

ANNEXE 5A: APPORTIONMENT OF LAND AND BUILDING VALUES

Owen Connellan, *Land Value Taxation in Britain: Experience and Opportunities*

Chapter 10: Towards Acceptable LVT Systems for Britain

The following passage, quoted from Britton et al. (1991, 161–167), deals with some of the issues relevant to apportioning land and building values as advised by the “Red Book” of the Royal Institution of Chartered Surveyors (RICS 1991; see also later version in RICS 1995).¹

1. There is a reference to DRC (depreciated replacement cost) as a method of apportionment in (RICS 1991, SAVP18; see also RICS 1995, GN 5), for which it is necessary to find the "building element," which will be the "depreciable amount," and the "land element," which will be the “residual amount.” The apportionment is arrived at in one of two ways:
 - (a) By deducting the land’s existing-use value from the cost or valuation of the asset
 - (b) Where little evidence or no evidence of land values exists, by relying on an assessment of the net replacement cost of the buildings (based on depreciated replacement cost)
2. Before examining possible incongruities that might arise in such apportionments, it is worth noting the constituent parts of the calculation that go to make up “gross replacement cost” of a building (RICS 1991, SAVP3; see also later version in RICS 1995, PS 4): “. . . the Valuer is concerned not with what it would cost to erect a building in the future but rather what it would have cost if work had commenced at the appropriate time so as to leave the building available for occupation at the valuation date”; “additions will normally need to be made to the estimated building contract for professional fees and for finance charges”; and “various grants payable from time to time under legislation . . . the valuer should make clear how he has treated the availability of grants in the valuation.”
3. It might be argued that (2) above indicates a form of "developer's balance sheet" at the end of a development period, when all the actual building costs are rolled up with fees, finance costs etc. What it would take to complete the developer's balance sheet is, of course, the inclusion of the land value/cost element (plus associated fees, costs etc.) and the sine qua non for the developer: the developer’s profit on the project as a reward for risk and enterprise.

1. The RICS and the IVSC (successor to the former IAVSC) are both in process of updating their valuation advice, but the fundamental guidance on issues raised in this annexe is still valid.

4. The International Assets Valuation Standards Committee (IVSC 1986, GN 3:7) also advises on "gross replacement cost" in its Guidance Notes: ". . . the figure may include fees, finance charges appropriate to the construction period and other associated expenses directly related to the creation of the asset."
5. The wording of the advice from RICS (1991, 1995) particularly differs from that of the IVSC in the reference to "associated expenses," etc. The immediate question that arises is whether or not it would be justifiable to argue that under IVSC's GN3, a developer's profit is one of the expenses that is directly related to the creation of the asset. This argument would have further weight if it could be demonstrated that a developer's profit on the project forms a link between cost and value.
6. To explore the possibility of such a link, we looked at the two procedures outlined in (2) above as methods of finding the "depreciable amount of a building": either to deduct the existing use value of the land from the total value of the asset or to assess the net replacement cost of the building.
7. We then hypothesized that if DRC as a method of valuation has validity, there should at least be some measurable consistency between the two approaches.
8. To test such consistency, we compared two options facing a trading company requiring warehouse accommodation for its products.

Option A

On a thriving trading estate, the developer buys the outright freehold of the last available vacant warehouse (as recently constructed), just fending off a competitor who wanted to rent the building, and thus having to pay virtually an investment price (going rent capitalized at going yield). The developer's final balance sheet for this warehouse (simplified for this presentation) could therefore be on the following lines:

| | |
|---------------|----------------|
| Building cost | £1,000,000 |
| Fees, etc. | <u>100,000</u> |
| | 1,100,000 |
| | |
| Land cost | 300,000 |
| Fees, etc. | <u>15,000</u> |
| | 315,000 |

