

fight Malthus' (and Sismondi's) theory of a *need* of prosthetics for circuit closure; Keynes made the opposite mistake and did not consider these limits.

Section 9. Kalecki: Only capitalists can save capitalists

Michal Kalecki

Michal Kalecki, a native Polish with Jewish origins, was an independent and cosmopolitan mind. He had a very interesting life as a scholar and world-touring economic adviser, in war and peace, to different capitalist and socialist countries, even if though his life also involved fleeing from the Nazis and leaving the US during McCarthyism. Born in 1899, he studied engineering and mathematics in Poland. After reading Marx, Rosa Luxemburg, and Tugan-Baranovsky,³⁶⁶ without ever formally having studied economics, he first travelled through Europe on grants or self-financed his way by teaching. He was in Stockholm when the *General Theory* first appeared. Joan Robinson recollects what Kalecki told her: "Someone gave him Keynes' book. He began to read it – it was the book that he intended to write. He thought that perhaps further on there would be something different. No, all the way – it was his book. He said: "I confess, I was ill. Three days I lay in bed. Then I thought – Keynes is more known than I am. These ideas will get across much quicker with him and then we can get on to the interesting question, which is their application. Then I got up".³⁶⁷

Soon afterwards, he arrived at the UK and spent time at several universities, including Cambridge and Oxford. Although he made friends with members of Keynes' Cambridge circle, Joan Robinson, Richard Kahn, Maurice Dobb, and Piero Sraffa, he had only one "cold" meeting with Keynes himself in 1937. Although she was close friends with Keynes, Joan Robinson still acknowledged a precedence of Kalecki's work over Keynes' work in major regards.³⁶⁸ Kalecki remained in the UK during World War II, teaching and working as a statistician in the war economy. After the war, he took on tasks in Montreal and New York and worked for the UN and US institutions until McCarthyism made him return to communist Poland in

366 López/Assous (2010) footnote 2, page 226.

367 Robinson (1977) page 8, 9.

368 She writes on the major contents of Keynes' theory: "Michal Kalecki's claim to priority of publication is indisputable. With proper scholarly dignity (which, however, is unfortunately rather rare among scholars) he never mentioned this fact. And, indeed, except for the authors concerned, it is not particularly interesting to know who first got into print. The interesting thing is that two thinkers, from completely different political and intellectual starting points, should come to the same conclusion. For us in Cambridge it was a great comfort." (Robinson (1966) page 337).

1955. Thereafter, he worked for Israel, Mexico, India,³⁶⁹ France, and Cuba, partly from Poland and partly within these countries, until he died in 1970.

The theory of firms' investments as missing a "central *pièce* of... economics" and as a "central *pièce de résistance* of economics"

Like Keynes, Kalecki had incorporated Marx's contents (Keynes had used $M-C-M'$, while Kalecki employed the evolutionary form of the reproduction schemes) and like him Keynes had avoided the pitfalls of Marx's labor value and exploitation theory. Both men had also remained outside of the circles of orthodox Marxism, communist, or socialist parties and of sectarian leftists. Alike Keynes, Kalecki saw investment as a crucial substitute for deficient consumption demand.

Furthermore, in Kalecki, much like in Sismondi, Malthus, and Marx,³⁷⁰ the working class ultimately contributes nothing to capitalist's profits; it only pays back to capitalists, in an eternal recurrence of the same, the salaries, which it has received from them, for consumption goods. Let us follow Kalecki's argument in a bit more detail: Salaries are paid out to workers by *all* departments or capitalists, but as workers have to spend their whole salaries on consumption and can only do so to the department in charge of workers' consumption goods, the salary spending of the aggregate capitalist class rather promptly travels back to this specific department. The capitalist class, thus, as we already saw in Marx's reproduction schemes, in the aggregate, through all its departments, pays out an amount that is recollected by one of its departments. The costs are recovered and the contribution to aggregate profit is zero. Therefore, salaries can never increase capitalists' profits.³⁷¹

369 López/Assous (2010). On Kalecki, see also King (2015) page 11.

370 In Marx, it contributes by creating surplus value, which capitalists can appropriate, but it does not crucially contribute to realizing the surplus value by buying the produce, which it represents.

