatively small, and it becomes more likely that the welfare loss rectangle in Figure 1 outweighs the Pigouvian welfare gain triangle in Figure 2 (Parry, Williams, and Goulder, 1999). In contrast, where marginal environmental benefits are relatively large (as estimates suggest for the case of sulfur emissions), the tax-interaction effect is unlikely to reverse the sign of the overall welfare impact from positive to negative (see Goulder, Parry, and Burtraw, 1997).

### SOME BROADER IMPLICATIONS

Although most of the new literature focuses on programs for environmental management, upon reflection it becomes clear that this is a very general issue. Any program or institution that influences the costs of production, or in any other way affects the labor market, is going to generate some social gains or losses from the operation of the tax-interaction effect. In fact, an independent discovery of the importance of this phenomenon arose in a very different kind of study. Edgar Browning (1997), reexamining the welfare losses associated with monopoly pricing, found (somewhat to his astonishment) that the welfare costs of monopoly distortions in a second-best framework were many times larger than those implied by the familiar Harberger triangles.

Some further thought suggests that programs like tariffs and quotas on imports of manufactured goods, or agricultural price-supports and quotas, which drive up prices and effectively reduce the real wage, are likely to have substantial welfare costs stemming from labor-market distortions in addition to the more traditional forms of welfare losses that economists have measured. Indeed, as this second-best analytical framework is applied to a wide range of programs, the welfare losses associated with many of these programs may turn out significantly larger than previously thought. To take one such case, Williams (1999) and Parry (in press) have recently shown that the presence of preexisting taxes can raise the economic costs of tariffs and import quotas by a potentially substantial amount.<sup>9</sup>

It is easy to extend the list of potential applications. It would appear, for example, that the costs of airline safety regulations, programs of occupational licensure that limit entry and increase prices, and minimum-wage laws can be much magnified in their impact when preexisting taxes are taken into account.

It is not the case, however, that this second-best framework implies that public programs are inevitably more costly than a partial-equilibrium treatment would indicate. There may well be some important cases where there are significant complementarities to work effort. One that comes to mind is traffic congestion. A (revenue-neutral) toll on a congested roadway for commuters that reduces travel time may, under certain circumstances, effectively raise the real wage and induce an increase in employment.<sup>10</sup>

<sup>9</sup>In fact, interactions with the tax system can eliminate the well-known textbook case for an optimal tariff when a country has market power in trade, unless the tariff revenues are used to finance reductions in other distorting taxes.

<sup>10</sup>The analysis also has some important implications for subsidy programs, such as those for industrial R&D, public transport, and child care. Here the tax-interaction effect results in a welfare gain where such subsidies reduce the price of goods and services. This implies that the tax-interaction effect may offset much of the cost of financing a subsidy by distortionary taxes.

## CONCLUDING REMARKS

This new literature thus raises a large red flag to those engaged in benefit–cost analysis: Beware of partial–equilibrium studies. In an economy with distorted factor markets, it is important to take into account the indirect welfare effects of public programs on the labor market and perhaps other factor markets as well.<sup>11</sup> In certain cases, these indirect effects (although seemingly small) can outweigh the primary welfare effects of the program.

This is a troubling and sobering finding because it complicates the task of policy analysis and can undermine the case for certain programs that have long been dear to economists working in a first-best setting. At the same time, the results from the recent literature are preliminary in a number of respects. We have much to learn about the properties and applicability of this analysis to the evaluation of public policy.

One issue, in particular, stands out: the structure and workings of the labor market. It is the indirect effect of these programs on levels of employment that is the source of most of the “secondary,” but large, welfare effects in a general–equilibrium setting. The labor market is a very complex institution with many facets. The analyses described here treat it as a single, integrated, and competitive market. But, in truth, it is difficult to estimate the overall employment effects caused by policies that affect the real wage because these effects depend on a diverse set of decisions involving labor–market participation and hours worked for a variety of different groups in varying settings. In the labor literature a substantial range of estimates exist of the relevant labor supply elasticities so that any projections of the effects of changes in the real wage on employment are subject to a fair amount of uncertainty. The point here is simply that given the importance of the labor-market responses to the bottom line in benefit–cost studies of public programs, it is crucial to have a sound understanding and reliable estimates of labor-market behavior.

This is likely to be even more complicated and important outside the United States. It may be reasonable to characterize the U.S. labor market as a competitive market, but this seems less true in, say, Europe, where there are many more regulations (including more generous unemployment benefits, provisions for retirement, higher minimum wages, and higher taxes on labor) and much stronger labor unions that impinge on (and distort) the workings of the market. The high levels of unemployment that are plaguing many of the European nations appear, at least in part, to stem from these provisions. Perhaps the revenue-recycling effects that result in lower taxes on labor and the tax-interaction effects from a reduced real wage operate a bit differently in the context of some of these institutional features of European labor markets.

Finally these new findings are certainly not grounds for abandoning the economist’s case for pricing incentives for environmental protection. The argument here has been limited to an essentially static framework. And, as economists have long argued, one of the most important properties (in fact, perhaps the most important) of incentive-based instruments for environmental management is the inducement that such

<sup>11</sup> Some of the numerical models are dynamic with capital accumulation and allow for tax distortions in the capital market (e.g., Bovenberg and Goulder (1997), and Jorgenson and Wilcoxon (1993)). Tax interactions are more complex in this setting. To the extent that environmental regulations discourage investment by raising the cost of producing output in future periods, they tend to compound the welfare costs of taxes on capital. Bovenberg and Goulder (1997) show that incorporating capital can either strengthen or weaken the results from static one-factor models, depending on whether the revenue-neutral environmental tax reform expands or reduces inefficiencies associated with the uneven taxation of labor and capital. However, given that the capital market is only around one-third the size of the labor market, we would expect the results from the static models to be reasonably robust to incorporating capital.

instruments provide for the development and adoption of new techniques for pollution control. The welfare gains from such technical advances may well dominate the static gains from the more efficient deployment of resources within a given technological context. Moreover, even in a purely static analysis, it is still the case that pricing incentives typically yield a net benefit. In short, the absence of a double dividend does not eliminate the case for environmental taxes.

The central, and more general, point is that a potentially major element of social costs has been systematically overlooked in the analysis of a wide class of public programs and economic institutions. It is tempting simply to dismiss such findings on the grounds that, "We know that anything can happen in a second-best setting." But this really misses the point. The contribution of this new literature is to show specifically what can happen under certain, well-defined, and realistic circumstances; it reduces the ambiguity. And the results seem quite robust: There is now a large body of work, encompassing both analytical and numerical studies, that has firmly established the potential importance of these indirect effects operating through factor markets. Moreover, this work generates some valuable insights into the design of policy measures (most notably the importance of revenue recycling). The new second-best literature presents a serious challenge to much of traditional policy analysis.

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