Chapter One

The Global Economic Crisis — A Marxist Perspective

The financial earthquake that erupted in September 2008 and that massively reinforced a downturn in the U.S. economy that began in 2007 has produced the worst global economic slump since the Great Depression of the 1930s. The U.S. government's $700 billion bailout of the financial industry in late 2008 and early 2009 guaranteed lavish bonus packages for Wall Street executives and provided funds for a new round of buyouts, mergers and accelerated concentration of financial capital, but did little to alleviate the credit squeeze that paralyzed new business investment and dampened consumer spending, generating a wave of bankruptcies across financial, manufacturing and commercial sectors.[1] Similar government infusions of liquidity into the banking systems of other countries, notably the U.K., proved just as ineffective in arresting the downward slide. By early 2009, stock markets in North America and overseas had lost between 30 and 50 percent of their nominal value due to tightening credit markets, declining corporate profitability and shattered "confidence." A growing list of countries, beginning with Ukraine, Hungary and Iceland, had obtained major loans from the International Monetary Fund (IMF) to fend off bankruptcy, while the economies of all the leading capitalist countries had begun to contract. By October 2009, the IMF predicted that the gross output of the world's most advanced economies would shrink by 3.4 percent in 2009 — the first such contraction since 1945 (see table 1.1).

According to the IMF, growth in the volume of international trade fell from 7.3 percent in 2007 to 3.0 percent in 2008 and was projected to be minus 11.9 percent in 2009 — a harbinger of much slower growth for the recently booming economies of South and East Asia. China — the most dynamic of these so-called "emerging economies" — saw its annual growth rate fall from 12 to 8.9 percent, and this was expected to drop to about 8.5 percent for 2009. While robust by global standards and higher than forecast earlier

Table 1.1: IMF Projected Growth Rates for 2009: Selected Economies

U.S.	Japan	U.K.	Eurozone	Canada	Developing	World
-2.7%	-5.4%	-4.4%	-4.2%	-2.5%	+1.7%	-1.1%

Source: IMF 2009.

in the year, this projected level of growth is considered barely sufficient to absorb the 24 million people entering China's labour market each year.

The global economy has spiralled down into a very severe and lengthy recession — or depression. But sharp disagreements have emerged over the causes of the crisis, its likely course and the solution to it. Those intent on "Saving the System" — the headline of the October 11, 2008, issue of the *Economist* — insist that there is "no alternative" to global capitalism and try to convince the worst-hit victims of the economic crisis — working people and the poor — that they must quietly accept massive job losses, pay cuts, slashed benefits and a roll-back of public services to help "speed recovery." At the same time, the ideological guardians of the status quo are putting forward various accounts that absolve the capitalist system itself of responsibility. Some focus on the greed and short-sightedness of the Wall Street financial elite and the failure of government agencies to adequately regulate markets. More sophisticated apologists for capitalism blame the excesses of "neoliberal ideology" and urge a retreat from "free market fundamentalism." A few go so far as to advocate a social-democratic "mixed economy," including the nationalization of the banks and a significantly expanded public sector.

At the other end of the mainstream spectrum, aggressively rightwing elements are, true to form, blaming the working class and the socially marginalized. According to these shameless victim-bashers, the deflation in housing prices that precipitated the 2008 financial crisis was triggered by "irresponsible" working people who took advantage of sub-prime mortgage rates between 2002 and 2006 and subsequently defaulted on their mortgages when rates went up. It is, however, a measure of the degree to which "greed" and "reckless irresponsibility" have become exclusively associated with the capitalist class and especially its financial aristocracy that this gambit has (so far) found little popular resonance.

Productivity, Value and Capitalist Crisis

On September 15, 2008, the Lehman Brothers investment bank collapsed, accelerating the financial crisis that began in 2007 and that gained momentum with the Bear Stearns fiasco, the failure of California's IndyMac Bank and the U.S. government takeover of the mortgage giants Freddie Mac and Fannie Mae. Lehman's collapse signaled to investors that the multi-trillion dollar market for securitized loans had no real foundation. The real worth of mortgage-backed securities and other exotic debt-instruments was unknown, and that sparked a global sell-off. As stock markets went into free-fall, Republican presidential candidate John McCain responded with the patently ridiculous assertion that "the fundamentals of our economy are strong." Later, in response to criticism from Barack Obama, an indignant McCain defended his remark by pointing to the high productivity of American workers, declaring "our workers are the most innovative, the hardest working, the best skilled, most productive, most competitive in the world."