371 "For the understanding of the problems considered it is useful to present the above from a somewhat different angle. Imagine that following the Marxian "schemes of reproduction" we subdivide all of the economy into three departments: department I producing investment goods, department II producing consumption goods for capitalists, and department III producing consumption goods for workers. The capitalists in department III, after having sold to workers [Kalecki means: to their workers of department III, GW] the amount of consumption goods corresponding to their wages, will still have left a surplus of consumption goods which will be the equivalent of their profits. These goods will be sold to the workers of department I and department II, and as the workers do not save it will be equal to their incomes. Thus, total profits will be equal to the sum of profits in department I, profits in department II, and wages in these two departments: or, total profits will be equal to the value of production of these two departments – in other words, to the value of production of investment goods and consumption goods for capitalists." Kalecki goes one step further, writing that "the production of department I and department II will also determine the

Salaries render profits possible for the dept. II.b-capitalists,³⁷² but they remain neutral in generating profits for the capitalist class in the aggregate. Even if workers spend their whole income reliably – as Kalecki said “workers spend all they receive”³⁷³ or “workers don’t save”³⁷⁴ – they are not the ones to provide value to pay for the surplus produce. Thus, in Kalecki’s work the capitalists are the only ones left charged with doing the critical buying, which enables profit. Others before him have stated this too, but thanks to his engineer-minded rereading of Marx’s reproduction schemes, Kalecki makes the point more strongly and more stringently than expressed anywhere else. The solution to the problem of circuit closure definitively lies in the hands of capitalists alone. They must buy their own produce at profitable prices in order to validate their own investments. Capitalists must drag themselves out of the swamp by their own bootstraps.

Now, while Kalecki made this point very clear, he also admitted that during his lifetime no theory of firms’ investment existed which would have convinced him. Let us look at his critique of Tugan-Baranovsky’s investment theory: Even if *all* investment is rewarding for the capitalist class in the aggregate (because of Kalecki’s profit equation – see the following section), this does not mean that all investment is also profitable for the individual capitalists who make it. They are only interested in their own profits, not in the profits of their fellow capitalists. What is “to the advantage of a single entrepreneur does not necessarily benefit all entrepreneurs as a class”.³⁷⁵ Therefore, the proof that investment is good for the capitalist class as a

production of department III if the distribution between profits and wages in all departments is given. The production of department III will be pushed up to the point where profits earned out of that production will be equal to the wages of departments I and II. Or, to put it differently, employment and production of department III will be pushed up to the point where the surplus of this production over what the workers of this department buy with their wages is equal to the wages of departments I and II.”³⁷⁷ (Kalecki (1933, 1954) page 80.) Note the following: We said that the reproduction schemes can be presented with two, three, or four units, while we have chosen four units [I.a. (means of production for means of production), I.b. (means of production for means of consumption), II.a. (means of consumption for capitalists) and II.b. means of consumption for workers). Kalecki uses a three-unit-model for capitalist firms here: producers of means of production (I), of means of consumption for capitalists (II) and of means of consumption for workers (III). This can be extended to a four-unit-model if we distinguish between producers of means of production for means of production (I.a.) and producers of means of production for means of consumption (I.b.), with departments II and III then becoming II.a and II.b In *Capital* volume II, Marx basically uses a two-unit-model only.

372 Kalecki calls our II.b.-department producing consumption goods for workers ‘department III’, but this difference is only terminological.

