

MS for Typing, III

Chap. 2 Substituting ~~between~~ labor and capital

There is no definitive work or much professional consensus on what it means to substitute capital for labor: Hence the need here to ^{analyze} ~~define any view of the~~ process ~~explicitly~~ and provide tools to handle it.

In the simple ^{Luddite or} common perception, capital displaces labor when a machine takes a man's job. ~~But~~ But this partial view of one stage of one industry is inadequate when we are looking at a whole economy, for ^{labor produces} the machine. ~~it then is produced~~

~~by men~~ In the ~~Oliver Goldsmith's~~ Deserted

Village model, ^{1/} capital in the form of sheep displaces

tillers of the soil, and the ~~sheep~~ explanation suffices
^{1/} Oliver Goldsmith's classic outcry against sheep and enclosures.

became sheep reproduce themselves, ^{from} the land, with little labor. But in general ~~the~~ the analyst of aggregate unemployment must look further, and ^{encompass or} ~~analyze~~ vertically

integrate several stages of an industry x in his view.

Suppose ~~that~~ ten men produce one ^{farm} machine ^(including owner) that handles as many acres ~~as~~ in a season as ~~displaces~~ ten farm workers. Has labor been

displaced? That depends on how long the machine lasts. If it lasts 2 years, half the labor is

displaced, — But by what? ~~By factory labor?~~ ~~By land?~~

~~Or by capital?~~

Clearly the process has substituted land for labor, for there is now twice as much land per man.

But where does capital fit in? Since capital is

an indirect way to apply labor, what does it mean to substitute capital for labor?

~~This too depends on how long the machine lasts~~

It means ^{for labor} to produce something whose service or

cash flow over life exceeds its initial ^{labor} cost. The machine is
- what a farmer would pay to hire it, ~~see~~ it's "custom rate" —
cash flow ₁ must return its cost plus interest on the

capital that financed it. The slower the capital

returns, the longer it is out at interest, ^{and} the more

interest is due per dollar of principal ~~that~~ al.

Thus the share of capital in the cash flow

earned by a machine ~~has nothing~~ does not depend on

its value, intricacy, ^{or} bulk, ~~or ownership~~. It ~~only~~ depends

on ~~its life~~ how long it lasts. Substituting capital

for labor means building things that ^{last long and} pay out slowly,
with interest.

Conceivably a thing might pay out quickly and still last a long time, but that is ~~obviously~~ not a normal, ~~lasting or general~~ sustainable ~~equilibrium~~ condition.

Investors move in to exploit and compete away ~~any~~ such windfalls, so in general things that endure also pay out ^{only} slowly, and short-lived things pay out quickly

to compensate their producers before they are gone. In the case of appreciating capital like trees, indeed, (over) ~~It~~ is not long life itself that ties up capital, but

the ^{high} cost of building ^{long service} ~~life~~ into things, relative to the

~~low~~ returns earned. In every case, the essence of

capital-intensity is slow recovery of principal.

long life necessarily means deferred payout, they are virtually
~~it is not even possible for a~~ identical. In the case of
depreciating capital ~~it~~ like machines or buildings it

It follows that the way ~~to substitute labor for~~
capital displaces labor is by ~~modifying products so they~~
~~last longer.~~ enclosing. ~~the~~ If there

were no land, that would sum it up. ^{With 3 factors,} Capital by

enclosing also helps ~~substitute~~ land displace labor, as we

have seen. ~~Capital~~ Land may also displace labor in

the production of capital. Thus range-bred cattle

are the product of ~~a~~ little labor and much land; so ~~it is~~ ^{are}

volunteer timber stands; so ^{is} ~~There are several balls to juggle~~ ^{crude from Kuwait.}

So there is more to factor substitution than ~~if~~ moving

speed. But this is basic, and a good place to begin.

~~This chapter~~

The identity of capital-intensity with slow recovery
an old idea, yet many deny it, and more neglect it, or ~~it~~ regard it as a
is ~~obvious to and accepted by many~~, but it is, ~~after~~ ^{often} ~~classified as~~
special case.

~~well, or neglected or violated,~~ ^{Even for believers,}
~~or ^{on} ~~hindered by~~ limited to a few cases.~~

~~General~~ ^{General} working models of how ~~the~~ product output is

divided among or imputed to various inputs are ~~lacking~~

needed. They are presented here, ~~not~~ to be used as tools

throughout. §§ Section a treats of appreciating

or "ripening" capital -- I will ^{use} ~~prefer the second~~ "ripening" henceforth.

~~Many~~ critics have thought ^{different} ~~the~~ principles apply to other

capital, so Section b treats of depreciating capital, extending
and generalizing the principle.

~~Section c shows how~~

If slow recovery is the essence of capital-

intensity, it follows again that high wages, forcing

capital to displace labor, do so by ~~long~~ ~~leading in~~

making durables more attractive to investors; and that

high interest rates make them less attractive. Section c

~~treats~~ shows how this works. It also shows how

high rents shorten lives, substituting labor for land;

and (obviously) reduce ^{relative} ~~the use of~~ land inputs in

the initial production of capital.