As unlikely as it may seem, and as foreign as it must have been to McCain's intent, this observation is actually a useful starting point for developing an interpretation of the current crisis that counters the *Economist's* clarion call to "save the system." For if one thing is clear in the present situation, it is this: *the working class can't be blamed for it*. On the contrary, worker productivity is at an all-time high and wages have lagged badly behind productivity growth for a whole generation. Data furnished by the U.S. Bureau of Labor Statistics reveal that productivity and real hourly wages in the private, non-farm U.S. economy grew in lock step between 1947 and the early 1970s, but diverged significantly over the next thirty years (Capitalism and Economic Crisis website n.d.). Referring to the growing income gap between wage earners and investors, U.S. billionaire Warren Buffett remarked candidly in 2005: "It's class warfare, and my class is winning."

Since the 1970s, labour has indeed lost considerable ground in what has been a decidedly one-sided class war. Capital has had its way, in the U.S. and globally, and yet, despite that, capital has still found a way to shoot itself in the foot — and rather badly at that. With Soviet-style "communism" out of the way, with unions decimated and lacking in strategic vision, with the welfare state a receding memory, with China partially reopened to capitalist exploitation and with most of the world's masses seemingly resigned to the inevitability of free-market economics, the global capitalist order is nevertheless now mired in what is clearly its worst economic crisis since the 1930s. The fact that workers and the oppressed cannot be easily scapegoated for the slump means that capitalism may also be on the verge of its deepest political-ideological crisis ever.

Socialists have a responsibility to say what is: the crisis unfolding before our eyes confirms (yet again) that capitalism has reached its "historical limits." This moribund, irrational and inhumane system cannot be reformed in such a way as to promote human progress and well-being but must be superseded, in Karl Marx's words, by a "higher state of social production" — a rationally planned, collectivized global economy under the democratic administration of those who labour.

In support of this claim, I want to elaborate on why McCain's observation about the productivity of U.S. workers is a useful starting point for a Marxist-socialist perspective on the economic crisis and the current predicament of world capitalism. In my 1994 book, *Invisible Leviathan,* I pointed out that at the very heart of Marx's critique of capitalism is the proposition that an immanent contradiction exists between the drive of capitalist firms to increase productivity through labour-saving technological innovation and the imperative of the capitalist mode of production to measure wealth in terms of labour time. According to Marx, the sole source of all "new value" (including the profits of the capitalist class) is the living labour expended in the capitalist production of commodities; and this new value constitutes a definite magnitude that limits prices, profits and wages on an economy-wide scale. These two postulates are the foundation of the "capitalist law of value."

To be sure, Marx's "labour theory of value" (a phrase never actually used by Marx) has been the subject of a long-standing and often tedious controversy, one that I sought to survey and evaluate in *Invisible Leviathan.* Huge quantities of ink have been spilled addressing a question that was of only secondary interest to Marx: namely, the contribution of labour inputs to the determination of relative prices. Marx's primary concern, however, was with exploring the historical significance and long-term implications of the social practice of measuring (valuing) wealth in terms of labour time, especially in a context (namely, a mature capitalist economy) where living labour is becoming a less and less vital ingredient in the production of material output. For Marx, this historically specific, institutionally based and largely unconscious social practice is by no means an eternal or inevitable feature of the human condition. Rather it is bound up with a particular stage in the development of human society, one dominated by the class-antagonistic social relations — and perverse logic — of the capitalist mode of production.

For Marx, then, the measurement of wealth in terms of labour time is by no means inherent in the metabolic exchange between humanity and nature; it is bound up instead with the capitalist social imperative to perpetuate the class domination of capitalists over wage labourers. It was precisely this consideration that prompted Marx to criticize the notion (advanced in the 1875 Gotha Programme of the German Social Democrats) that "labour is the source of all wealth and all culture":

> Labour is *not the source* of all wealth. *Nature* is just as much the source of use-values (and it is surely of such that material wealth consists!) as labour, which itself is only the manifestation of a force of nature, human labour power…. [A] socialist programme cannot allow such bourgeois phrases to pass over in silence the *conditions* that alone give them meaning. (1970: 13, emphasis in original)

Marx's point here is that it is only the social arrangements specific to a capitalist society that render meaningful the identification of "wealth" (a natural category consisting of use values — that is, of useful things and effects) and "value" (a social relation that is created and sustained by a historically specific form of social labour). By way of contrast, Marx suggests that in the future socialist society, "real wealth is the developed productive power of all individuals. The measure of wealth is then not any longer, in any way, labour time, but rather disposable [free] time" (1973: 708).[2]