373 Kalecki (1937) page 35.

374 Kalecki (1937) page 36.

375 Kalecki (1935) page 26.

whole, is no theory of investment yet; such theory ought to explain why an *individual* capitalist might invest. Thus, writes Kalecki, Tugan-Baranovsky's theory "rests on an error that what *may* happen is actually happening..." and he blames Tugan-Baranovsky because he "does not show at all why capitalists in the long run are to invest to the extent which is necessary to contribute to full utilization of productive equipment."³⁷⁶ Alternatively, as Kalecki states: "Tugan considers the *possible* use of the national product created by full employment of the productive forces as the actual fact ...". Therefore, his theory is not "wrong", but it is "completely unfounded". The challenge remains "in order to give an answer to this query... construct a theory of investment decision..., which I always considered to be the central problem of the political economy of capitalism."³⁷⁷

Kalecki did make efforts of his own towards a theory of investment.³⁷⁸ He investigated capitalist's investment behavior in business cycles³⁷⁹ and came to see a virtuous circle, in which the investment rate and the derivative of the previous investment rate from the past might determine the present: "It follows that investment at a given time is determined by the level and rate of change in the level of investment at some earlier time", he wrote.³⁸⁰ He also reflected that "investment decisions (are determined) by, broadly speaking, the level and the rate of change of economic activity."³⁸¹ What Kalecki says here is certainly true, at a certain stage of analysis. The past does have an impact on future investments by establishing certain technological, economic, and social preconditions in industries, capital, institutions, consumer preferences, etc. These earth-grounded facts cannot help but influence expectations about the future, including those of investing firms. The speed and dynamics of economic activity witnessed yesterday – and of their changes and derivations – also matters here. However, Kalecki himself ultimately did not consider this effort satisfactory and quite rightly. He admittedly remained unhappy with the state of investment theory, including his own, until the end of his life and recapitulated that the "determination of investment decisions ... *remains* the central *pièce de résistance* of economics" (without even mentioning Keynes).³⁸²

376 Kalecki (1967) page 147 (italics by Kalecki).

377 Kalecki (1967) page 148 (italics by Kalecki).

378 Kalecki (1943, 1954) page 110 et seq.

379 These subjects appear in the titles of many of his articles and in the introduction to his *Selected Essays on the Dynamics of the Capitalist Economy* written shortly before his death. He admits that while his "theory of effective demand (was) already clearly formulated in the first papers (and) remains unchanged in all the relevant writings... there is a continuous search for new solutions in the theory of investment decisions" (Kalecki (1971) page viii).

380 Kalecki (1943, 1954) page 124.

381 Kalecki (1968) page 165.

382 In his last article on the subject, see Kalecki (1968) page 165.

We believe that Kalecki was misled, possibly by his engineering background, to look out for a theory of investment that would explain present investment from the past with the help of some complex function, e.g., one comparable with a theory of waves that build up and interact or a theory of the dynamics of gases. We believe that the interference of human minds dealing with uncertainty, including with the uncertainty resulting from the reflexivity that other humans deal with the exact same situation, is much stronger than any causation chains from the past. To this end, we side with Keynes' inducement to invest and Minsky's later evolution thereof, even though Keynes was not free of the same fallacy when he slipped into the idea of a multiplier and of an identity of $I = S$ in the $S \rightarrow I$ -direction, as we observed, which also featured causation-style types of answers. But while the correct expectation-driven or motivation-driven style maintained the upper hand in Keynes, this approach is less undeveloped in Kalecki; he searches for the theory of investment in the wrong place of past-based causality and takes the insufficiency of his attempts there to signify his general defeat in a theory of investment.

Kalecki cannot have believed in Keynes' "inducement to invest"-theory either. Not only he continued to mourn the lack of a theory of firms' investment but, while he survived Keynes by 24 years, never made a attempt to use Keynes' "inducement"-theory, not even as raw material, to build such a hitherto outstanding investment theory. Unlike Minsky later, Kalecki also made no effort to further evolve the "inducement to invest" in the direction of the Viner-Rebuttal. The reasons for this are probably the same as those provided above: Kalecki was essentially going after a theory which would explain when the potentiality of investment becomes a reality of investment with engineer-like causes or mathematical functions, running from the past into the future and not, like Keynes, on the basis of uncertainty and expectations about the future. It is also telling that Kalecki made no effort to use Keynes' multiplier or Keynes' identity of saving and investment in the $S \rightarrow I$ -direction for a theory of investment, although they have mechanistic causal moments which were generally closer to Kalecki's preferred theory design. The reason for this omission may be found in Kalecki's aforementioned critique of Tugan-Baranovsky. It may have been clearer to Kalecki than it was even to Keynes that Keynes' identity of saving and investment, when read in the $S \rightarrow I$ -direction, was only a theory of refunding and had no potential to analyze whether the funds would actually be used for investment or not. Kalecki likely also felt that his own "profit equation", to which we turn in the following, provided a superior theory of the funding of investment.

