


NOTES AND REPLIES

The Relevance of Bitcoin to the Regression Theorem: Reply to Pickering

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JEL Classifications: B53 Austrian, E42 Monetary Systems - Standards - Regimes - Government and the Monetary System - Payment Systems

<https://doi.org/10.35297/001c.155954>

Quarterly Journal of Austrian Economics

Vol. 29, Issue 1, 2026

That bitcoin and other cryptocurrencies have gained acceptance as media of exchange appears to conflict with the regression theorem offered by Ludwig von Mises. In brief, Mises maintained that an item must possess some positive value prior to being used as a medium of exchange. Intrinsically worthless items, he claimed, require some government support to become media of exchange. Hence, if bitcoin or some other cryptocurrency (1) has no use apart from any role it might play as a medium of exchange, (2) does not enjoy government support, and yet (3) comes to be employed as a medium of exchange, it contradicts the regression theorem.

In a recent article, George Pickering (2019, 604–5) has taken issue with my work regarding the two potential ways one might deal with the regression theorem in light of bitcoin:¹

Luther's argument . . . rests on a misinterpretation of the regression theorem which is not uncommon in the broader conversation on cryptocurrencies. Mises's goal when formulating the regression theorem was not to explain the origin of money, nor to comment on which particular commodities could and could not spontaneously emerge as monies, nor even to advise governments on how to launch fiat monies, but specifically and exclusively to provide a subjectivist explanation of the present purchasing power of money. To do this, it requires only that the commodity in question was subjectively valued and exchanged by individuals prior to its use as a medium of exchange, not that it had some objective pre-monetary use.

Pickering argues, in other words, that I misinterpret "the purpose and requirements of the regression theorem" (608). This critical assessment falls short on both counts.

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¹ Pickering (2019) refers exclusively to Luther (2018). The interested reader is directed to Luther (2019), where I consider the historical emergence of bitcoin.

Pickering (2019, 605) accurately explains that the regression theorem was developed “to explain the purchasing power of money using Menger’s subjective marginal utility theory of value.” But I have not denied this. He claims I assert that “the *goals* of the regression theorem extend beyond this explanation of money’s purchasing power” (605, emphasis added). I have not made any such claim about the *goals* of the regression theorem. Rather, I have claimed that the regression theorem’s *practical relevance* is in identifying what items might function as media of exchange.

Pickering goes to great pains to suggest that Mises never intended the regression theorem to be used to determine which items might function as media of exchange. He notes that “Mises subscribed to Carl Menger’s theory of the origin of money” and advanced his regression theorem “in an entirely different section of the book from his discussion of the origin of money, separated by nearly 100 pages” (606). The claim that Mises subscribed to Menger’s theory of the emergence of money is not at odds with my view. Menger (1892), after all, explained how commodity monies might emerge spontaneously in the absence of government support, and Mises echoed this view. Mises (1949, 407) also went further, claiming that “no good can be employed for the function of a medium of exchange which at the very beginning of its use for this purpose did not have exchange value on account of other employments.” Mises is quite clear, in other words, that an item must have some use apart from any role it might play as a medium of exchange in order to gain acceptance as a medium of exchange.

Despite Pickering’s claim to the contrary, Mises appears to have used the regression theorem to rule out the prospect that an intrinsically worthless item might be employed as a medium of exchange without government support. The “link with a preexisting exchange value,” Mises (1934, 131–32) wrote, “is necessary not only for commodity money, but equally for credit money and fiat money”:

No fiat money could ever come into existence if it did not satisfy this condition. . . . Such money must have come into existence in one of two ways. It may have come into existence because money substitutes already in circulation, that is, claims payable in money on demand, were deprived of their character as claims, and yet still used in commerce as media of exchange. In this case, the starting point for their valuation lay in the objective exchange value that they had at the moment when they were deprived of their character as claims. The other possible case is that in which coins that once circulated as commodity money are transformed into fiat money by cessation of free coinage (either because there was no further minting at all or because minting was continued only on behalf of the Treasury), no obligation of conversion being de jure or de

facto assumed by anybody, and nobody having any grounds for hoping that such an obligation ever would be assumed by anybody. Here the starting point for the valuation lies in the objective exchange value of the coins at the time of the cessation of free coinage.

Hence, based on the regression theorem, Mises denies that an intrinsically worthless item (or potential fiat money) can come to be used as a medium of exchange without government support.²

Nonetheless, how Mises intended the regression theorem to be employed is irrelevant. Again, I have merely claimed that the regression theorem's *practical relevance* is in identifying which items might function as media of exchange. The only relevant question for assessing the regression theorem's practical relevance is what the regression theorem tells us about the world that might be used for some practical purpose today.

Pickering (2019, 606) is right to note that “the regression theorem does not claim that a money’s present purchasing power is strictly determined or solely explained by the ratios at which consumers exchanged it prior to or apart from its role as a medium of exchange” and thereby “handles any objection that the regression theorem is unable to account for Bitcoin’s high purchasing power now relative to the humble rates at which it was originally exchanged against other goods.” But here, again, his observation is not a criticism of my work, as I have raised no such objection. Rather, I have claimed that the regression theorem requires an item like bitcoin to have some nonmonetary use *prior to* its employment as a medium of exchange. *After* such an item has come to be employed as a medium of exchange, its value might be wholly governed by its usefulness as a medium of exchange.

On the requirements of the regression theorem, Pickering claims I make a distinction “between a commodity’s subjective valuation by individuals and its objective non-monetary uses, pointing to the latter as supposedly the more relevant to the question of whether Bitcoin violates the regression theorem” (607). I make no such distinction. Rather, I make a distinction between the subjective valuation of an item’s usefulness as a medium of exchange and the subjective valuation of an item’s usefulness for nonmonetary uses.

As I explained in Luther (2018), the claim that an item has some intrinsic worth does not deny that all value is subjective. Indeed, I included an entire section to preempt this charge titled “The Superficial Subjective Value Argument,” from which I will quote a single paragraph:

² I use the term *government* here to denote any entity capable of (i) nullifying the contractual obligation to redeem money substitutes or (ii) prohibiting coinage.

The problem with this view, which I refer to as the superficial subjective value argument, is that it misunderstands what monetary economists mean by “intrinsic.” Monetary economists do not deny that all value is subjective. By “intrinsic worth,” they mean nonmonetary use value—or, value apart from any role the item might play as a medium of exchange. All value is subjective. But there is one’s subjective valuation of an item’s usefulness as a medium of exchange and one’s subjective valuation of an item’s usefulness apart from that role. One need not reject the fundamental principle of subjective value to distinguish between monetary and nonmonetary uses. Indeed, valuations of both uses are typically presumed to be entirely subjective. (Luther 2018, 33)

It should be clear, in other words, that the regression theorem described in Luther (2018) relies exclusively on subjective assessments.

Pickering claims I misinterpret the purpose and requirements of the regression theorem. In fact, I have done neither. His criticism misrepresents my work.

Submitted: December 06, 2021 CDT. Accepted: December 13, 2021 CDT. Published: February 13, 2026 CDT.



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