In a capitalist society, the material output of the economy-wide division of labour is distributed and consumed in accordance with people's ability to purchase it with money — which serves not only as a means of exchange but, above all, as a claim on abstract social labour. Marx's proposition that money is the necessary "form of appearance" of abstract social labour may not seem immediately obvious. But consider this: apart from those who subsist on state-funded social assistance or private charity, people possess money for two basic reasons — they either earn it through the performance of labour or they obtain it by virtue of their ownership of property. The vast majority of the population immediately sees the connection between their labour and the value represented by the money in their possession. At the same time, however, the origin of the money income of those who do not labour and have never laboured for a living seems more obscure. Even so, it's not difficult to understand that those few who hold significant property assets "earn" their money primarily by getting others to perform labour on their behalf. There can be no money profit, money rents, money dividends or any other form of money income for those who own factories, mines, land, apartment blocks, retail stores or banks unless there are people labouring to create the value that finds expression in corporate profits, ground rent, interest and wages. To put the matter starkly, the class of big capitalist property owners can earn income only by exploiting those who labour for a living — that is to say, by paying workers far less than the total "new value" created through the performance of their labour and by appropriating the difference as "surplus value."[3]

If Marx was right about this, then money is indeed the necessary form of appearance of abstract social labour, which is the "social substance" of economic "value" under capitalism. Money profit results from the appropriation of workers' unpaid (surplus) labour and its conversion into surplus value. Furthermore, it follows that the displacement of living labour from production, through increased investments in labour-saving machinery and technology, must undercut the profitability of the system as a whole — its ability to produce "new value" in general and "social surplus value" in particular in magnitudes large enough to sustain the average rate of profit. Accordingly, improved labour productivity, insofar as it results from labour-saving innovation, will actually lower the average rate of profit, which is the decisive regulator of investment and growth in a capitalist economy. As Marx put it: "The progressive tendency for the general rate of profit to fall is… simply the expression, peculiar to the capitalist mode of production, of the progressive development of the social productivity of labour" (1981b: 319).

Capitalism is a system geared not toward the maximization of material wealth (or use values) in general but toward the maximization of wealth in the socially antagonistic form of private profit — the profits of capitalists, who own and control the major means of production, distribution and exchange. This accounts for the characteristic form of capitalist crisis — overproduction. The capitalist economy enters into periodic crisis not because too few goods are being produced to meet human needs, but because too much is produced in the form of commodities intended for sale at a profit. Too many commodities are produced in relation to the effective, money-backed demand that exists for them. What's more, the fundamental reason the economy enters into crisis is not because of a decline in productivity growth (although this can certainly affect the relative fortunes of competing capitalist firms and even national economies), but because not enough surplus value is being produced and subsequently realized in money form across an increasingly globalized capitalist economy. And an insufficient magnitude of surplus value is being produced because, with the introduction of ever more sophisticated technology, the contribution of living labour as a "technical-natural input" into the production process diminishes, even though living, exploitable labour remains the sole source of all new value within the economy as a whole.

So where exactly did McCain go wrong? McCain implied that a high level of labour productivity ought to mean that the "economic fundamentals" are sound — but this assumption presupposes the existence of a rationally ordered economic system. The problem is that capitalism is not rational in this sense. On the contrary, capitalism is dominated by historically specific laws — the law of value and the law of the tendency of the rate of profit to fall — that involve a deepening structural contradiction between the development of the productive forces and the reproduction of capitalist social relations. These laws inform and give expression to a growing incompatibility between the "technical-natural" and "social" dimensions of capitalism. Without grasping them, it's impossible to understand how real progress in labour productivity — based on labour-saving technical innovation — can result in the turmoil in which global capitalism finds itself. Indeed, these laws are the key to understanding how the application of natural-scientific rationality in production, spurred on by the competition of individual firms, creates the "macro" or "global" social irrationality of wasted capacity, wasted labour power and wasted opportunities for human development — as well as a vast and growing mass of human misery.

