The Flow of Capital (Part I)
By Dr. Mason Gaffney

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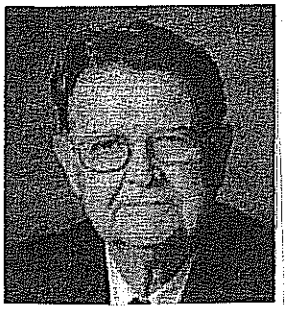
THE FLOW OF CAPITAL (Part I)

By Dr. Mason Gaffney, Riverside, CA



It is a common belief that capital is needed to make jobs, and the more the better. The moral is always "be nice to capitalists," and usually landholders sneak in with them, although land is not formed, as capital is, by human saving or investing. In Section E. we will see that investment makes jobs, and investment is capital in motion. Capital-in-motion is an economic flow. To begin let us here look briefly at the usual meaning of capital as an economic fund, a static quantity of stored-up wealth. Its relationship to labor and land is one of coexistence, not of sequence; a relationship in parallel, not in series.

Much capital substitutes for and displaces labor. Cattle and sheep are good examples. In British history sheep have a long record of displacing the rural population, in something called the "enclosure" movement in England, and "the clearances" in Scotland and Ireland: the people were cleared away to make place for the sheep. Clearances and enclosures brought many of our ancestors over here from over there. Likewise, range cattle in the U.S. have preempted large areas, and their owners have fought the settlers in a thousand horse operas for young viewers. Range cattle today are one of the least labor-using of farm enterprises.

Trees are another kind of capital that crowds out labor. Most American farming goes back to clearing off trees. On tree farms labor may plant the trees, and 80 years later go back to harvest them. In between the capital in the trees needs little help from labor; it just ties up the land.

Farm machinery has done more than anything to depopulate rural America in our times. Machines displace workers in many other industries, too: automation, cybernetics, robots, spray painters, office machines, pool sweeps, computers, word processors, modern presses and a thousand other things do the jobs of human workers. The ambition of many industrial engineers is a plant to turn out a product "untouched by human hands."

The prospect that a machine may take our jobs is enough to send shivers through most of us. Ned Ludd (he smashed machinery), John Henry (he was a steel-driving man), and Karel Capek (he wrote a play, R.U.R., which stands for "Rossum's Universal Robots") are names all associated with man's recurring nightmare that machines will take over the world. There may be labor-using forms of capital, too, but it is easier to think of labor-saving forms. Whatever else capital may be and do, it is not unambiguously clear that more capital means more jobs.

Ordinary texts generally skirt this issue. About all they tell us is that capital formation may increase "growth." They don't say who gains from growth, and are often vague on specifying growth of what? Other macro writers go farther and allege that labor gains when capital grows. They use a device that you will often see in economic reasoning, the "Cobb-Douglas function," a mathematical artifice that sneaks in an implicit assumption that more capital always means more jobs for labor. Since ordinary macro texts leave this out we will too, other than mentioning it here.

We may also view the relations of labor and capital in sequence. This is the evident meaning of those who say capital employs labor. Static capital like farm machines may displace labor, but labor produces the farm machines, and capital-in-motion, or "investing", is the "income-creating expenditure" that employs these factory hands. Labor works to produce capital. Here, capital serves to spread labor over more time. For example, say labor works to build a house. We invest an extra 20% in stouter materials and better workmanship in order to make the house last 100% longer: the house gives no more service/year, but more years of service before we need labor to build a new house. Thus capital lets us apply labor less often. Of course the first year we use 20% more labor. But over time we do so only half as often, so the number of jobs drops to .5 x 1.2, which is 60%, of the original amount.

Or again, let's compare growing bamboo, which matures in a year, and Douglas-fir, which may take 80 years. Planting and harvesting bamboo makes jobs every year; Douglas-fir every 80 years. When we get to the end of the 80-year cycle, most of the value of the timber has been added by capital, in the form of what is called "capitalized interest," i.e. accumulated compound interest on the planting cost. I'll show you how to figure that quickly. Financing timber while you wait for it to mature is a way of substituting capital for labor.

Besides that, with bamboo we get a building material that requires much labor to assemble and maintain; with Douglas-fir, highest-quality structural lumber. Both in the production of the material and the use of it, bamboo is labor-using and Douglas-fir is capital-using. To analyze this sequential relationship of labor and capital we need more input, which follows in Section E.

Investment, or the flow of capital.

A. The wages-fund theory

You may get the impression from modern texts that macroeconomics originated in 1936, but that is wrong: it was rather revived from a long nap of 40 years. Eighteenth and nineteenth-century political economists (the "classical" economists) had a macro-economics which they called "Wages-fund theory." Adam Smith, David Ricardo, John Stuart Mill, Stanley Jevons and many lesser lights all espoused it. The "Austrian School" economists like Gustav Spiethoff and Eugen von Bohm-Bawerk and Friedrich von Hayek rephrased it without abandoning it, and Knut Wicksell, arguably the smartest economist of all time, improved on it and reaffirmed it strongly.

But Francois Quesnay, protégé of Madame Pompadour, Royal Physician to Louis XV, and house intellectual at Versailles, scooped us all in 1758. Production, he says, requires "advances" of capital—today we say "front money" or "investment." According to A.R.J. Turgot, Quesnay's disciple, *"Richesse mobiliere amassé d'avance est un prealable indispensable pour toute la production"* (liquid capital stored up ahead is a prior necessity for all production). (Turgot was Finance Minister for a (continued on page 8)

THE FLOW OF CAPITAL (from page 7)
time under Louis XV until the local greed lobbies got him sacked when he tried to reform the tax system.)

