

THE PARADOX OF INTEREST REVISITED

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The classical formulation of the paradox of interest is due to Böhm-Bawerk and Schumpeter. Its modern formulation is due to Hausman and Kirzner. I quote Kirzner:

Much – perhaps all – will turn out to depend on the way in which the interest problem is formulated. For present purposes we adopt a modern formulation of the problem, but wish to emphasize that this formulation is very similar in spirit and character to classic formulations... The modern formulation we cite is that of Hausman. Hausman points out that an “individual’s capital . . . enables that individual to earn interest. If the capital is invested in a machine, the sum of the rentals the machine earns over its lifetime is greater than the machine’s cost. Why?” Common observation, that is, tells us that possession of a given stock or capital funds can, by judicious investment (say, in a machine) yield a continuous flow of income (annual rentals net of depreciation) without impairing the ability of the capital funds to serve indefinitely as a source of income. The problem is, how this can occur. *Why is not the price of the machine* (paid by the capitalist at the time he invests in the machine) *bid up* (by the competition of others eagerly seeking to capture the net surplus of rentals over cost) – *to the point where no such surplus remains?* We are seeking, then, an explanation for an observed phenomenon which is, in the absence of a theory of interest, unable to be accounted for. Absent a theory of interest, no interest income ought to be forthcoming, except as a transient phenomenon; competition ought to squeeze it out of existence.

In this note I propose to solve the paradox by suggesting that the exchange of wealth and income should be made the cornerstone of the theory of interest, replacing the exchange of a present and a future good.

To say that the capitalist “invests” his wealth is too simplistic. Investing is bound to confuse the issue. Moreover, possession of wealth does not automatically guarantee access to income. There is an implicit exchange of wealth and income interposed between the capitalist and entrepreneur that needs to be made explicit. Here is what happens.

The capitalist exchanges wealth for income. Income is yielded by the entrepreneur, who converts wealth into capital goods (such as a machine or a fruit tree) and hires a manager to tend them (including the task of setting depreciation quotas in anticipation of having to replace the capital goods at the end of their useful life without further charges to the capitalist). The entrepreneur sets up three accounts for the distribution of the yield after depreciation, namely, one for each of:

- (1) a fixed interest income payable to the capitalist,
- (2) wages payable to the manager,
- (3) the remainder, or entrepreneurial profit, payable to himself.

In this way it is revealed that “investing” involves an exchange of wealth for income, and it is no longer a mystery that the sum total of income payments exceeds the wealth subject to the exchange. If entrepreneurs were not prepared to pay the capitalist an income in exchange for wealth at positive interest, then the latter would simply withdraw his offer to make the exchange and fall back on direct conversion of wealth into income through dishoarding

(ideally, dishoarding gold). From his point of view direct conversion is preferable to, and less risky than, indirect conversion or exchange at zero interest. In this light the modern formulation of the interest problem and the language of “investing” appear rather naive, if not outright boorish. It ignores the triple partnership of the capitalist, the entrepreneur, and the manager underlying the enterprise. It bypasses the problem of managerial compensation, and obscures the emergence of entrepreneurial profit. These, plus the interest income, must come out of the gross yield of capital (after depreciation). Only the last-named, profit, could fall to zero in the process, and it is the task of the entrepreneur to bolster it by looking for more promising production targets, possibly involving the application of a different set of capital goods.

Thus the act of investing is ridden with all sorts of specifics. Therefore it is eminently justifiable that we cut through the maze of irrelevant details with our abstraction of exchanging wealth and income. “Investing” is far too imprecise a term to be useful in developing theory.

Even if the owner of wealth is prepared to take the role of the entrepreneur, or that of the manager, or both upon himself, we still have to assume that there is an underlying exchange of wealth and income. Suppose, for the sake of argument, that the capitalist is acting as his own manager and also as his own entrepreneur. He must still break down his operation into that of three departments: (1) the bondholding, (2) the managerial, and (3) the entrepreneurial departments. Accordingly, he would oversee three accounts: the interest account, the managerial compensation account, and the entrepreneurial profit account. If he wants to have sound financial controls, he must assume that an exchange of wealth and income has taken place between the bondholding and the entrepreneurial departments, and he must not blend the three accounts into one. Only in this way can he be sure that the fixed income is not out of line with the rate of interest prevailing in the market and that, similarly, his managerial compensation is fixed at a level which is consonant with what he could get in the competitive market. Any shortfall in gross income must then hit the entrepreneurial profit account first – a penalty for the poor choice of the line of production, or of capital stock employed. If profit is wiped out, further shortfall would hit the managerial compensation account – a penalty for setting depreciation quotas too low. In this way the interest income is cushioned twice. Repairs must be made before further deterioration could threaten it.

A different order of priorities would make repair, indeed, economic survival, difficult if not impossible. For example, if entrepreneurial profit and managerial compensation were allowed to continue unabated while interest income was reduced to zero, then the operation would no longer have economic justification. The owner-manager would be better off if he sold his capital stock, bought the bonds of other firms, forgot about his own entrepreneurship, and took a managerial job elsewhere. Without such an internal accounting procedure assuming an underlying exchange of wealth and income the investor would lose financial control of his enterprise. He would be at a loss in trying to compare the efficiency of his entrepreneurship and managerial talents with those of others.

Triple-Entry Revenue-Accounting

I submit that the triple partnership of the capitalist, entrepreneur, and manager is so important in the context of the theory of interest that it ought to be formulated as an independent principle, on a par with the Principle of Double-Entry Book-Keeping.

