OTTO BAUER’S *BETWEEN TWO WORLD WARS?* (1936)

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*I owe thanks to the Three Michaels: Howard, Krätke and Schneider.*
Otto Bauer (1881-1938) was one of the most prominent theorists of Austro-Marxism, and also played a very important role in the leadership of the Austrian Social Democratic Party from the early years of the twentieth century until it was destroyed by the Dolfuss putsch of 1934. Born in Vienna, Bauer grew up in a wealthy but troubled Jewish family. His much-loved sister Ida was an early patient of Sigmund Freund’s and is known in the psychoanalytic literature as ‘Dora’ (Rogow 1979). Otto Bauer studied law and economics at the University of Vienna, where his fellow-students in Eugen von Böhm-Bawerk’s graduate seminar included Rudolf Hilferding, Ludwig von Mises and Joseph Schumpeter.

Apart from three years as a prisoner of war in Russia (between 1914 and 1917) Bauer spent his entire adult life in the service of Austrian Social Democracy, writing prolifically for party journals and publishing many books and pamphlets on economic, political and philosophical themes; his collected works fill nine substantial volumes. Bauer’s best-known work is also the only book that has been translated in its entirety into English: *The Question of Nationalities and Social Democracy* (Bauer 1907). There is also a good but drastically abridged English translation of *The Austrian Revolution* (Bauer 1925), and extracts from this and other works in Bottomore and Goode (1978), which remains the best introduction in English to the intellectual foundations of Austro-Marxism. In German there is a substantial literature on Bauer, including two early biographical works by former colleagues (Braunthal 1961; Leichter 1970); a recent, lengthy biography (Hanisch 2011); and a massive study of Bauer’s social and political thought (Czerwinska-Schupp 2005). There is no biography in English.

Beginning in 1904, Otto Bauer wrote many articles on economics for the party press, only one of which has been translated. This is his critique of Rosa
Luxemburg’s *Accumulation of Capital* (Bauer 1913), which between 1983 and 1991 was the subject of several articles in *History of Political Economy* (Bronfenbrenner and Wolfson 1983; Orzech and Groll 1983, 1991; Samuelson and Wolfson 1986). Bauer’s own interest in Marxian political economy was reawakened by the Great Depression, which led him to publish one substantial volume, *Capitalism and Socialism after the World War. Volume 1: Rationalisation and False Rationalisation* (Bauer 1931), and to begin work on a second, companion volume. This was still unfinished when, in February 1934, he fled Austria to avoid imprisonment and probable execution by Dolfuss’s clerical-fascists. The unfinished manuscript of this second important work has been transcribed by Michael Krätke, and will be discussed below.

Bauer’s last major book, *Between Two World Wars?* (hereafter ZZW, the initials of the German title, *Zwischen Zwei Weltkriegen*?), was written while he was in exile in Brno and published in Bratislava in 1936. Brief extracts are translated in Bottomore and Goode (1978), and a full English translation by John King and Michael Krätke is in progress. An Italian translation, edited by Enzo Collotti, was published in 1979 and a Japanese translation in 1992, while the proceedings of a conference held in Vienna in 2006 to celebrate the 70th anniversary of the book were published in 2008 (Baier, Trallori and Weber 2008). Bauer himself did not long survive the appearance of ZZW. In May 1938 Hitler’s designs on Czechoslovakia forced him to leave for Paris, where he suffered a fatal heart attack three months later. A final short book, *The Illegal Party* (Bauer 1939), was published posthumously.

Although it begins with a discussion of the causes and effects of the Great Depression, ZZW is primarily a text on politics and international relations. Bauer’s principal themes are political: the rise of fascism; the threat to freedom and
democracy that it posed; the prospect of a second world war; the consequences of such a war; and the urgent need to promote an ‘integral socialism’ that would transcend the splits in the international socialist movement that occurred in 1914 and 1917 and enable concerted resistance to be offered to the fascist threat. Bauer’s aim in writing ZZW was to encourage the reunification of the European socialist movement, and his analysis of the economic crisis was undertaken not for its own sake but rather to allow him to identify the material basis for this vital change in the political superstructure. But it is a work of political economy, broadly defined. Bauer sees the triumph of fascism in Central Europe as a direct consequence of the Great Depression; fascism is an extreme version of the more general tendency towards a ‘regulated economy’ that could be seen throughout the capitalist world. In order fully to comprehend these developments, he maintains, it is necessary first to understand the causes of the Depression.