Kalecki's macro-transmissions: "Investment plus capitalists' consumption equals gross profit"

Kalecki's famous profit equation is *investment plus capitalists' consumption equals gross profit*, which one might abbreviate ($\text{Concap} + I = P$). Here we encounter a sourcing-

related style of teaching, which, as mentioned previously, is functionally close to Keynes' identity/equality of $I = S$ in the $I \rightarrow S$ -direction. While Kalecki felt that a convincing theory of firms' productive investment had not been developed until the end of his life, which dealt with Keynes' identity/equality of $I = S$ in the $S \rightarrow I$ -direction, he was still quite satisfied with his "profit equation" which dealt with it in the $I \rightarrow S$ -direction.

The profit equation certainly considers what happens *after* firms make actual investments. It looks at typical recurring exchanges of capitalists, and at their effects on a macroeconomic level. It does not reflect upon *when* capitalists will invest or how much – insofar it misses the most crucial macroeconomic question –, but it does tell us that it is good it they *have invested* and even quantitatively measures how good it is. Strangely enough, future investment, still comes into play, as the old investment fills the pot, like in poker, for other capitalists, which are lured to also invest. First movers must invest, to prepare the ground and to draw second movers into investing too; Early investments of some enable gross profits of the aggregate capitalists' class as a whole. This obviously must be read before the background, taught elsewhere by Kalecki, that only capitalists can provide the profits for capitalists and to keep the wheels turning.³⁸³ However, Kalecki does not think in terms of teleology or motivation – capitalists have no interest in the profit of their colleagues – but rather in terms of mere factual effects: as the invested money arrives somewhere else, the financial means are supplied for others to profit. Therefore, even bad investments are good for the capitalist class in the aggregate; they too can be turned into other capitalists' additional profits. An investment, which goes wrong for the investor himself, who may have made no profit and even gone bust, still not only employed and fed workers, but also munitioned suppliers who will have their outlays returned and mostly also receive profit on top. Investment, which is bad for the investing capitalist as it is unprofitable, is still good for the capitalist class generally! Now, the same applies to capitalist consumption, which was never meant to generate profit for the consuming capitalist anyhow. Macroeconomically, it is always like a blown investment; the fact that consuming capitalists get satisfaction out of consumption, but not out of failing investments, is not a relevant economic factor.

In order to arrive at his profit equation, Kalecki used an approach similar to the "theory of business cycles", or so he at least said in an article written shortly before his death in 1970.³⁸⁴ He identified proper flows, captured them in definitions, and determined the relationships and causal influences between them. In this way, he sought out macro-transmissions, like Keynes and Marx had, the latter in his reproduction schemes. Already in an article written in 1933, Kalecki had chosen "gross real profit" as the critical "output flow" and he would remain attached to this