In American folklore one spoke of "priming the pump"—you had to pour water into the top of an old fashioned water pump before it would draw. The Kingston Trio (pop songsters in the '50s) put it memorably in "The Ballad of Desert Pete." A thirsty traveler in the desert spies an old water pump with a note on it.

"Yeah, you've got to prime the pump,
Work that handle like there's a fire.
Under that rock you'll find some water
I left in a bitters jar.
Now there's just enough to prime it with
So don't you go drinkin' first.
Just pour in the water and pump like mad:
Buddy, you'll quench your thirst."
The traveler hesitates, but ---
The note went on "Have faith, my friend
There's water down below.
You've got to give until you get:
I'm the one that ought to know.
You've got to prime the pump,
You must have faith and belief
You've got to give of yourself
'fore you're worthy to receive
Drink all the water you can hold
Wash your face to your feet.
Leave the bottle full for others.
Thank you kindly."—Desert Pete
P.S. The pump worked.

Returning to Quesnay, he broke it down into four kinds of advances which, being French, he called avances (f.). Avances souveraines build public works or infrastructure; avances foncieres clear land, fence it, and improve it with buildings; avances primitives take care of movable capital like farm machines and animals; and avances annuelles carry current expenses that are recouped within less than a year. All these advances of capital were necessary before any return or production of more capital was possible. We still call the cash flow of a firm its "revenue," which is French for "come back." "Receipt" means "take back," and "return" means "turn back," which all amount to the same idea; you've got to be forthcoming, to make advances, to give until you get. Some other names for liquid capital are circulating capital, ready capital, working capital, accounts receivable, realizable capital, disposable capital, mobile capital, "putty" (as opposed to clay) capital, consumer goods, and ripe goods. The concept refers simultaneously to money held by the investor, and ripe goods held by retailers to validate and give value to the money.

B. How glitches develop

A shortage of ready capital can make the economic machine seize up or freeze or stall, like a car that runs out of gas. The macro-economy is not "glitch-less" like the hypothetical micro-economy postulated in Econ. 100A. Capital is freely and quickly convertible from the circulating to the fixed state, but not so easily converted back again. Fixing capital in highways, office towers, drilling rigs, monumental water projects, or ocean vessels is irreversible over long periods. Thus, there can be a shortage of liquid capital at the same time there is a surplus of fixed capital, causing a "glitch."

The problem may even become self-aggravating when liquid capital is required as a solvent to activate and recover value from the fixed capital. That is always true of "Construction Work in Progress" (CWIP), like a bridge that is 99% complete. Unfinished structures are totally useless until they finally go "on line." Feedstock is needed for a refinery; spare parts to repair vehicles and machines; goods to stock a store; hay to feed the cows; materials to flow through a factory; seed corn for the farm; and fuel to move a tractor. Liquid capital is also needed to meet the payroll while materials move through a business and value is added. A business that runs out of working capital is called "insolvent" and shuts down, even though its fixed capital may exceed its debts.

A single business in trouble may be saved by others. But a whole economy that runs short of liquid capital has a hard time recovering any value from its fixed capital, and has to start all over again with new savings. There you can have a big, big glitch. In the 19th century it was clear to contemporaries that the several severe depressions in America resulted from freezing most of the nation's capital, plus more borrowed from Europe, into premature public works like canals, railroads, and roadways. Brazil has done the same thing in the last 20 years, and our own behavior is only marginally improved over the debauches of the past.

Nowadays, with world capital markets, a nation in trouble can borrow abroad—if there is something to borrow. In 1929 Austria wanted its capital to stay home, and imposed exchange controls, triggering off a wave of the same behavior in other nations. Of course, such foolishness could never happen again—could it? What happens if Japan dries up, if West Germany turns all its capital exports to East Germany, if the Soviet Union soaks up world capital, etc. etc.? Something to worry about.

C. The new dismal scientists

Ordinary models, both Keynesian and Monetarist, bypass all this. They deal mainly with money and its circulation. They presuppose, in effect, that real supply responds automatically to the touch of spending and may be taken for granted. Real supply refers both to the supply of factors of production, and also to the supply of ripe goods ready to consume.

Faced with roaring inflation in the 1970s the best-known economists and government advisers threw up their hands and said "Tsk, tsk, too bad, we have to choose between inflation and unemployment. You ordinary people need a scolding: you must face the facts, tighten your belts and make sacrifices." Experts with that attitude rise to the top because they take the pressure off public officials to do something effective. But, alas, they made modern economics a new "dismal science", a science of choice where all the choices are bad.

People got sick of such dismal messages and inaction, so in the 1980s we had a run at "supply-side economics." The good idea in it is that we have
continued on page 9)

THE FLOW OF CAPITAL (from page 9)

monetary flows, neglecting the real flows that give money its meaning. Modern "supply-side economics" and "neo-Austrian economics" are efforts to bring real goods flows back into the picture, but thus far are, alas, feeble and abortive, twisted and corrupted by the special pleading and political ambitions of their best-known votaries.

(The Flow of Capital will be concluded in the Nov.-Dec. 2013 issue of GroundSwell. Economics Professor Dr. Mason Gaffney may be emailed at m.gaffney@dslextreme.com. GroundSwell does not have room for reference footnotes, but they are available from Dr. Gaffney.) <<

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