Capital-Intensity of Housing

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To resolve the issue of whether anything is more labor- or capital-intensive, we must look below the surface and find a more fundamental concept of what labor-intensity means. We do not judge the labor-intensity of, say, housing by the share of on-site building costs paid to labor (which is about 20%, by the way). Housing is capital-intensive because what labor builds lasts a long time, yields its services slowly over fifty to one hundred future years. It must be "financed," and the financier gets most of the income. For example, if a house is to last one hundred years and yield a service or cash flow of $1 a year over that time, its present value at 7% is:

$$PV = \frac{1 - (1.07^{-100})}{.07} = \$14.27$$

That is, the maximum one would pay to build the house is about $14, even though it will yield a total of $100 over life. The other $86 is return on investment, shared between lender and equity investor.

Some people find it easier to perceive the matter thus. If I borrow $14 and repay it on the installment plan at 7% over 100 years, the annual level installment is $1.

The $14 capital cost is only partly payroll, too, but even were it all payroll, labor would get only 14% of what is paid for the house. Actually, when we consider the land and materials in the original cost, labor gets much less than 14%.

A capital-intensive industry then is essentially one where there is a long time lag between input and output, between effort and result, between investment and recovery. It is one where the early inputs must be financed over long years before payoff.

Turnover of capital in durable structures

How fast does the owner recover capital from a long-lived “income property”? Again, let annual cash flow be $1, and the present value = $14.27. Interest at 7% is:

$$\text{Interest} = .07 \times PV = 1 - 1.07^{-100} = 1-.0012 = .9988$$

Capital recovery and the Capital Consumption Allowance are the rest of the $1, which isn’t much: 12/100 of one cent from each dollar of cash flow. Given the uncertainties of life, it might be more, but it might just as likely be less, or negative, so this “equilibrium” figure is a fair stab at what it really is in practice.

Bottom line: capital in durable structures is recovered so slowly it might as well be sunk permanently.