383 See page 322.

384 Kalecki (1968) page 165.

term throughout his life. He then chose investment and capitalists' consumption as his most important "input flows"³⁸⁵ and connected the three by his profit equation. Kalecki ran his profit equation, "gross profit equals investment and capitalists' consumption", in both simplified and in more developed versions. In his simplified version, he abstracts from taxes, government spending, and foreign exchange. "Indeed", he writes, "in our simplified model, profits in a given period are the direct outcome of capitalists' consumption and investment in that period. If investment increases by a certain amount, savings out of profit are *pro tanto* higher." Or "...investment, once carried out, automatically provides the savings necessary to finance it."³⁸⁶ Capitalists forward to other capitalists the means for additional investment and for capitalists' consumption in several ways: "...if some capitalists increase their investment by using for this purpose their liquid reserves, the profits of other capitalists will rise *pro tanto* and thus the liquid reserves invested will pass into the possession of the latter"; accordingly some capitalists' profits may come directly from "liquid reserves" or from the prior saving of other capitalists. However, they may also come about indirectly through bank loans: "[A]dditional investment", Kalecki goes on to claim, "is financed out of bank credit [and] the spending of the amounts in question will cause equal amounts of saved profits to accumulate as bank credits".³⁸⁷ What began as a bank loan to one capitalist, coming from the deposits of another capitalist,³⁸⁸ ends up as profit for yet a third group of capitalists – and likely into their bank accounts again.

Kalecki asked himself expressly in what direction his equation "gross profit equals investment and capitalists' consumption" operates: "What is the significance of this equation? Does it mean that profits in a given period determine capitalists' consumption and investment, or the reverse of this? The answer to these questions depends on which of these items is directly subject to the decision of capitalists. Now, it is clear that capitalists may decide to consume and to invest more in a given period than in the preceding one, but they cannot decide to earn more. It is, therefore, their investment and consumption decisions, which determine the profits and not vice versa".³⁸⁹ Hence, as implied in Keynes, albeit more clearly, in Kalecki, investment and consumption are the dog and profits are the tail. Alternatively, we might say that investment and capitalists' consumption are the call and profits are the answering echo, or that profits are the explosion in the cylinder and profits the rotations of the shaft, or that investment and capitalists' consumption

385 Kalecki (1933) page 1.

386 Kalecki (1933 1954) page 83.

387 Kalecki (1943, 1954) page 84.

388 Ignoring bank credit money creation for the moment.

389 Kalecki, *The Determinants of Profit* (1933, 1954), in: *Selected Essays on the Dynamics of the Capitalist Economy*, 1971, page 78.

are the rain and snow in the Himalayas and profit the swelling of the Ganges river, etc. Kalecki in his profit equation is clearly only concerned with what comes out of investment; hence, if we draw the comparison with Keynes' identity/equality in the $I \rightarrow S$ -direction again, he speaks about the $\text{Concap} + I \rightarrow P$ -direction of his profit equation, but it has no application vice versa. That direction ought to be covered by the (as yet lacking) theory of investment.

Evidently, the terms "investment", "capitalists' consumption", and "gross profit" require elucidation. Like Marx, Kalecki lived in a two-class world in which wealth owners and entrepreneurs are merged into capitalists. Wealth owners do not appear separately; they do not consume and do not draw wealth revenue of their own, e.g., rent. Everything happens either between capitalists (who also consume) or between capitalists and workers (exchanges between workers are also excluded). Every investment implies that capitalists take one of two roles, either as *investor-capitalists* (operating in the $M-C$ -leg of their circuit) and or as *supplier-capitalists* (operating in the $C-M'$ or $C'-M'$ -leg of their circuit); the investors-capitalists' paid purchase prices will be the supplier-capitalists' collected sales prices. If we include consumption, we may say that one side's outlays, capitalist's investment and consumption, become *sales*, *turnover* or *revenues* of the other side. This way, we, though, do not yet arrive at "profits" and at the equation "*profits* = investment plus personal consumption of capitalists" or "*gross profits* = gross investment plus capitalists' consumption".³⁹⁰ So far, we have rather justified why *sales* (turnover or revenues) equal investment plus personal consumption. This appears unavoidable because sales, turnover, or revenues are not profit but a part of sales prices only recover outlays or costs.

Yet, Kalecki uses a change of terminology to avoid a contradiction here. Profit in his equation is not simply taken to mean "profit" but some extended, coarse, rough, or gross version of profit: "Gross profit", he defines, is the "aggregate real income of capitalists including depreciation per unit of time consisting of their consumption and saving".³⁹¹ Hence, depreciation is included. Kalecki confirms this when he also defines "gross profits", from the perspective of an individual enterprise, as the "difference between the value of sales and prime costs".³⁹² Inventories should include "prime costs" – and they are to be deducted from sales in order to arrive at "gross profit".