The Principle of Triple-Entry Revenue-Accounting asserts that the capitalist who goes into partnership with the entrepreneur and the manager will succeed best if he adopts the following formula for the distribution of revenue (after depreciation) from the enterprise. He sets up three accounts, in order of seniority moving from the senior to the junior: the interest

account; the managerial compensation account; and the entrepreneurial profit account. Whereas insufficient revenue affects the junior before affecting the senior accounts, all surpluses accrue to the junior (profit) account. Triple-entry revenue-accounting is applicable par excellence in case the capitalist acts as his own entrepreneur or manager. Rather than plowing the three accounts into one, the successful capitalist-entrepreneur shall keep the exchange of wealth and income that underlies his enterprise in evidence.

Triple-entry revenue-accounting is necessary in order to keep the enterprise competitive and economically healthy, to ensure that it is capable of self-correction and self-improvement. Any different order of priority in revenue distribution makes the enterprise economically vulnerable and less competitive.

Synthesis between the time preference and productivity theories of interest

Re-setting the paradigm from exchanging present and future goods to exchanging income and wealth has other important consequences besides disposing of the paradox of interest. It is the point of departure towards a synthesis between the time preference and productivity theories of interest.

It is commonly assumed that an irreconcilable conflict obtains between the two. But as we shall now see, the time preference and the productivity theories are in fact complementary. The instrument of exchanging income and wealth is the gold bond. By definition the rate of interest is that rate which amortizes the market price of the bond by maturity when the face value of the bond falls due. If the bond sells at par, then the rate of interest coincides with the coupon rate. It is higher or lower than the coupon rate according as the bond sells below or above par (so that the rate of interest varies inversely with the bond price).

However, following Carl Menger, we ought to consider not *one* but *two* market prices: the higher *asked price* and the lower *bid price*. The former determines the *floor* and the latter the *ceiling* of the range to which the rate of interest is confined. These two rates are regulated by two independent market processes with different protagonists in charge, as we shall now spell out.

The floor for the rate of interest is determined by *the rate of marginal time preference*. This is just the rate at which the opportunity cost of holding the bond becomes critical to the marginal bondholder. At the next down-tick in the rate of interest he will sell the bond — in view of his opportunity to carry wealth in the form of a present good, gold, rather than a future good, the gold bond.

The ceiling for the rate of interest is determined by *the rate of marginal productivity of capital*, that is, the rate at which the opportunity cost of carrying capital stock becomes critical to the marginal entrepreneur. At the next up-tick in the rate of interest he will sell the stock — in view of his opportunity to carry his earning assets in the form of a higher-yielding gold bond. Thus the rate of interest is regulated from below by the arbitrage operations of bondholders between the bond market and the gold market, and from above by the arbitrage operations of entrepreneurs between the bond market and the market for capital stock.

In more details, bondholders will not let the rate of interest go through the floor. In selling their overvalued bonds they will take profit and put the proceeds into gold — until bond prices fall and the rate of interest bounces back to the rate of marginal time preference. At that time they will buy back their bond.

Likewise, entrepreneurs will not let the rate of interest go through the ceiling. They will stop production, discontinue maintenance of capital stock, abolish depreciation quotas, and put their savings into the undervalued bond — until bond prices rise and the rate of interest falls back to the rate of marginal productivity of capital. At that time they sell the bond at a profit and put the proceeds back into capital stock. The persistent selling of bonds at

the floor, and the persistent buying of the same at the ceiling, will confine the rate of interest to a range and keep it on an even keel.

Note that the arbitrage of the marginal bondholder between the bond and the gold market lends teeth to time preference as it forces the banks and the government to yield to the wishes of the savers. Without it time preference would remain a mere prayer, just a cry in the wilderness.

Gold withdrawal by bondholders, and also by holders of bank notes or deposits, is not a drawback of the gold standard. Rather, it is its main excellence placing as it does the ability to install or to retire capital, and the power to create or to extinguish money, squarely where they belong: into the hands of the people. It is precisely these spontaneous gold flows that prevent the government from usurping the power to create money, and the banks from usurping the privilege to form capital. The idea that the government can organize debt into currency, and that the banks can organize credit into capital, is pernicious and will ultimately lead to the self-destruction of the monetary system and the economy.

References

Israel M. Kirzner, *The Pure Time-Preference Theory of Interest: An attempt at clarification*, in the volume: *The Meaning of Ludwig von Mises*, Norwell (Mass.): Kluwer, 1993, p 166 ff.

A. E. Fekete, *Gold and Interest, A Synthesis between Time Preference and Productivity Theories of Interest*, Memorial University of Newfoundland, St.John's, Newfoundland, 1998, p 14, 52-54, 58-59.

Notes

My 1998 treatise *Gold and Interest* is out of print. Photocopies of the 120 page book can be obtained for €75 per copy (€50 per copy on multiple-copy orders), postage included. Send your order and check to: A. E. Fekete, H-1025 Budapest, Ali utca 9/B, Hungary.

While my theory of interest is applicable to the regime of the gold standard, this does not mean that no lesson can be extracted from it in studying the problem of interest under the regime of irredeemable currency. For example, Gibson's paradox can be considered as a corruption of it, just as irredeemable currency is a corruption of the redeemable variety. I shall deal with this issue in a forthcoming article.

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