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## A Note on Horizontal Equity


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### I. INTRODUCTION

Richard Musgrave has recently offered a new defense of the concept of horizontal equity (HE)—the requirement of equal treatment of equals—as an independent norm in assessing tax policy.[1] This defense is significantly more elaborate than the brief sketch he offered in his pioneering treatise[2] or in his subsequent work on the subject.[3] Musgrave's latest contribution is important because prior literature developing and applying HE measures gives little justification for this norm. The gap in the literature remains, however, because Musgrave assumes what must be demonstrated and suggests an index of HE that is implausible.

### II. DISTRIBUTIVE JUSTICE AND HORIZONTAL EQUITY AS AN INDEPENDENT NORM

Musgrave first seeks to establish HE as an independent norm.[4] By this, he means to suggest that some degree of efficiency and vertical equity (VE)—the proper redistribution among unequals—should be sacrificed in order to reduce violations of HE. His method is to examine various views of entitlement and distributive justice (entitlements to earnings, ability to pay, maximum welfare, and the veil construct) and observe that, for all the views he surveys, HE is realized while the implications for VE differ. From this, he concludes that HE is of independent significance in the relevant sense. There are two fundamental problems with his argument.

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 I am grateful for comments from Steven Shavell.

1. See Richard A. Musgrave, Horizontal Equity, Once More, 43 Nat'l. Tax J. 113 (1990). For an extended treatment of the subject by the author of this commentary, see Louis Kaplow, Horizontal Equity: Measures in Search of a Principle, 42 Nat'l. Tax J. 139 (1989).
2. See Richard A. Musgrave, The Theory of Public Finance 160-61 (1959).
3. See Richard A. Musgrave, ET, OT and SBT, 6 J. Pub. Econ. 3 (1976).
4. See Musgrave, supra note 1, at 114-17.

First, the logic is deficient on its own terms. HE arises under each theory as a by-product of the norm rather than as having independent significance. Musgrave indicates this in the context of individual discussions,[5] and the point is obvious for many theories. For example, it has long been recognized that if one seeks to maximize welfare, HE will be satisfied in the process (if the structure of the problem is sufficiently simple). Whatever rule is best for one individual will necessarily be best for another who is equal in all relevant respects. The fact that many distributive theories have this property without giving HE independent significance provides no justification for Musgrave's induction that HE should be seen as having independent significance.[6] Moreover, since most (including Musgrave) would ultimately adopt a particular theory (or perhaps a mix of two), the fact that HE is incidentally satisfied in other theories would be of little relevance.

Second, Musgrave's major criticism of views not giving independent weight to HE is that one must account for second-best policy settings.[7] Yet this very criticism undermines Musgrave's claim for the principle. After all, HE is achieved as a by-product in so many distributive theories because they are usually explicated in a first-best world, or at least one with few complications. It has been demonstrated that such theories may not respect HE when they are elaborated in a second-best setting.[8] To illustrate, assume that the only administratively feasible way to redistribute wealth from the rich to the poor involves omitting some of the rich from the tax base or excluding some of the poor from receiving transfers (perhaps because some individuals live in remote areas). Clearly, neither a maximum welfare perspective nor a Rawlsian approach (derived from a veil construct)[9] would oppose such redistribution because it violated HE. (They would indicate that the distributive objective is satisfied incompletely.) Musgrave does not attempt to offer an example involving HE violation that any relevant distributive theory would count as decisive against an otherwise desirable policy.[10]

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5. For the entitlement to earnings theory, Musgrave states that "HE is thereby satisfied," id. at 114, not that it is an independent requirement. For maximum welfare, he notes that "[s]ince HE is implied already in the least aggregate sacrifice rule, so [Sidgwick] argued, no independent normative role for HE is needed." Id. at 115. For the veil construct, he notes that "conformity" is assured. Id. at 116.

6. The only other support Musgrave offers for HE in these discussions is that some famous proponents of some theories stated that HE was important. He does not, however, indicate the basis for such statements or defend them.

7. See Musgrave, supra note 1, at 117-20.

8. See, e.g., Joseph E. Stiglitz, Utilitarianism and Horizontal Equity: The Case for Random Taxation, 18 J. Pub. Econ. 1 (1982) (analyzing a context in which HE and maximum welfare conflict).

9. See John Rawls, A Theory of Justice 54-192 (1971).

10. He does construct an example in which he argues that HE should be decisive, but he never links the example to any of the distributive theories he surveys in the article. See

## III. AN INDEX OF HORIZONTAL EQUITY

Musgrave develops indexes for total welfare cost, HE, and "vertical equity adjusted" (VEA).[11] The latter two are defined in a manner that constitutes a decomposition of the former. HE measures the welfare cost from failing to treat equals equally. That is, the index registers the welfare gain that would result from treating pre-reform equals equally (equal to the group average). This, of course, is a gain from equalizing income, often associated with VE. In contrast, VEA measures the welfare gain from equalization of income after all the equalization within groups of pre-reform equals has been accomplished. (It is called vertical equity *adjusted* because it excludes a portion of inequality normally included in VE, in order that it may be called HE instead.) These indexes are applied to a numerical illustration for the purpose of suggesting the workability of HE as an independent norm.

The most fundamental problem with his construction of an index of HE is that it is never linked to any normative principle.[12] The measures are all based on changes in welfare, suggesting a maximum welfare perspective. Yet, if that were the perspective, the total welfare measure would suffice, so his proposed HE index would be of no interest.[13]

Second, Musgrave does not offer any method for weighing HE, VEA, and total welfare cost. This omission is extremely significant. For example, in his illustration in which HE is said to be decisive, total welfare is the same for both options.[14] For one, the affront to HE is greater and for the other the affront to VEA is greater. He prefers the one in which the HE violation is less. But since he grants that we care about VEA as well, there is no basis for his preference without defending that a *greater* weight be given to what he calls HE than to VEA. No such defense is attempted.