Kalecki's equation, accordingly, is not dealing with "pure" profit, as in Marx's $M-M'$, or with "earnings", e.g., in the sense of the conventional accounting and reporting-terms of "earnings", "earnings before taxes", EBT, etc., but he is instead talking about "pre-depreciation profits" or "earnings before depreciation". We may ask

390 Kalecki (1943, 1954) page 83 et seq Italics added.

391 Kalecki (1933) page 1.

392 Kalecki (1937) page 36.

whose depreciation Kalecki thinks of and try to relate it to Marx's v , c , and s . The supplier-capitalist receives a payment, which for him is M' . That is not his profit, given that he has had to incur labor costs v , which must be deducted. He also has costs for inventories, which must be deducted (we may call them c/inv). Then, there is a final part of c left, the part for depreciation of equipment (which we may call c/dep). Kalecki quite obviously wants the supplier-capitalist's c/dep to be a component of his "gross profit". What Kalecki is looking at, could, thus, alternatively be called the *supplier capitalist's cashflow minus costs for inventories and labor*. This is the value that Kalecki primarily uses to study the economy's macroeconomic wheels.

Kalecki moves from his simplified model to his general one by allowing for foreign trade, state taxation, budget deficit, state expenditures, and workers' saving. He emphasizes that only export surpluses (not just exports, but export minus imports)³⁹³ increase capitalists' gross profits. Increases of government indebtedness also have this effect; they are like "domestic exports" and are functionally equal to trade surpluses.³⁹⁴ The "general equation for profit" then becomes: gross profits net of taxes equals gross investment plus export surplus plus budget deficit minus workers' savings plus capitalists' consumption.³⁹⁵

Now, does Kalecki and his profit equation teach us something new about the theory of firms' investment (or about their employment-generating spending)? How does the equation relate to Keynes' identity/equality? Does it give us anything that goes beyond it? Kalecki teaches us that capitalists' investment and consumption are good – from the perspective of employment and the modern master drama – in the aggregate. Investments and capitalist consumption will never be lost, even if becomes useless for the individual capitalist who originally made it. This idea was already present in Keynes' identity/equality, partly more encompassing (as salaries and workers' income was included from the beginning), partly in a narrower sense (as capitalist consumption was not). Let us compare the situation to a pre-money, pre-economic form of subsistence procurement. Assume that a neolithic community makes an effort to erect a dam to irrigate an area for agriculture. The dam breaks, so the effort was in vain. Now translate the event into capitalism. In both cases, the physical results of the efforts are gone and the physical damage (in terms of deaths, resources used, etc.) is the same. Yet while It may be very difficult to re-build the motivation for a second effort in the neolithic subsistence community, that is quite different in capitalism. While the merchant heroes of the first effort are bankrupt, somebody else now sits on Keynes' saving or Kalecki's gross profits. The motivational system's independence from values-in-uses in a money economy

393 Kalecki criticizes Luxemburg for confusing the two. See *Kalecki* (1967) page 152.

394 *Kalecki* (1934) page 16, 18.

395 *Kalecki* (1943, 1954) page 82. If Kalecki were to assume, as he mostly does with justification, that workers do not save, then the deduction of such savings can be omitted.

proves utterly robust, one might even consider calling it “anti-fragile” with *Nassim Nicolas Taleb*.³⁹⁶ Capitalists, it seems, hold an instrument in their hands (their consumption and their investment) which is able to perpetuate motivational power for production and employment and can both enrich their class and carry workers along (at least to some extent). Keynes and Kalecki are telling us that the stuff to motivate workers and supplier firms to turn the wheels is not likely to ever be scarce in capitalism. The problem rests in the investor firms: Their motivational stuff is not money but profit, more money – and that stuff is indeed scarce, certainly in the productive economy. Whether investor firms will actually make investments remains as conditional as it already was in the third interpretation of Ricardo’s Law of Say, in Sismondi, Malthus, Marx, and in Keynes’ theory of firms’ investment.