The book is divided into three (unnumbered) Parts, each with several chapters (also unnumbered). Part 1, ‘The Crisis of the Economy’ occupies the first 84 pages of the German original. Part 2, ‘The Crisis of Democracy’, is almost twice as long (pp. 85-222), while Part 3, ‘The Crisis of Socialism’, is only slightly shorter (pp. 224-343). It is, for the most part, clearly and vigorously written, though there are places where Bauer seems suddenly to have remembered that he was writing in German and was therefore obliged to include a few twenty-five-line sentences where the reader is forced to play ‘hunt the main clause’. Unusually for Bauer, who was very widely read in at least four languages (German, English, French and Russian), and who normally cited extensive source material in the footnotes of his books, ZZW contains few references other than to the classic works of Marx and Engels. Presumably this was a
consequence of the author’s exile, which deprived him of access to his own books and to the extensive Vienna library system.

Bauer begins with a detailed description of economic events between 1918 and 1935, in the first chapter of ZZW (Bauer 1936, pp. 10-20). Next he discusses the ‘revolution and counter-revolution in prices’ in the two decades beginning in 1914, before turning to an analysis of the agricultural and industrial crises in the third and fourth chapters (ibid., pp. 20-36, 36-42, 42-9). Only in the fifth chapter, ‘A Diagnosis of the Crisis’, does he provide an explanation of the Great Depression; I shall concentrate on this question in the present paper (ibid., pp. 49-66). This chapter is followed by chapters on the growth of regulation in the new phase of ‘bureaucratically directed monopoly capitalism’ and on Bauer’s own prognosis, in which he takes a pessimistic view of the prospects for reformist socialism, given that a return to sustained prosperity seemed most unlikely (ibid., pp. 66-78, 78-93).

Before outlining the account of the crisis theory that Bauer sets out in chapter 5 of ZZW, some background will be helpful. Underconsumption theories occupy a rather awkward place in Marxian political economy. They can be traced back to Marx himself, who dismissed underconsumption as ‘sheer tautology’ (Marx 1885, p. 414) but also described Say’s Law as ‘childish babble’ (Marx 1862-3, p. 502) and insisted that ‘the sale of commodities, the realization of commodity capital and thus of surplus value, is limited, not by the consumer requirements of society in general, but by the consumer requirements of a society in which the vast majority are always poor and must always remain poor’ (Marx 1885, p. 320).

Similar ambivalence can be found throughout the economic thinking of the Second and Third Internationals (Howard and King 1989, 1992). It can still be detected in the literature today, with advocates of underconsumption in the Baran-
Sweezy tradition being sharply criticised by advocates of the falling rate of profit school as vulgar Marxists who give priority to problems with the realisation of surplus value rather than difficulties in producing it. This, it is argued, is objectionable on both methodological and political grounds. Methodologically, it involves a focus on the superficial appearances of market exchange rather than on the underlying reality of the production process. Politically, it suggests that the fundamental contradictions of the capitalist mode of production can be overcome by Keynesian-style reforms, rather than requiring socialist revolution. Otto Bauer’s Austro-Marxism led him to discount the methodological problem, and he was himself ambivalent about the political question.

Reduced to its most simple elements, there are three theories of economic crisis in Marx, which can be found principally – again, this is a bold generalisation – in each of the three volumes of *Capital*. In volume I, cyclical fluctuations in the size of the reserve army of the unemployed lead to corresponding fluctuations in real wages, in the rate of exploitation, and hence in the rate of profit, driving the business cycle. This theory of crises was emphasised by Maurice Dobb (1937) and rediscovered by Andrew Glyn and Bob Sutcliffe (1972) in their influential account of the ‘profit squeeze’ that ushered in the age of stagflation.

In volume II, where Marx sets out his original and important analysis of the expanded reproduction of the capitalist economy, considerable attention is paid to the problem of proportionality between the two departments, which produce means of production (department I) and consumer goods (department II); sometimes a further distinction is drawn between wage-goods and luxuries, the latter produced by department III. Since capitalism is an anarchic system, with no omniscient Walrasian auctioneer to ensure that the departments grow at the appropriate rates, a lack of
proportionality between them is an ever-present and disruptive possibility. In a general sense, some form of disproportionality underpins all Marxian theories of over-production (see, for example, Hilferding 1910), and the tendency for department I to expand too quickly, relative to department II, is the basis of all underconsumption theories. It can be expected to occur because of the tendency for real wages to lag behind productivity, so that the rate of exploitation rises, the wage share in net output falls, and working-class consumption lags behind the growth of output. The volume III analysis, by contrast, sees economic crises as the result of a tendency for the rate of exploitation to rise too slowly, if at all, relative to the supposedly inexorable increase in the organic composition of capital.

