

ISSN 1045-6333

TAX AND NON-TAX DISTORTIONS

Louis Kaplow

Discussion Paper No. 176

1/96

Harvard Law School
Cambridge, MA 02138

The Center for Law, Economics, and Business is supported by
a grant from the John M. Olin Foundation.

Tax and Non-Tax Distortions

Louis Kaplow*

Abstract

Measurements of the distortionary cost of labor income taxation generally assume that there are no other distortions. Browning (1994) identifies many pre-existing distortions, argues that such distortions reduce wages below the social value of labor's marginal product, and concludes that the welfare cost of labor income taxation is substantially higher than suggested by previous estimates. The primary type of distortion Browning analyzes, however, does not in fact reduce wages below labor's marginal social product and thus has no direct effect on the distortionary cost of labor income taxation.

*Harvard Law School and the National Bureau of Economic Research. I am grateful for comments from Steven Shavell and for support from the John M. Olin Center for Law, Economics, and Business at Harvard Law School.

Measurements of the distortionary cost of labor income taxation generally assume that there are no other distortions. In a recent article, Browning (1994) establishes the importance of a “non-tax wedge.” His argument is that the distortionary cost of labor income taxation depends not simply on the tax rate but also on the presence of other distortions that cause the value of labor’s marginal social product to differ from workers’ net wages in the absence of a tax on labor income. For example, if monopoly pricing involved mark-ups of 5 percent, the supply of labor would be distorted downward in the absence of taxation; as a result, a 30 percent labor income tax would involve a marginal welfare cost close to that usually associated with a 35 percent tax. Browning argues that this phenomenon is important because there are many significant non-tax distortions and because welfare costs tend to rise disproportionately with the extent of the net distortion.¹

Browning’s analysis of non-tax distortions, however, is problematic because the primary set of inefficient interventions that he examines -- pollution controls, other government regulations, and international trade restrictions -- do not in fact cause the private and social values of labor to diverge. Thus, regardless of their empirical significance, these interventions (as well as many others) have no direct effect on the distortionary cost of labor income taxation. To be sure, the interventions may require firms to produce in a more costly manner, under which the marginal value of labor’s product is reduced. But the labor market in such cases operates efficiently *conditional on the existence of the regulation*, so there is no pre-existing distortion in the labor market that is exacerbated by labor income taxation.

¹Similarly, Browning emphasizes that the welfare cost of non-tax distortions is greater in the presence of distortionary taxation. The present analysis is relevant to this additional application.

To illustrate the foregoing point, consider the example that Browning analyzes in his article. He posits a workplace safety regulation that increases the cost of production by \$Z per hour of labor and examines the case in which workers obtain no value from the additional safety.² Under these conditions, firms offer a lower wage on account of the additional cost of labor, causing the amount of labor supplied to fall. But this reduction in labor supply is an efficient market response to the change in technology caused by the regulation. Contrary to the analogy Browning offers, the additional cost of \$Z is *not* like a tax of \$Z: a tax would *transfer* \$Z per hour to the government; the regulation, by assumption, *destroys* \$Z per hour. Because firms' production costs are actually higher -- due to excessive safety regulation, inefficient pollution control standards, or the need to purchase domestic steel at greater expense -- the resulting reduction in production does not imply that, *given the existence of the distortion*, the demand for labor is too low.

By contrast to these cases involving production inefficiency, Browning's analysis is correct when the pre-existing distortion really does cause the market wage to diverge from the marginal social product of labor. In the example of monopoly pricing that Browning offers, the demand for inputs will indeed be too low from a social perspective. The labor income tax adds to this distortion in the manner that Browning describes.

Browning's analysis of this case, although correct, is incomplete in that he fails to note the possibility of "negative wedges," which have been identified in some previous work.³ Consider

²He addresses the full range of cases, but that in which workers obtain no value is the simplest, as well as the strongest one for his claim.

³Browning notes that efficient pollution policies -- pollution taxes -- would involve no distortion. He argues that inefficient controls would inefficiently reduce labor supply in the manner discussed above, but does not point out that any pollution policy, however efficient with regard to the cost of pollution controls, will result in an opposing distortion to the extent that residual pollution is not priced. See van der Ploeg and Bovenberg (1993). For discussion of the relative magnitudes of pollution costs and the monopoly wedge, see Oates and Strassmann (1984). Additional "negative wedges"

command and control pollution regulation. At best, it mandates the efficient control of pollution; pollution that is permitted is not priced, so product prices will be too low, demand for output too high, and the resulting demand for labor input too high as well. This type of inefficiency will tend to *offset* the distortion caused by labor income taxation.

Browning's analysis is also imprecise in that the empirical evidence he cites refers to the average or total costs imposed by non-tax distortions, but it is the difference between the *marginal* private and social product of labor that determines the marginal efficiency cost of labor income taxation. This suggests that both positive and negative non-tax distortions are more significant than may be apparent from the sorts of estimates cited by Browning.

In summary, Browning has made an important contribution in identifying the importance of non-tax distortions. His suggestive estimates -- indicating non-tax distortions on the order of 15 percent -- must be severely qualified, as many categories he identifies involve no relevant distortion of labor supply, others are incorrectly measured (by using average rather than marginal cost), and still other non-tax distortions in the opposite direction are not identified. His article, however, was not primarily empirical; it was designed to identify and suggest the significance of an important issue. In that respect, I believe the article is quite successful. The present qualifications and extensions are designed to clarify the problem and to provide a firmer foundation for subsequent empirical work.

are identified in Ng (1977).

References

Browning, E.K., 1994, The non-tax wedge, *Journal of Public Economics* 53, 419-33.

Ng, Y-K., 1977, Towards a theory of third-best, *Public Finance* 32, 1-15.

Oates, W.E. and D.L. Strassmann, 1984, Effluent fees and market structure, *Journal of Public Economics* 24, 29-46.

van der Ploeg, F. and A.L. Bovenberg, 1993, Direct crowding out, optimal taxation and pollution abatement, *Economics Letters* 43, 83-93.