The incoherence of the TSSI: A reply to Kliman and Freeman

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In this paper, we examine the substantive arguments proposed by Kliman and Freeman (2006) in their reply to Mohun (2003). We find them seriously deficient.

1. Introduction

In recent years, considerable attention has been paid to the temporal single-system interpretation (TSSI) of Marx’s Capital. Its adherents claim that the TSSI ‘refutes’ what they see as false allegations that Marx made logical mistakes—false allegations based on a ‘simultaneist’ interpretation of Marx that the TSSI ‘shows’ is untenable. They claim that, while Marx was not necessarily correct, the TSSI has an explanatory power surpassing that of any other interpretation of Capital, and that only the TSSI is consistent with Marx’s method and results (Kliman, 2001; Kliman & Freeman, 2006). This short paper deals with the substantive arguments in Kliman and Freeman.¹

2. Reprise of a debate

Marxism holds that profits exist because labour is exploited. ‘Exploitation’ has a precise meaning: that the worker is paid the full value of the labour power she supplies, but that property relations entail the appropriation by the capitalist of what the worker produces, whose value is greater than the value of labour power. This theoretical proposition is part of the core of Marxism, however else that core is understood.
In contemporary Marxian economics, this theoretical proposition is called the ‘fundamental Marxian theorem’ (FMT). Loosely, it states that the existence of surplus labour is necessary and sufficient for the existence of profits. Roemer (1981) provides a precise statement of the FMT, and goes on to prove it for a reproducible economy. The proof requires seven assumptions plus four conditions underlying a ‘reproducible solution’, and if any of these is violated, then the FMT does not necessarily hold. Roemer himself discusses the role of the assumptions, and provides some counterexamples to the FMT (ibid: 48, 50).

Kliman (2001: 99) wrote ‘general versions of the FMT ... prove that the theorem holds for any set of positive market prices ... Yet these versions of the FMT rely on an equally restrictive condition: in every period, a positive physical surplus of each good must be produced’. This is misleading. Roemer’s FMT does not hold for any set of positive market prices. It holds for prices that support a reproducible solution (Roemer, 1981, theorem 2.11: 48), and reproducibility requires a strictly positive vector of net products (ibid., definition 2.5(a): 41). Hence Kliman’s numerical example (Kliman, 2001: 100), which demonstrates that if one of the conditions for the FMT does not hold, then the FMT does not hold, is quite beside the point. Nobody could disagree.

What Kliman tried to do was to show that:
1. negative net products of some goods exist in the real world;
2. hence theorems that assume that they do not do not apply to the real world—this includes Roemer’s FMT and all other variants of Marxism in which inputs and outputs are valued simultaneously;
3. only the TSSI escapes this stricture, because in the TSSI, the FMT holds ‘under completely general conditions’ with ‘absolutely no restrictive postulates’ (Kliman, 2001: 106, emphasis in original).

Hence only the TSSI ‘vindicates the logical coherence of the exploitation theory of profit’ (ibid: 110).

As regards point 2: can an ‘unrealistic’ theory have explanatory power? No theory is entirely realistic. Because they do more than describe, all theories make assumptions. All theories abstract from empirical reality, and a theory is a good one if it has explanatory power. But all of these terms are loaded and carry a variety of interpretations. Issues concerning precisely what a theory is, how its adequacy
should be assessed, what are necessary and what sufficient conditions for propositions within a theory, and what is required to falsify a particular proposition, are always delicate issues. The degree of the lack of realism of the assumptions required for particular propositions, and the extent to which the explanatory power of the theory is thereby affected are matters of judgement, and we leave it to the interested reader to judge the empirical plausibility of Kliman’s constructed numerical examples.

Regarding point 3, Mohun (2003) showed that the TSSI FMT required a particular theoretical concept of temporality, a particular understanding of the measurement of value, and some particular sign restrictions (ibid: 98–9; see also Veneziani, 2004). These are not ‘completely general conditions’. Unwittingly perhaps, Kliman and Freeman clearly illustrate the difficulties with the TSSI. We offer three examples.

2.1 Example 1
(Kliman & Freeman, 2006: 121) A single good is produced. Its price \( p \) is constant, as are gross output \( x \), the non-labour input \( a \), and labour input \( L \). Assume that \( p = x = L = 1 \), and that \( a > 1 \). The aggregate money price of the net product is \( p(x - a) \), and the simultaneist monetary expression of labour time (MELT) is \( \frac{p(x - a)}{L} \). Both are \((1 - a)\) and are negative. The TSSI aggregate value equation is\(^2\)

\[
P(t + 1) - \frac{\tau(t + 1)}{\tau(t)} C(t) = \tau(t + 1) L(t)
\]

(1)

On substituting the assumed values, this becomes

\[
1 - \frac{\tau(t + 1)}{\tau(t)} a = \tau(t + 1)
\]

(2)

or

\[
\tau(t + 1) = \frac{\tau(t)}{\tau(t) + a}
\]

(3)

Kliman and Freeman conclude that equation (3) ‘shows clearly that if the initial condition \( \tau(0) \) is positive, then all subsequent values of \( \tau \) must also be positive. Surplus labour and profit have the same sign’.