Bauer’s position on underconsumption changed over time. In his first published work on political economy, an article written for *Die Neue Zeit* in 1904, he identified it as the most significant form of disproportionality in the capitalist economy (Orzech and Groll 1991, pp. 747-50). Nine years later, however, he criticised Rosa Luxemburg’s version of underconsumption theory and set out a numerical example that illustrated the possibility of a stable long-term accumulation path. His own explanation of capitalist crises now stressed fluctuations in the rate of exploitation, together with a rising organic composition of capital, and was closer in spirit to Marx’s volume I and volume III analyses (Bauer 1913).

In the 1931 book his main concern was with the consequences of technical and organisational change, which constitute only *false* rationalisation of which the social costs greatly exceed the private benefits. Bauer distinguishes two dimensions of such social costs. At the micro level, the intensification of labour saps the energy of the worker and induces premature ageing. In macroeconomic terms, the displacement of workers by machines gives rise to technological unemployment. These heavy costs
are the result of ‘the anarchy, the planlessness of the capitalist mode of production’ (Bauer 1931, p. 199), and cannot be overcome within it. They point to the need for a rationalisation of the social order, by which Bauer means the replacement of capitalism by a socialist society.

There is no clear underconsumption message in *Rationalisation and False Rationalisation*, contrary to the claim of Orzech and Groll (1991, p. 755). The only brief reference to the causes of crises is an allusion to the ‘echo effect’ that Marx had identified in which fixed capital tends to be replaced every ten years or so, giving a definite periodicity to the business cycle. ‘The ultimate cause of this industrial cycle’, Bauer writes, ‘is that in capitalist society the renewal, expansion and technological improvement of the productive apparatus is not undertaken throughout the various years in a planned manner, but is always concentrated in a few years and then discontinued for several years’ (Bauer 1931, p. 185; cf. Marx 1862-3, p. 495, 1885, pp. 188-9, 318-20, 454). This is followed almost immediately by a disclaimer: ‘This is not the place to set out the mechanism of the industrial cycle, which will be done in the following volume’ (Bauer 1931, p. 186).

In the unpublished manuscript that was intended as a first draft of this complementary volume to *Rationalisation and False Rationalisation*, Bauer has much more to say about crisis theory, and he also provides an impressive list of references to the (mainly bourgeois) authorities that he had consulted. These included Aftalion, Carver, Cassel, J.M. Clark, Hawtrey, Hayek, Hobson, Keynes, Mises, Mitchell, Pigou, Robertson, Spiethoff, Tugwell and Wicksell, together with the ‘long wave’ theorists De Wolff and Kondratiev. Most important, Bauer sets out what might be termed a ‘knife-edge’ account of the instability of the capitalist economy, in which the system
tends either to produce too much surplus value, leading to an underconsumption crisis, or too little, generating a falling rate of profit crisis:

Thus we see two quite different types of crisis. We shall describe crises of the first type as crises of the rate of profit, and crises of the second type as crises of consumption.

Crises of the rate of profit occur because the rate of surplus value does not increase, so that, with an increasing organic composition of capital, the social rate of profit must fall. Crises of consumption occur because the rate of surplus value does increase, and with it the social rate of accumulation, so that the rate of growth of consumption falls, leading to a decline in the demand for means of production. *Crises of the rate of profit are the result of a slow increase in the rate of exploitation; crises of consumption are the result of a rapid increase.* (Bauer 1932-4, pp. 174-5; original stress)