Third, Musgrave's decomposition of total welfare into HE and VEA is extremely problematic, in that the relative magnitude of these two measures will be determined by happenstance. To illustrate, consider three reforms (A-

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Musgrave, supra note 1, at 119-20. In particular, his index and example are constructed largely using the maximum welfare principle, which, as he states, does not support his position. Thus, his position must derive from some other norm, but no such other norm is offered.

11. See id. at 117-19.

12. Thus, Musgrave simply states that "HE performance *is* measured by...." Id. at 117 (emphasis added). Later, his "HE index for the entire group *is* thus given by...." Id. at 117 (emphasis added). No statement that precedes or follows suggests the origin for either use of "is."

13. In particular, attaching greater weight to HE than VEA involves a particular privileging of certain parts of the status quo distribution. No justification for any status quo privileging from a welfarist perspective appears in Musgrave's discussion—much less one for privileging the particular aspects captured in Musgrave's HE measures but not others.

14. See Musgrave, supra note 1, at 119.

C), each affecting a different pair of individuals in the following manner:[15]

| | Pre-Reform Wealth | | Post-Reform Wealth | |
|---|---|---|---|---|
| | First | Second | First | Second |
| A: | 100 | 100 | 150 | 50 |
| B: | 101 | 99 | 150 | 50 |
| C: | 99 | 101 | 150 | 50 |

Thus, for example, reform A affects two individuals whose initial wealth is 100 each; it leaves them with a wealth of 150 and 50.

Musgrave's indexes would measure a large HE violation (due to the increased inequality, registered by a utilitarian measure) with respect to the reform affecting pair A and none with respect to pairs B and C. Of course, it might appear that this is an artifact of the way the example is constructed, but this is not the case. This arbitrary character of the measure is the very essence of what Musgrave advances as HE.[16] In particular, he rejects measures proposed by others that include any effects on individuals not initially equal. The peculiar property of HE, as advanced by Musgrave, is that individuals just above the pre-reform equals and those just below—whether moved much further apart by a reform (pair B) or whether crossing over and ending up far apart (pair C)—are ignored entirely in the HE measure. (They are included in the VEA measure, but Musgrave privileges increments to the HE measure over identical increments to the VEA measure.)

As another way to see the problem, consider some sequences of reforms. One reform moves pair A to 101 and 99; later, another reform moves them to 150 and 50. The first reform registers a tiny violation of HE and the second involves none. Alternatively, one reform moves pair B or C to 100 each; later, another reform moves them to 150 and 50. The first involves no HE violation and the second a large one. Thus, a trivial change in the structure of the reforms reverses the result: the reform that involves massive HE violation results in little if decomposed into two reforms, and the reforms involving no violation of HE result in massive violation if each is

15. Musgrave contrasts individuals' wealth under various policies not to their pre-reform wealth but rather to their wealth under the ideal policy. The text refers to pre-reform wealth instead because this is how HE typically has been used in the past, both in academic discussions and in political debate about tax reform. In addition, knowing all individuals' wealth, and which individuals would have equal wealth, under an ideal policy (which, if we knew what it was, we might then simply enact) is entirely impractical. And approximate knowledge is insufficient: in Musgrave's scheme, the text demonstrates that whether resulting inequality involves violations of HE or VEA depends on individuals' precise wealth in the benchmark scenario.

16. Even if one defines equals liberally, say to include a band of 10, his index would have the same property with respect to individuals on each side of the band.

decomposed into two.

The problem with Musgrave's HE index has been recognized before: giving significant weight to the happenstance of precise initial equality and none if there is slight initial inequality is unappealing. It is difficult to imagine any distributive principle that would support an approach that involves radical discontinuities of this sort. Thus, many indexes developed in the past decades have counted rank changes, measured distances, or examined correlations between distributions. Some of these alternatives avoid the discontinuity problem partially; others avoid it completely. What all have in common is a merging of the concepts of HE and VE wherein the original notion of HE is lost in the process.[17]

Musgrave recognizes this collapse of HE into VE in the literature, and his stated purpose is to avoid it. In the process, however, he loses any claim to a plausible notion of equity. Moreover, he does not avoid the collapse, except in a semantic sense. After all, his independent index of HE is precisely a measure of VE, as he admits. The only difference is that he applies his HE measure only to subsets of the population—those that are, by chance, precise pre-reform equals. His VEA index also is a measure of VE that is applied to subsets of the population—everyone not initially equal to anyone else and everyone in one group of equals to the extent their wealth differs from others' wealth. The indexes he offers involve a separation of VE into two components.[18] But since both components derive from the same normative origin and involve identical forms of measurement, it is difficult to understand why they should have such different normative import.

## IV. CONCLUSION

In the end, Musgrave's proposed HE index cannot be compelling so long as there remain fundamental problems with his attempt to derive HE as an independent norm. In addition, his index lacks a clear connection to any theory of distributive justice. Rather, it is directly contraindicated by the theories he examines, because such theories would not give independent weight to HE in second-best settings in the manner Musgrave suggests.

That Musgrave's HE index is simply a component of traditional VE measures suggests the possibility that a primary motivation for HE actually involves an implicit appeal to considerations of VE. After all, treating equals unequally increases inequality, which is undesirable from many ethical

17. This literature is discussed and criticized in Kaplow, supra note 1.

18. Musgrave explicitly notes that his total welfare measure can be seen as a conventional measure of VE. See Musgrave, supra note 1, at 117. Much of his development involves separating this measure into the two components.

perspectives.[19] It is precisely this inequality—no more—that Musgrave's HE index measures.

19. This view of HE is explored further in Kaplow, supra note 1.