Kalecki’s profit equation runs a transmission gear through the economy at large, which allows investment and capitalist consumption to positively feedback on investment via enabling future profits. However, we need profit-enabling investment first in order for the transmission gear to operate and to allure second movers. But it remains in the realm of conditionality and potentiality when these second movers will be allured, as, according to Kalecki, a convincing theory of investment is still missing. Perhaps Kalecki, like Keynes and Marx before him, did not arrive at one because he remained caught in the productive economy and was, as little as Marx and Keynes, able to see the perpetual drain of the wealth economy on the productive economy’s investment funds. They question whether or not Kalecki’s potentiality of investment will, to a sufficient degree, become reality, may have to be answered from the perspective of the battle between the two economies for the money. There will always be, irrespective of what other circumstances affect firms’ behavior, insufficient employment-generating spending and lack of circuit closure because of the drain of money into the sterile economy. Like Keynes, Kalecki ends by suggesting prosthetics through state intervention and, like Keynes once again, he does not appropriately reflect on the limits and consequences of such prosthetic spending in any great depth.

Kalecki very clearly sees the paradox, which was already present in Sismondi, Malthus, in the third interpretation of Ricardo’s Law of Say, in Marx, and in Keynes: Will the capitalists save the capitalists by buying the $M'-M$ -part of the produce of their colleagues for M' , thereby allowing them to validate their investment M ? He also expected that they would, aside consumption, only do it for investment purposes. He wrote “...profits, to put it paradoxically, are invested even before they come into being”,³⁹⁷ but he knew that the benevolent consequences of investments

396 In the sense of *Taleb* (2012).

397 *Kalecki* (1935) 29.

for the capitalist class in the aggregate are not a sufficient motive for investment for individual capitalists. His profit equation describes a macro-transmission through the economy, one comparable, if more concise, to Keynes' identity of S and I , but in the end he only gives us that capitalists' prior investment, and consumption will enable the receiving supplier capitalists to make new investments. Whether this potentiality becomes a reality remains open-ended.

Section 10. Minsky: Liquidity and firms' employment-generating spending

Hyman P. Minsky

Hyman Philip Minsky (1919 – 1996) was a student of both Henry Simmons and Josef Schumpeter, and influenced by their views on credit³⁹⁸ and financial instability. Furthermore, he was influenced by Irving Fisher's debt-deflation theory.³⁹⁹ Moreover, he was particularly impressed with Keynes. He must have known Marx, partly used his insights, but he was careful when referring to him; he commonly made reference to Marx's ideas via Kalecki.

Minsky's starting point was where Marx and Keynes agree: "For a capitalist system to function well, prices must carry profits. Prices are also vehicles for recovering costs... Firms try to build into their supply prices an excess of cashflows over operating costs... This building takes the form of markups on technologically determined costs..."⁴⁰⁰ "The capital development of a capitalist economy is accompanied by exchanges of present money for future money, the present money pays for resources that go into the production of investment output, whereas the future money is the 'profits'"⁴⁰¹ "For output to be produced over a succession of periods, prices must exceed the per-unit costs of those inputs that directly vary with production"⁴⁰² "Business investment involves spending money to produce goods that are to be used in a production process that are expected to yield revenues in excess of current out-

398 Schumpeter writes, for instance, that: "Der Unternehmer "kann nur Unternehmer werden, indem er vorher Schuldner wird. Er wird zum Schuldner infolge einer innern Notwendigkeit... und ist nicht etwas abnormales, ein durch akzidentielle Umstände zu erklärendes, missliches Ereignis. Sein erstes Bedürfnis ist ein Kreditbedürfnis." (*Schumpeter* (1912) page 208). On Schumpeter see also *Beinhocker* (2006) page 39.

399 *Fisher* (1933) page 337.

400 *Minsky* (1986) page 158 et seq

401 *Minsky* (1993) page 2.

402 *Minsky* (1986) page 161.