This is a remarkable anticipation of a 1965 paper on Marx by Martin Bronfenbrenner, setting out a simple algebraic Marxian model ‘in dilemma, or Scylla-Charibdis form’, in which ‘we will eventually become unable to find any rate of profit which will simultaneously be high enough to avoid a liquidity or hoarding “crisis” (depression) from the capitalist side, and low enough to permit the output of the system to be “realized” or purchased, primarily by the workers, without an overproduction or realization “crisis”’ (Bronfenbrenner 1965, pp. 433, 420; original stress). Although he does not use the word, Bronfenbrenner’s reference to ‘overproduction crisis’ is simply another way of stating the underconsumption theory.
I am almost certain that Bronfenbrenner was unaware of Bauer’s work when he wrote this influential article. The 1932-4 manuscript had not been discovered in 1965, and there is no evidence that Bronfenbrenner himself had ever read ZZW. Indeed, the knife-edge model is not clearly set out in Bauer’s book. Writing from memory, without access to his manuscript, his notes or his library, he is not as precise or as incisive on this question as he had been in the earlier version. He does distinguish two ‘mutually exclusive theories of crisis’ that were ‘advocated in the capitalist world and have had a practical influence on economic policy since the 1929 crisis broke out’ (Bauer 1936, p. 59). One theory was that wages and ‘social burdens’ were too high, and needed to be reduced in order to restore profitability; the other was that wages were too low, and should be increased in order to raise the purchasing power of the masses (ibid., pp. 59-61). Bauer does not mention the volume III, falling rate of profit, theory in this context.

Instead he develops the underconsumption side of the knife-edge in much more detail, and in an appendix sets out the first ever mathematical model of underconsumption; a translation is given in the appendix to the present paper. Bauer uses some elementary calculus to compare the ‘required’ and the actual rates of growth of constant capital. He defines \( c = T.db \) as ‘the additional constant capital needed to produce the increasing quantity of consumer goods’, where the coefficient \( T \) is ‘the technical requirement for means of production’, which ‘depends on the development of technology’; Bauer assumes that it remains constant. The required constant capital grows at the rate \( dc/dt \). Since the rate of exploitation tends to increase, so that the share of wages in net output tends to fall, the actual rate of increase in constant capital \( a (= da/dt) \) will exceed \( c \), causing overproduction of the means of production as a direct consequence of underconsumption (Bauer 1936, pp. 351-3).
Unfortunately, as Mike Howard pointed out to me many years ago, Bauer’s model contains a fatal flaw. It does entail overproduction of the means of production if the means of production are used only in the production of consumer goods. If means of production are also used as an input into their own production, however, no such overproduction is implied; Bauer’s coefficient $T$ is incorrectly specified. I shall return to this fundamental problem shortly.

In all likelihood ZZW had a very small print run, and it seems to have gone very largely unnoticed, at least in the English-speaking world; I have found no academic reviews. Disappointingly there is no reference to it in Gottfried Haberler’s otherwise magisterial *Prosperity and Depression* (Haberler 1937), though there would, of course, have been no language barrier for him. The one exception to this general neglect is an important one. In his *Theory of Capitalist Development* Paul Sweezy constructs a variant of Bauer’s model, which he describes as ‘highly interesting’ and ‘essentially correct’, but criticises as ‘not presented quite accurately’ and as failing to ‘bring out with sufficient clarity the connection between underconsumption and the basic characteristics of capitalist production’ (Sweezy 1942, p. 186).

In his own model there are eleven equations (Bauer’s has eight). In the crucial fourth equation, Sweezy sets the required addition to means of production ($c$) equal to the increase in consumption goods output ($dw + dl$), multiplied by which he terms ‘the factor of proportionality’ ($\gamma$), so that $c = \gamma (dw + dl)$ (*ibid.*, p. 187). In a footnote, Sweezy maintains that ‘$\gamma$ is essentially the relation described in modern business cycle literature as “the acceleration principle” or simply as “the relation”’ (*ibid.*, p. 187n). He then points to ‘a contradiction’ between the rate at which capitalists tend to increase the rate of investment and the rate at which they allow consumption to grow,
which (given the factor of proportionality) ‘warrants only a declining rate of
investment’. In consequence, ‘the output of consumption goods will display a
continuous tendency to outrun the demand’ (ibid., p. 189).