Financing:

| | |
|---|-------------------|
| 0.75 year on building costs, etc. @ 15% | 123,750 |
| 1.5 years on land cost, etc. @ 15% | <u>70,875</u> |
| | 194,625 |
| Developer's profit (20% on all costs) | <u>321,925</u> |
| Development appraisal | <u>£1,931,550</u> |

It follows that the same warehouse, if let at market rent and taken on at a 10 percent investment basis, would have been valued and purchased thus:

| | |
|---|-------------------|
| Estimated market rental value | £193,155 |
| Capitalise using YP @ 10% in perpetuity | <u>10</u> |
| Capital value | <u>£1,931,550</u> |

However, on the apportionment, as there is ample evidence of open market value of land for existing use, the calculation for the depreciable amount would have to be:

| | |
|----------------------------|-------------------|
| Capital value | 1,931,550 |
| <u>Less</u> value of land* | <u>385,875</u> |
| Depreciable amount | <u>£1,545,675</u> |

(* It is argued that an increase in this value over the development period of 1.5 yrs. is appropriate, i.e., original cost + fees + finance charge.)

Option B

Alternatively, on its own freehold central urban site, the same company can build an identical warehouse, employing consultants and a contractor and borrowing interim finance. As stated in RICS (GN 5): "For many central urban properties there may be little or no evidence of land values and in such cases greater reliance will have to be placed on the method below," i.e., net replacement cost (based on depreciated replacement cost), for which, with such a new building, the calculation would be:

| | |
|--|-------------------|
| Building cost | £1,000,000 |
| Fees etc. | 100,000 |
| Financing: allow 0.75 year (average period) on £1.1m @ 15% | <u>123,750</u> |
| Depreciable amount | <u>£1,223,750</u> |

Difference

There is thus a difference of **£321,925** (£1,545,675 less £1,223,750) between the two depreciable amounts, **which exactly equates to the developer's profit as described above.**

9. Differences in the two approaches to depreciable amounts have been revealed elsewhere by practitioners and commentators in other works:

a. C.A. Westwick (1980, 31–34)

Depreciable amount (OMV minus land): £420,000

Depreciable amount (NRC of buildings): £508,000

b. W.H. Rees, ed. (1988, chapter 16)

Depreciable amount (OMV minus land): £132,500

Depreciable amount (NRC of buildings): £87,916

10. A dilemma is thus identified, in that both approaches to the "depreciable amount" arguably ought to be reconcilable. In the first example in (8) above, they are clearly not reconcilable, unless one makes use of a possible missing link between cost and value, which may now be identified as the developer's profit.

11. Standard works on American appraisal methods have discussed the inclusion of entrepreneurial or developer's profit at some length. In the main, their authors support the proposition in the attempt to reconcile the cost approach to a predictive role in the valuation process; however, there are some dissenting voices. Some interesting references are Shenkel (1978), Khan and Case (1976), American Institute of Real Estate Appraisers (1987), and Acolia (1984).

12. From the above, the proposition now arises that an element of developer's profit ought to be built into DRC calculations, in order to proceed from cost to quasi-value, perhaps classifying developer's profit as "associated expense directly related to the creation of the asset" (IVSC 1986, GN 3).
13. This concept is not a new one, even in the U.K. Westwick (1980, 52–54)² addressed the problem:

Developer's risk

Another reason for the value of the property not being equal to the sum of the values of land and buildings is the profit expected by the developer. This profit relates partly to the exposure risk incurred by the developer, and he will take into account, in assessing the profit he requires, the time period over which his exposure will last, the gross amount of capital at risk, the margin between the likely costs and the likely end value, and the quality of the investment. There is no rule of thumb to determine developer's profit which will depend partly on competition among developers. The risk involved in development is a factor which must be taken into account in the relationship between the value of the land and the cost of the buildings on the one hand and the open market valuation of the property on the other.