But if we are interested in ‘completely general conditions’, then consider a steady state in which the temporalist MELT \( \tau \)
does not change from period $t$ to period $t + 1$. (And, after all, all variables are assumed to be constant in this example.) Equation (2) then becomes

$$1 - a = \tau$$  \hspace{1cm} (4)

and $\tau$ is negative by the assumption that $a > 1$. This is supposed to illustrate that ‘$\tau$ must always be positive’ (ibid., emphasis in original).

Clearly, as Mohun (2003) emphasised, quite a lot hinges on the definition of the temporalist MELT and its associated ‘sign restrictions’.

Kliman and Freeman are concerned to ‘prove that the challenged “sign restrictions” must hold true’. Their ‘proofs’ are the subject of the next two examples.

2.2 Example 2: ‘Proof’ that $P > 0$, $C \geq 0$
(Kliman & Freeman, 2006: 122) Kliman and Freeman’s argument is that, under commodity production, no prices are negative and some are positive; inputs and gross outputs cannot be negative, and some outputs must be positive. Therefore $P > 0$, $C \geq 0$. The conclusion does not follow. That $p$ and $x$ are semi-positive vectors does not imply that their product $P$ is strictly positive.

2.3 Example 3: ‘Proof’ that the temporalist MELT is initially positive and finite
(Kliman & Freeman 2006, pp. 122–3) Kliman and Freeman are emphatic that the temporalist MELT $\tau$ is not undefined, because it is the ratio of total price to total value. Rearranging equation (1),

$$\tau(t + 1) = \frac{\tau(t)P(t + 1)}{C(t) + \tau(t)L(t)}$$  \hspace{1cm} (5)

This serves to define the MELT of one period in terms of the preceding period’s MELT. For this to be a definition, an independent definition of $\tau(0)$ must be given. Kliman and Freeman conspicuously fail to do this. They have no explanation of why $\tau(0)$ is independent of $\tau(-1)$—if it is not, there is an infinite regress; if it is, then there must be some explanation of why $\tau(1)$ is not independent of $\tau(0)$. None is forthcoming, and hence the TSSI MELT is undefined. Nevertheless, it is clear from
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equation (5) why it is so important for Kliman and Freeman to be able to prove that $\tau(0)$ is positive and finite. Consider, then, their ‘proof’, which we spell out step by step.

1. Define the price of any commodity as $\tau$ times the amount of labour the commodity commands in exchange.

$$p_i(t) = \tau(t)l_i(t)$$  \hspace{1cm} (6)

2. Define the price of a unit of money as being unity.

$$p_m = 1$$  \hspace{1cm} (7)

3. Select an arbitrary date (period 0). Then

$$p_m(0) = \tau(0)l_m(0) = 1$$  \hspace{1cm} (8)

4. Suppose that a unit of money in period 0 commands a positive and finite amount of labour.

5. Then, since

$$\tau(0) = \frac{1}{l_m(0)}$$  \hspace{1cm} (9)

the temporalist MELT is initially positive and finite.

There is no logical deduction here, just a series of assumptions, with no explanation of what is meant by ‘the amount of labour the commodity commands in exchange’. Why does this reasoning hold at $t = 0$ but not at any other $t$? If this argument is valid for ‘any date arbitrarily selected as the “initial” one’, then at any specified date $t$ it is possible to consider $\tau(t)$ as determined by variables at $t$ only (and not at previous dates); but this contradicts equation (5). There is also some confusion in determination, since equation (6) uses $\tau$ to define price, whereas equation (9) uses the labour commanded price of money to determine $\tau$. In sum, this ‘proof’ by assumption merely confirms that the temporalist MELT is undefined.

3. Time and the MELT

Production takes time; inputs are temporarily prior to outputs. How should inputs be valued? The answer given by almost all schools of economics is that they should be valued at current or replacement cost. When prices are changing, we want to know whether the firm is viable and can
reproduce itself. With a labour theory of value, there is another reason: we want to be able unambiguously to attribute the value of net output to the labour that produced it.

For Kliman and Freeman, equation (1) shows that the value created by labour is equal to total sales revenue less the monetary expenditure on used-up constant capital, each deflated by the appropriate *melt*. But

\[
C(t) = p(t)c(t) \\
= p(t+1)c(t) - \{p(t+1) - p(t)\}c(t) \\
\]

so that

\[
\frac{P(t+1)}{\tau(t+1)} - \frac{p(t+1)c(t)}{\tau(t)} + \frac{\{p(t+1) - p(t)\}c(t)}{\tau(t)} = L(t) \\
\]

(10)

The third term on the left hand side is an inventory revaluation because of price changes. Should its (positive or negative) effects be included as part of the value created by living labour? We say ‘No’, whereas Kliman and Freeman say ‘Yes’.

Because Kliman and Freeman include inventory revaluation effects as part of the new value created by labour, value is dissociated from labour performed. Instead, value is determined from observed prices and quantities for some value of the *melt*. But the TSSI *melt* is undefined, and hence there is no determination of the new value created.

4. Conclusion

In their use of logic, their reporting of the views of those with whom they disagree, and in their elaboration of their own fundamental categories, Kliman and Freeman leave something to be desired.

Notes

1. Space constraints preclude our replying to the more trivial inaccuracies and distortions in Kliman and Freeman.
2. These symbols are defined in Kliman (2001) and repeated in Mohun (2003) and Kliman and Freeman (2006).
References