There were significant defects in Sweezy’s model, some of which were soon
identified by a Japanese critic, Y. Yoshida, who objected to the assumption that \( \alpha \), the
factor of proportionality, was constant. If Sweezy had used gross rather than net
magnitudes, and had distinguished between ‘capital goods in general and capital
goods for the second department’, Yoshida suggested, he would have been unable to
defend the assumed constancy of \( \alpha \) (Yoshida 1953, p. 361). Further difficulties were
pointed out by Evsey Domar in his seminal American Economic Review article on the
theory of economic growth, where hedevotes several pages to a critique of Sweezy
(Domar 1948, pp. 787-94). Sweezy’s model, Domar argues, involves ‘a
confusion…between absolute and relative rates of growth’, and this ‘unnecessarily
weakens his own position’ (ibid., pp. 792, 790). Domar is not entirely clear on the
implications of this for the stability of real-world capitalist economies, but he seems
to be arguing that underconsumption is even more likely to be a serious problem,
especially in the early stages of capitalist development, than Sweezy himself had
claimed. Sweezy (1953) accepted the validity of these technical criticisms but never
attempted to produce an improved version of his own model. While he continued to
assert the fundamental importance of underconsumption in advanced capitalism, most
famously in Monopoly Capital (Baran and Sweezy 1966), he showed no interest in
formalising the analysis.

There appear to have been only two subsequent contributions to the literature
that Bauer initiated. The first was by Nicholas Georgescu-Roegen, who agrees with
Domar that Sweezy’s model contains ‘serious mathematical errors which completely
invalidate the proof”. But, he continues, ‘even Domar does not seem to have realized precisely where the errors lie’ (Georgescu-Roegen 1960, p. 225). I find his own mathematics impossible to follow, but his conclusion is clear enough: even assuming that the ‘Marxian description of capitalism’ provided by Sweezy is correct, it ‘does not justify any prediction of the breaking down of capitalism’. Capitalism is an evolutionary system, which is too complex to model, and any supposed mathematical proofs of its future evolution should therefore ‘be viewed with skepticism’ (ibid., pp. 241, 243).

The second contribution was by Michael Schneider, in the appendix to chapter 4 of his book on J.A. Hobson. As Schneider had noted in his earlier New Palgrave entry on underconsumption, a variant of the acceleration principle ‘can be seen as underlying all underconsumption theories’ (Schneider 1987, p. 742). In the book he uses the acceleration principle to establish the ‘warranted capital-output ratio’ (in effect, Sweezy’s ‘factor of proportionality’ between capital and output), which he, too, assumes to be constant. This implies the existence also of a (larger) warranted ratio of capital to consumption. As wages lag behind labour productivity and the wage share in output declines, the actual ratio of capital to consumption increases, inducing capitalists to cut back on investment in order to restore the warranted ratio; and this gives rise to a crisis, a subsequent recovery, a boom and in due course to a renewed crisis (Schneider 1996, Tables 4.2, 4.3).

I imagine that Otto Bauer would have welcomed Schneider’s formulation, as it neatly captures the essence of his own argument in the appendix to ZZW. While technically superior to Bauer’s version, it does, however, remain vulnerable to the objection raised by Mike Howard, which can itself be traced back at least to Mikhail Tugan-Baranovsky: why is it not possible to use machines to make machines to make
machines…without any discernible limit? Why should the warranted ratios of capital to output, and capital to consumption, not have a tendency to increase? After all, capitalism is all about profit, not the satisfaction of human needs. Is it not what Marx had predicted in volume III of *Capital*, where the organic composition of capital is supposed to rise inexorably over time? Bauer himself had made precisely this point in his review of Luxemburg.

Ironically, the very same criticism had been made of the underconsumption theory of William Trufant Foster and Waddill Catchings several years before the publication of *ZZW*, by another Austrian economist – Friedrich von Hayek. In his lengthy critique of ‘the “paradox” of saving’, published in *Zeitschrift für Nationalökonomie* in 1929 and (in an English translation) in *Economica* two years later, Hayek maintained that Foster and Catchings had misunderstood the nature of capital formation. They ‘base the whole of their exposition on an hypothesis of what may be called single-stage production’, ignoring the ‘greater and more productive “roundaboutness” in the methods of production’ that characterises the capitalist production processes (Hayek 1931, pp. 141, 143). Austrian capital theory, Hayek believed, was sufficient to refute the underconsumptionists, and he provided two elaborate numerical examples to illustrate the point (*ibid.*, pp. 145-6).