The foregoing may be summed up in the following formulae:

$$(1) P_c = B_b + L_a + DP_b$$

$$(2) L_e = P_a - DC_d$$

where

P = Value of property

B = Cost of building

L = Value of land

DP = Developer's profit

DC = Demolition costs

a = Now

b = Time taken to construct

c = End of period b

d = Time taken to demolish

e = End of period d

2. We are grateful to the author for giving permission to reproduce these extracts.

Problems of arriving at a basis for depreciation

This lack of equality between the value of the property and the value of the land and buildings of which it is composed can cause problems in discussions between valuers, accountants and businesspeople when calculating depreciation in accordance with SSAP 12, because they may not agree on which value to use in the calculation. RICS (1991, GN J1) is careful to avoid the impression that an open market value of a property can be divided into one figure for buildings and land with no remainder (positive or negative):

When providing figures for the purposes of depreciation, the valuer should emphasise in the report, that the resultant figures, i.e. the depreciable amount and the residual amount are informal apportionments and that the individual figures do not represent the open market value of the building and land elements.

This issue is also discussed in Noke (1979, 53–54).

14. Westwick (1980, 52–54) goes on to quote “An Economist’s View” from Turvey (1957, 23–24), who believes that any attempt to divide "property" into "land" and "buildings" has no analytical value, because of the impossibility of physically separating land and buildings, and that the distinction is meaningless except in long-run stationary equilibrium.

Nevertheless, Turvey does add that, in order to secure rules of assessment for property taxation that are simple to apply and can be formulated precisely, an artificial distinction may be used, as in most American cities. The “building value” is often a rough estimate of cost less depreciation, and “site value” is then made comparable for different properties. The advantage of this is that it can be seen whether or not the relative assessments of different properties appear equitable.

Turvey’s main argument is quoted as follows:

The following magnitudes can be ascertained or estimated:

T = The market value of a building on a site

R = The replacement cost of the building

T' = The market value the property would have if the building on it were new and represented the highest and best (most profitable) use of the site

C = The cost of constructing such a building

$S = T' - C$, market value of the site

If S exceeds T by more than the cost of demolition (net of scrap value), it will pay to demolish the building. Thus, it might be said that T could be split into S and $(T - S)$, the value of the building, since if $(T - S)$ is positive it represents the sum which would just compensate the owner for removal of the building. Nobody, however, will ever offer to pay $(T - S)$, so it is not in any sense a "market" value.

Alternatively, it might be said that T could be split into R , the value of the building, and $(T - R)$, the value of the site. But R may be irrelevant to any proposed action, so it cannot be called a "market" value. Thus neither method of division has any useful meaning except in the event of their coincidence, when

$S = T - R$,

which requires that

$T' - C = T - R$.

Apart from coincidence, the only general case where this equality is fulfilled seems to be where the existing building is that representing the highest and best use (so that $T = T'$) and is new (so that $C = R$). But then the division is useless, since one can simply speak of S (site value), C (construction cost), and T (market value of the property). T will equal $S + C$ in a competitive market, if a developer's profit is included in C .

The two divisions will thus be consistent only in the long-run stationary equilibrium. But since building value is defined residually and since its equality with R only follows from the assumption that there is equilibrium, the concept is useless for economic analysis. Since no ordinary building is ever sold floating in the air, this is not surprising. (Turvey 1957, 23–24)

15. From the preceding paragraphs, it appears that there is now a proposition that ought to be seriously considered, namely that there is an element of entrepreneurial or developer profit that could be built into DRC calculations in order to proceed from cost to quasi-value. The fact that such profit might perhaps be classified as an "associated expense directly related to the creation of the asset" (IVSC, GN3, para. 7) should not be overlooked.

16. The main case against this proposition, and part of the rationalization for cost-based methods of valuation, is that if the property did not exist, the owner-occupier would buy a site and build a similar property. Such an owner-occupier is not necessarily an entrepreneur or developer, and the argument goes that the costs of an owner-occupier include something for contingencies and risks, but not a profit element as such.

17. Although this argument has more weight with public-sector properties than in the private sector, we nevertheless feel that the issue is sufficiently moot to justify this particular review.

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