Production, Finance and the Falling Rate of Profit

What exactly does all this talk about capitalist production have to do with the current global slump and financial crisis? Certainly the most immediate causes of the current crisis lie in the frenzied and short-sighted efforts of investment bankers to realize profits through more-or-less speculative transactions in the sphere of exchange — above all, through the sale, slicing up, repackaging and reselling of "toxic" mortgages. It's also manifestly true that it was the long-overdue puncturing of "bubbles" (in particular the housing bubble) associated with the growth of highly dubious "financial instruments" (a manifestation of what Marx called "fictitious capital")[4] that sent shock waves through the financial system and contributed, directly or indirectly, to the collapse of asset values in the broader economy. All of this has been dissected and discussed ad nauseam by mainstream journalists, politicians, pundits and economists. The relentless chatter about hedge funds, derivatives, collateralized debt obligations, credit default swaps, Ponzi schemes and financial mismanagement and malfeasance has done little, however, to clarify the most fundamental issues underlying the crisis. If anything, its effect has been to deflect attention from the systemic irrationality of capitalism to the greed, corruption and short-sightedness of particular capitalists — precisely, of course, with a view to "saving the system."

What is crucial to understand is that the ground for the financial bubbles and the associated feeding frenzy that led up to the current slump was prepared by an economic malaise that extends back to the 1970s and that originated in the "real economy." The spectacular rise of financial (especially fictitious) capital (relative to productive capital) over the past three decades was neither an accident nor the result of the ascendancy of "neoliberalism," understood primarily as an ideological phenomenon.[5] Rather an adequate account of the long-term financialization of the economy must focus on the tendency of the rate of profit to fall as a result of changes in the capitalist process of production.

Let's consider a couple of observations from the third volume of Marx's *Capital*. Marx stated that the corporate capitalism that was emerging in his own time (in the form of the "joint-stock company") would produce a "new financial aristocracy, a new kind of parasite in the guise of company promoters, speculators and merely nominal directors; an entire system of swindling and cheating with respect to the promotion of companies, issue of shares and share dealing" (1981b: 569). Furthermore:

> The credit system, which has its focal point in the allegedly national banks and the big money-lenders and usurers that surround them, is one enormous centralization and gives this class of parasites a fabulous power not only to decimate the industrial capitalists periodically but also to interfere in actual production in the most dangerous manner — and this crew know nothing of production and have nothing at all to do with it. (1981b: 678–79)

Elsewhere, in the second volume of *Capital*, Marx noted:

> [To the possessor of money-capital] the production process appears simply as an unavoidable middle term, a necessary evil for the pur-

> pose of money-making. This explains why all nations characterized by the capitalist mode of production are periodically seized by fits of giddiness in which they try to accomplish the money-making *without the mediation of the production process.* (1981a: 137, emphasis added)

To understand the significance of such "giddy" and unproductive capitalist behaviour, one needs to consider how the preconditions for it develop, which in turn requires a concrete analysis of how the immanent contradictions of capitalism find expression and unfold in particular historical contexts. The current financial crisis is the outcome of a decades-long effort on the part of the capitalist class, in the U.S. and elsewhere, to arrest and reverse the long-term decline in the average rate of profit that occurred between the 1950s and the 1970s. It is the cumulative and complex result of a series of responses by the capitalist class to an economic malaise that can be traced to the persistent profitability problems of productive capital — the form of capital associated with the so-called "real economy."

Virtually all radical political economists agree that the current debacle has roots in the profitability crisis of the 1970s. In response to that crisis, manifested throughout the advanced capitalist world in falling rates of profit as well as in "stagflation" (high inflation rates combined with slower growth and increased unemployment), the capitalist class abandoned the "capital-labour accord," negotiated in the late 1940s and 1950s. Rendered economically feasible by the high profit rates of the immediate post-war period and prompted by the politico-ideological exigencies of the Cold War (especially the necessity to block the emergence of powerful leftwing forces in Western labour movements), this "class compromise" delivered rising real wages, low unemployment and expanded social-welfare programs for over twenty years. But with the advent of the profitability crisis of the 1970s the capitalist class was compelled to undo much of this. The inflation that fuelled high levels of class conflict in the 1970s was defeated through wage controls and/or high interest rate policies under successive post-Keynesian and monetarist regimes. The deep recession of the early 1980s, engineered by the high interest rate policies of the U.S. Federal Reserve under Paul Volcker, along with cutbacks in social-welfare provision by most major Western governments, replenished the "reserve army" of the unemployed and placed downward pressure on real wage growth. Trade liberalization, corporate globalization and the turn toward "lean production" and "flexible labour markets" further weakened nationally based labour movements and removed obstacles to the international mobility of capital. Taken together, these measures — often referred to as "neoliberalism" — stemmed the fall in the average rate of profit in the leading capitalist countries but failed to restore the much higher rates enjoyed by capital in the earlier post-war period. For a considerable period of time, extending into the 1990s, the average profit rate was stabilized, albeit in a comparatively low range. Far more draconian anti-labour measures might have been tried to restore profitability to higher levels, but such measures would have carried considerable political-ideological risks — particularly during the 1980s, when the capitalist West was facing down a weakening but still formidable Soviet adversary.