As a student of Böhm-Bawerk’s, Otto Bauer would have been aware of the arguments, and he does cite Hayek in two places in the 1932-4 manuscript (Bauer 1932-4, pp. 254, 279). But both references are to Hayek’s views on the theory of money, and Bauer seems to have been unaware of the 1929 article on the ‘paradox of saving’. At least, he does not attempt to rebut the underlying argument, either in the manuscript or in *ZZW*. Had he done so, he would probably have insisted that Hayek had shown only the *possibility* of a profitable lengthening of the average period of
production; he had not set out the conditions under which it actually would be profitable. Still less had Hayek demonstrated that these conditions rendered an underconsumption crisis impossible.

Hayek himself never returned to the question, and to the best of my knowledge no subsequent Austrian theorist has attempted to formalise his argument. In 2013 the nearest thing that can be found to a formal model of underconsumption is in the Kaleckian literature on ‘wage-led growth’ (Hein and Stockhammer 2011). Perhaps significantly, one of the principal contributors to this literature, Engelbert Stockhammer, also participated in the 70\textsuperscript{th} anniversary conference on ZZW (Stockhammer 2008). There are some obvious applications of these Kaleckian models to the Global Financial Crisis of 2007-8, though a Bauer-Kalecki synthesis would need to include some consideration of money, finance, asset price bubbles and the growth of consumer debt. These topics are not to be found either in Kalecki or in ZZW, but Bauer’s core insights have much to offer us in the new age of austerity.

**Appendix: Bauer’s Underconsumption Model** (translated by John King and Michael Krätke)

We denote by $w$ the national income, or, as Marx puts it, the value product of social labour, that is, the sum of the value of the commodities produced by society in any particular period of time, less the value of the means of production needed to produce them. Part of the value product is accumulated, converted into capital, to increase the constant capital, in Marx’s sense; that is, it is used to buy means of production to make profits for capital. We denote this by $a$. The other part of the value product is consumed; we denote this by $b$. Thus:

\[ b = w - a. \]
In the period $dt$, the total value of the commodities that are consumed grows from $b$ to $b + db$ units of value. Constant capital of $c$ units of value is needed to produce consumer goods with a value of $db$; $c$ is the additional constant capital needed to produce the increased quantity of consumer goods. Let

$$c = T.db.$$ 

The coefficient $T$ depends on the development of technology. We shall term it the technical requirement for means of production. To simplify our analysis, we shall assume that it remains constant.

If the increase in consumption grows from one period to the next, the constant capital necessary for the production of this increase in consumer goods will also grow. The rate at which it increases is:

$$dc/dt = T. d^2b/dt^2.$$ 

That part of the value product of social labour that is accumulated is used to increase constant capital. In a period $dt$ the accumulated part of the total value product increases from $a$ to $a + da$. The rate at which it increases is thus $da/dt$. If $da/dt > dc/dt$, then society’s constant capital is growing faster than the requirement for constant capital to produce the increase in consumer goods, and there is over-production of the means of production. Consumption lags behind society’s productive capacity. This is the case when:

$$da/dt > T.d^2b/dt^2.$$ 

Over-production of capital thus occurs whenever the relation between the pace of capital accumulation and the acceleration of the growth of consumption is larger than the ‘technical requirements for means of production’.
If consumption grows at a decreasing rate, \( d^2 b/dt^2 < 0 \). Now if the value product of social labour and the rate of surplus value are increasing, then \( da/dt > 0 \), so that in this case it is always true that

\[
\frac{da}{dt} > T \frac{d^2 b}{dt^2},
\]

and in this case consumption always lags behind society’s productive capacity.

Given

\[
\frac{d^2 b}{dt^2} = \frac{d^2 w}{dt^2} - \frac{d^2 a}{dt^2},
\]

then, if

\[
\frac{d^2 a}{dt^2} > \frac{d^2 w}{dt^2}
\]

it follows that \( \frac{d^2 b}{dt^2} < 0 \).

As long as the rate of surplus value remains constant, and the capitalists accumulate a constant proportion of the surplus value that they appropriate, the accumulated capital in each period will grow at exactly the same rate as the value product of social labour. Once the rate of surplus value increases, consumption will grow more slowly than the value product of social labour. Once the rate of surplus value, and hence also accumulation, grows faster than the value product of social labour, the rate of growth of consumption falls, and this brings about over-production of capital.

Now the value product of social labour is proportional to the number of hours of labour that are performed in society. Thus, assuming a constant working day, it is proportional to the number of workers employed. Therefore over-production occurs, assuming a constant working day, as soon as the rate of surplus value rises more rapidly than the number of workers employed (Bauer 1936, pp. 351-3).
References