This was the background to the long ascendancy of the rate of profit in the U.S. financial sector relative to that of the productive economy (manufacturing, construction, mining and so forth). In the early 1980s, the financial sector accounted for only about 10 percent of total profits; by 2007, this figure had risen to 40 percent. From the 1950s to the 1970s, the ratio of financial assets to GDP averaged approximately 4 to 1; by 2007 it had risen to roughly 10 to 1. In 1980, world financial assets (bank deposits, securities and shareholdings) amounted to 119 percent of global production; by 2007 that figure had risen to 356 percent.

Following the capitalist offensive against labour in the 1970s and early 1980s, crises of overproduction were avoided or attenuated (as in 1991–92 and 2001–02) through an enormous expansion of credit. Between the fourth quarter of 1981 and that of 2008, credit market debt in the U.S. mushroomed from 164 percent to 370 percent of GDP. While real wages stagnated or declined, American working people were encouraged to maintain "effective demand" by plunging ever deeper into debt. Between 1980 and 2007, total household debt mushroomed from about 60 percent of national income to over 120 percent. Meanwhile, between 1973 and 2000, the average real income of the bottom 90 percent of American taxpayers declined by more than 7 percent (Chernomas 2009: 21). Ronald Reagan's massive increase in military spending during the 1980s, which primed the demand pump enormously, ran up government debt to unprecedented levels. Throughout the 1990s, federal government debt continued to steadily expand, before exploding under George W. Bush following the U.S. invasion and occupation of Iraq. In early 2009, it stood at about $11 trillion in a $14 trillion (GDP) economy.

What prompted this massive expansion of debt and the associated financialization of the U.S. economy? To answer this question, we need to consider why the traditional, more production-centred investment strategies

Table 1.2: Growth of U.S. National Debt (in constant 2007 dollars), 1945–2009

1945	1950	1990	2000	2008	2009 (projected)
$3 trillion	$2 trillion	$5 trillion	$7 trillion	$11 trillion	$12 trillion +

of the capitalist class began to falter beginning in the 1970s. For the time being, it's sufficient to note that, over an extended period, investment in finance and commerce became a much more secure and lucrative way to earn profits than investment in industrial production, at least for capitalists operating in the most developed capitalist nations. Many giants of industrial capital acknowledged this new reality by expanding their business operations beyond the production of manufactured goods to the provision of an array of profitable financial services, a notable example being General Motors' GMAC financial services company.

The Malaise of Productive Capital

What is most striking about the past thirty years is the persistently lackluster performance of productive capital operating in the "real economy" — the form of capital that is the source of all new value and thus of all "real wealth" in capitalist terms. (According to Marx, surplus value must be produced by living labour employed by productive capital before it can be shared with unproductive financial and commercial capitals.) Since the 1970s, the ruling elites have been successful both in massively redistributing wealth in their own favour and in ratcheting up the rate of exploitation of wage labour, but the rate of growth of the world capitalist economy (global GDP) has been declining and there have been numerous indications of long-term malaise (see tables 1.3 and 1.4).

Cross-national data compiled by the Organisation for Economic Co-operation and Development (OECD) show that a growing gap developed between average profit rates and growth rates in all the G7 countries (the U.S., Britain, Canada, France, Germany, Italy and Japan) following the deep recession of the early 1980s. Furthermore, the trend for the accumulation rate (that is, average annual percentage growth rates of capital stock) began to decline with the profitability crises of the 1970s and continued to fall even

Table 1.3: Indicators of Economic Malaise, G-7 Nations, 1950–93

Private Business Indicators	1950–73	1973–93
Average annual growth rate of output	4.5%	2.2%
Average annual growth of labour productivity	3.6%	1.3%
Average unemployment rate (overall economy)	3.1%	6.2%

Source: Brenner 1998a: 5.

Table 1.4: Average Growth Rates of World Capitalist Economy, 1960–2004

1960s	1970s	1980s	1990s	2000–2004
4.90%	3.93%	2.95%	2.70%	2.76%

Source: World Bank website.

after a partial recovery of profit rates in the 1980s. The average "all business" accumulation rate for the G7 fell from an average of 5 percent in 1960–73 to 4.1 percent in 1973–79 and 3.9 percent in 1979–89. The corresponding figures for manufacturing were 5.5 percent, 3.6 percent and 2.9 percent (Armstrong, Glyn and Harrison 1991).

To be sure, economic growth has occurred unevenly across the world, and certain regions have fared much better than the G7 countries with respect to GDP growth rates, especially since the mid-1990s. In particular, China has experienced growth rates that have been dramatically higher than the global averages, and this performance has been associated with an explosion of productive capitalist enterprise, especially in light manufacturing and construction. Assuming the role of "workshop of the world," China has attracted an increasing share of the productive-capital investments being made by U.S. and other Western-based transnational corporations. The result has been a further decline of industrial production in the advanced capitalist countries and a corresponding rise of the FIRE (finance/insurance/real estate) and service sectors.

Trends in global GDP growth rates tell only a part of the story. When global growth rates are calculated on a per capita basis, and with the erstwhile "socialist countries" included, the declining performance of the world economy as a whole is even more remarkable, with average growth rates of 3.5 percent in the 1960s, 2.4 percent in the 1970s, 1.4 percent in the 1980s and only 1.1 percent in the 1990s (Harvey 2005: 154).

Apologists for the capitalist system have a hard time accounting for the bleak picture I've just sketched. Even so, while leftist critics of capitalism, and even many mainstream economists, have identified the profitability crisis of the 1970s as a vital factor in shaping subsequent economic trends, controversy abounds as to whether Marx's theory provides a satisfactory explanation of its origins. Does our recent history really confirm Marx's claim that "the real barrier to capitalist production is capital itself" (1981b: 358)?

Marx's Law of the Tendency of the Rate of Profit to Fall

For many years, the favoured explanation for the profitability crisis of the 1970s among radical political economists was the "wage-push/profit-squeeze" or "rising strength of labour" account. According to this approach, the profit share of national income declined because real wages (across private and public sectors) rose faster than the rate of productivity growth — a view shared by most mainstream economists as well. The element of truth in this explanation was that, over a considerable period of time, an increasing share of the aggregate wage bill went to wage and salary earners who were not directly involved in the production of commodities, and "total wages and salaries" as a percentage of national income rose relative to the profit share. As workers were displaced from production due to technological innovations in manufacturing, forestry, mining and construction, they found new jobs in commercial and financial sectors as well as in non-profit state or para-state agencies (public administration, education and so on). While the labour performed by these workers was, to varying degrees, useful and even "socially necessary" from the standpoint of capital, it was by no means directly productive of commodities embodying surplus value — and it therefore constituted "unproductive labour" in Marx's terms. The activity of some of this labour (both commercial and financial) accelerated the turnover of productive capital by hastening the realization of commodity values in the circulation phase of the circuit of capital, while the activity of the growing army of workers in finance laid the foundation for the subsequent expansion of fictitious capital. This growth of "socially necessary unproductive labour" was likely a supplementary cause of the post-war fall in the rate of profit in the advanced capitalist countries, but it was by no means the sole or even the primary cause.

As noted earlier, there is strong evidence, particularly for the U.S. economy, that the growth of real wages for private-sector workers did not outstrip productivity growth in the period leading up to the profitability crisis of the 1970s. Moreover, rigorous empirical studies by the Marxist economist Anwar Shaikh have established that the fall in the average rate of profit in the U.S. economy was significantly correlated with an increase in what Marx called the "organic composition of capital" — the ratio of "dead labour" (accumulated fixed capital, etc.) to living labour in production (Shaikh 1989; see also Shaikh and Tonak 1994). Independent studies by Fred Moseley (1987; 1991) have complemented Shaikh's findings, while giving greater weight to the role of a rising ratio of unproductive to productive labour in the overall fall in the average rate of profit.

Over a decade ago, I tested Marx's theory of the falling rate of profit in regard to the evolution of the Canadian economy between 1947 and 1991. This analysis, co-authored by K.W. Taylor (1996), was later summarized in my article "The Necessity of Value Theory" (1999; reprinted as chapter 3 of this volume).[6] The first major finding of the study was that between 1947 and 1975 the average rate of profit on capital investment exhibited a long-term declining trend — a well-established and uncontroversial fact (see chart 1.1). The second major finding was that, as the rate of profit was declining, the rate of surplus value (that is, the rate of exploitation of productive workers) showed a long-term upward trend (see chart 1.2). But the most interesting finding was that the organic composition of capital (the ratio of fixed-capital values invested in machinery and other physical assets to the total new value created by living labour) displayed a very sharp upward trend during the same period (see chart 1.3).: