Differential Accumulation

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The concept of differential accumulation is part of a new approach to the study of capitalism. This approach, first developed by Shimshon Bichler and Jonathan Nitzan, emphasizes the primacy of power rather than of consumption and production. The emphasis on power accentuates the centrality of relative rather than absolute measures and of disaggregate rather than aggregate methods. It focuses attention not on the quest for profit maximization by capital in general, but on the drive for differential accumulation by dominant capital in particular.

The Conventional Dual View

In the conventional view, epitomized by the neoclassical doctrine, capital belongs to the productive-material sphere of the 'economy'. When free from outside 'distortions', the economy is an autonomous sphere, clearly demarcated from other spheres of society. It has its own laws, logic and purpose. Driven by the mechanical forces of supply and demand, energised by the quest for equilibrium, disciplined by competition and pushed forward by individualism, the ultimate achievement of the economy is utilitarian: it maximizes pleasure and minimizes pain.

The principles of the economy negate hierarchy: they defuse all power relations through voluntary market clearing. Power certainly exists, but it exists mostly 'outside' the economy proper, primarily in the realm of politics and state. Governments never tire of imposing their power on the economy. They 'intervene' by using taxes and subsidies, regulation and discrimination, public spending, tariffs and levies, among other strategies. But since the interventions are always 'exogenous', coming from outside the economy, their outcomes are always sub-optimal, by definition.

The Great Depression softened this fundamentalist division. After the 1930s, the strict separation between economics and politics gave way to a synthetic compromise: government was given a positive 'macroeconomic' role, adjacent to the 'microeconomic' role of individual consumers and firms. But the new synthesis didn't change the meaning, position and logic of capital: it remained a productive-material entity, located in the economy and subject to its strict laws.

The neoclassical doctrine sees capital as a *dual entity*. Capital is both productive capacity and market value, a 'real' thing whose material quantity is reflected in its 'nominal' price. On the face of it, modern capitalist decisions are driven by finance; but according to the dual view, in the final analysis *finance is a derivative of production*. From this perspective, the dollar market value of General Electric's stocks and bonds mirrors the company's overall productive capacity. When GE's productive capacity increases – when it adds more factories, when it improves its plant and equipment, when it increases its knowhow – the real quantity of its capital grows, and that real growth causes a corresponding increase in the company's dollar market value. And conversely – when the company neglects to boost its productive capacity, its real accumulation falters; and as real accumulation decelerates, the company's dollar market value follows suit.

This real-nominal correspondence is merely a first approximation: it holds only in the ideal world of perfectly competitive equilibrium. The actual world, though, even according to neoclassicists, is rarely if ever in a perfectly competitive equilibrium. Unlike the models, reality is besieged by disequilibrium, irrationality and distortions, and these imperfections cause the nominal magnitude to mismatch and deviate from the real one.

This account, argue Bichler and Nitzan, is deeply problematic for at least two reasons. The first reason is theoretical. Capital, they say, is simply *not a dual entity*. Contrary to the conven-

tional view, it has only one quantity: its nominal dollar value on the stock and bond markets. And that's it. There is no underlying 'real' quantity to be examined, let alone measured. And without a real quantity, there is nothing for the dollar value of capital to match or mismatch.

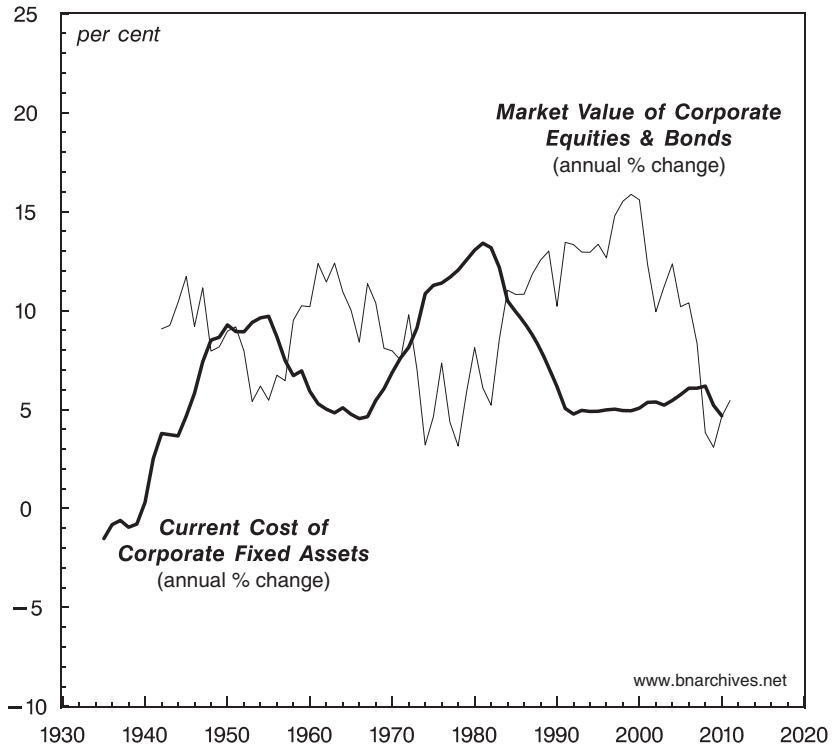
Economists might find this later claim nonsensical: after all, most countries provide detailed quantitative estimates of their 'real capital stock', so how could one say that these quantities do not exist? According to Bichler and Nitzan, though, these estimates, popular as they may be, do not – and indeed *cannot* – measure the real capital stock. In order to know the quantity of real capital, the statisticians have to sum up the quantities of individual 'capital goods' – plant, equipment, and infrastructure, as well as patented knowledge and goodwill, among other things. And this aggregate, say Bichler and Nitzan, is impossible to compute. According to neoclassical theory, the aggregate of capital goods, like every basket of commodities, is measured in terms of the utils it supposedly generates. But 'utils' are fictitious quanta that cannot be observed, let alone measured.

So in practice, argue Bichler and Nitzan, the statisticians go in reverse: they use the dollar price of capital goods to 'reveal' their so-called productive quantity (i.e., their ability to generate utils). The first step in this process is to pick a point in time and claim it represents perfectly competitive equilibrium. The second step is to assume that, in a perfectly competitive equilibrium, the nominal dollar value reveals the real quantity of capital (so if the dollar price of a patent X is ten times bigger than that of machine Y, X must have ten times as much real capital as Y). The third step is to use these nominal values as weights with which to aggregate the different capital goods into real capital (multiplying the number of capital goods in each category by their dollar value and summing the results). And the fourth and final step is to announce that the nominal magnitude that emerges from this procedure is the quantity of real capital (read its util-generating capacity). But since perfectly competitive equilibrium and the utils this equilibrium is said to 'reveal' are all fictitious entities, the resulting measure of real capital is devoid of any real meaning.

The second problem of the real-nominal view is empirical. In practice, the oscillations of finance seem to have little to do with those of productive capacity – even when capacity is measured in nominal dollars (rather than in so-called real terms). To see the problem, note that, according to the conventional creed, the deviations of finance from real capital, however large, tend to be *pro-cyclical*. In general, the market value of capital is expected to overshoot real accumulation during a boom and undershoot it in a bust. In the first case, euphoria inflates a speculative bubble; in the latter case, panic deflates it.

But the evidence, at least in the United States, doesn't sit well with this pro-cyclical convention. Figure 1 contrasts two growth series (based on nominal dollar data, since the 'real' measures are fictitious). The thick line shows the rate of growth of the productive capacity of U.S. corporations as measured by the current replacement cost of their fixed assets. The thin line shows the rate of growth of the dollar market value of U.S. corporate stocks and bonds. And here lies a puzzle: the growth of corporate market value, instead of moving in tandem with – and possibly amplifying – the growth of 'real' assets, appears to move in exactly the *opposite* direction. The figure shows a systematic, long-term counter-cyclical pattern in which the market value of corporations accelerates exactly when the dollar value of their 'real' capital decelerates, and vice versa.

Figure 1
U.S. Capital Accumulation: Fiction vs. Reality



NOTE: The market value of equities and bonds is net of foreign holdings by U.S. residents. Series are shown as 10-year moving averages. The last data points are 2011 for the market value of corporate equities and bonds, and 2010 for the current cost of corporate fixed assets.

SOURCE: Jonathan Nitzan and Shimshon Bichler (2009) *Capital as Power: A Study of Order and Creorder*, p. 181. Updated till 2010-2011. Original data: U.S. Bureau of Economic Analysis through Global Insight (series codes: FAPNREZ for current cost of corporate fixed assets). The market value of corporate equities & bonds splices series from the following two sources. 1932-1951: Global Financial Data (market value of corporate stocks and market value of bonds on the NYSE). 1952-2011: Federal Reserve Board through Global Insight (series codes: FL893064105 for market value of corporate equities; FL263164103 for market value of foreign equities held by U.S. residents; FL893163005 for market value of corporate and foreign bonds; FL263163003 for market value of foreign bonds held by U.S. residents).

Now, since capitalist decisions are driven by finance, this inversion, say Bichler and Nitzan, means that theorists of accumulation have to make a hard choice: they can stick to the conventional dual view and end up being unable to explain what drives capitalists, or they can go back to square one and develop a new framework altogether.

Capitalization Reconsidered

Bichler and Nitzan take the second route. Their starting point is the meaning of capitalism. In their framework, capitalism is not a mode of consumption and production, but a *mode of power*: a totalizing regime that defines, shapes and regulates the general trajectory of society.

The centre of this regime is the institution of capital. Earlier modes of power were organized through the complex codes of religion, kingship, feudal servitude and castes, among others. The capitalist mode of power replaces these complex codes with a universal logic: the power logic of capital. Now, in conventional theory, capital is a narrow economic entity that produces goods and services for its individual owners. But according to Bichler and Nitzan, this portrayal is deeply deceiving. Capital, they say, is not a productive entity but the key power institution that regulates capitalist society. Its language is not utilitarian, but financial. The ever-changing quantities of finance – expressed as capitalization – reflect not the capacity of capital goods to produce well-being, but the power of capitalist owners to constantly reshape the course of their society in their own interest. The logic of finance and capitalization is the anonymous, undifferentiated mechanism through which they control society.

Capitalization represents the discounting to present value of risk-adjusted expected future earnings, and each of its symbolic components – the expected future earnings, the risk that capitalists associate with these earnings, and the normal rate of return that they use to bring them to present value – is a manifestation of organized power.

The primacy of power, say Bichler and Nitzan, is built into the concept of private ownership. The very concept implies exclusion and deprivation. In this sense, private ownership is a negative, not a positive, entity. It is based not on the ability to produce, but on the capacity to incapacitate. It is wholly and only an institution of exclusion, and institutional exclusion is a matter of organized power. Of course, exclusion does not have to be exercised. What matter here, argue Bichler and Nitzan, are the right to exclude and the ability to exact pecuniary terms for not exercising that right. This right and ability are the foundations of accumulation. They enable capitalists to profit greatly from mismanaging the world's ecosystem, from making society more unequal and from blocking the development of humane alternatives – and to do all that under the guise of 'scientific management' and the 'efficient allocation' of resources.

Capital, Bichler and Nitzan claim, is nothing *but* organized power. This power, they say, has two sides: one qualitative, the other quantitative. The qualitative side comprises the many institutions, developments and conflicts through which capitalists constantly *creorder* – or create the order of – their society; that is, the processes through which they shape and restrict the social trajectory in order to extract their tributary income. The quantitative side is the universal algorithm that integrates, reduces and distils these numerous qualitative processes down to the monetary magnitude of capitalization.

In principle, every stream of expected income is a candidate for capitalization. And since income streams are generated by social entities, social processes, social organizations and social institutions, we end up with capitalization discounting not the so-called sphere of economics, but potentially every aspect of society. Human life, including its social habits and its genetic code, is routinely capitalized. Institutions – from education and entertainment to religion and the law – are habitually capitalized. Voluntary social networks, urban violence, civil war and international conflict are regularly capitalized. Even the environmental future of humanity is capitalized. Nothing escapes the eyes of the discounters. If it generates expected future income, it can be capitalized, and whatever can be capitalized sooner or later *is* capitalized.

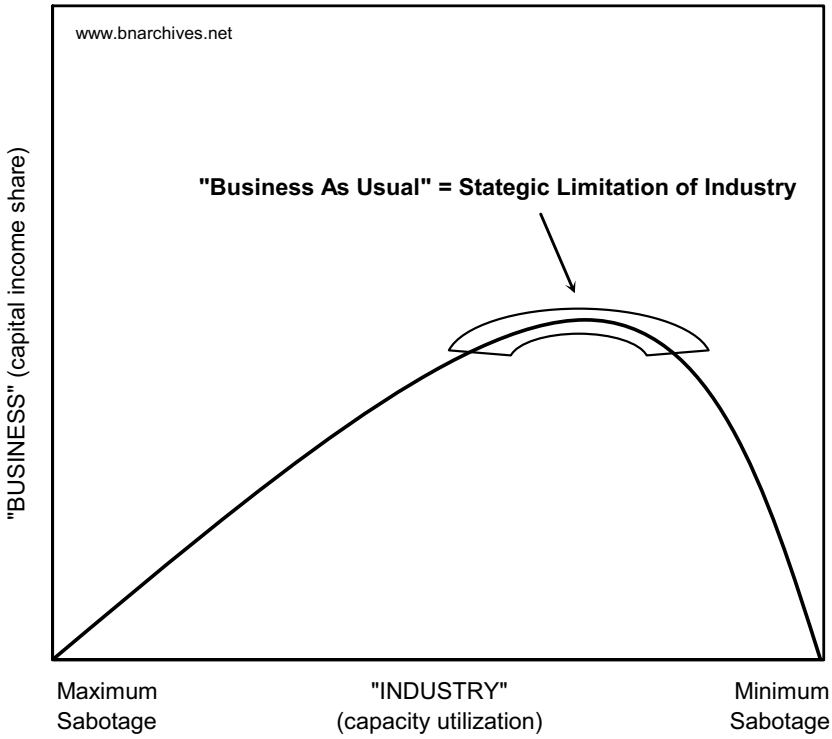
Business and Industry

What is the object of capitalist power? How does it *creorder* society? According to Bichler and Nitzan, the answer begins with a conceptual distinction between two spheres: the first is the crea-

tive/productive potential of society – or what American political economist Thorstein Veblen called 'industry'; the second is the realm of power, which, in the capitalist epoch, takes the form of 'business'. Veblen conceived of industry as the collective knowledge and effort of humanity, a sphere that is inherently cooperative, integrated and synchronized. Business, in contrast, isn't collective; it is private. Its goals are achieved through the threat and exercise of systemic prevention and restriction – that is, through strategic sabotage. The key target of this sabotage is the resonating pulse of industry – a resonance that business constantly upsets through built-in dissonance.

Bichler and Nitzan illustrate this interaction of business and industry conceptually and empirically. Conventional economics, they say, postulates a positive relationship between production and profit. Capitalists, the theory argues, benefit from industrial activity; and, therefore, the more fully employed their equipment and workers, the greater their profit. But if one thinks of capital as power, exercised through the strategic sabotage of industry by business, the relationship becomes nonlinear – positive under certain circumstances, negative under others.

Figure 2
Business and Industry



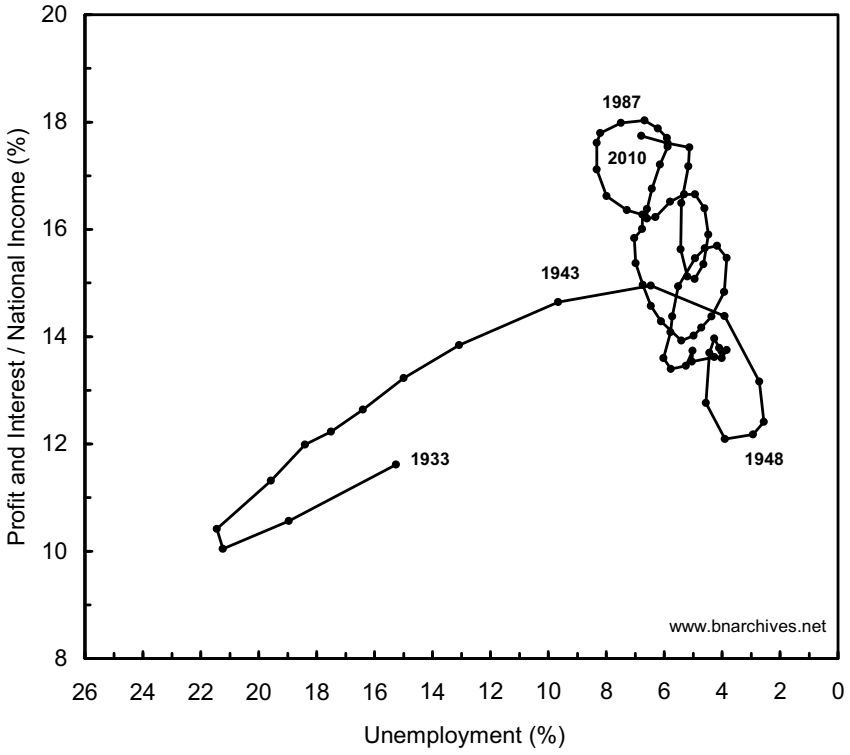
SOURCE: Jonathan Nitzan and Shimshon Bichler (2009) *Capital as Power: A Study of Order and Creorder*, p. 237.

This latter relationship is exemplified, hypothetically, in Figure 2. The chart depicts the utilization of industrial capacity on the horizontal axis against the capitalist share of income on the vertical axis. Now, up to a point, the two move together. After that point, the relationship becomes negative. The reason for this inversion can be explained by looking at extremes. If industry came to a complete standstill at the bottom left corner of the chart, capitalist earnings would be nil. But capitalist earnings would also be zero if industry always and everywhere operated at full socio-technological capacity – depicted by the bottom right corner of the chart. Under this latter scenario, industrial considerations rather than business decisions would be paramount, production would no

longer need the consent of owners, and these owners would then be unable to extract their tributary earnings. For owners of capital, then, the ideal Goldilocks condition, indicated by the top arc segment, lies somewhere in between: with high capitalist earnings being received in return for letting industry operate – though only at less than full potential.

Figure 3 operationalizes this thought experiment for the United States since the 1930s. The horizontal axis approximates the degree of sabotage by using the official rate of unemployment, inverted (note that unemployment begins with zero on the right, indicating no sabotage, and that, as it increases to the left, so does sabotage). The vertical axis, as before, shows the share of national income received by capitalists.

Figure 3
Business and Industry in the United States



NOTE: Series are shown as 5-year moving averages.

SOURCE: Jonathan Nitzan and Shimshon Bichler (2009) *Capital as Power: A Study of Order and Creorder*, p. 238. Updated till 2010. Original data: U.S. Department of Commerce through Global Insight (series codes: INTNETAMISC for interest; ZBECON for profit; YN for national income; RUC for unemployment).

And the empirical picture seems very close to the theoretical one. Like in Figure 2, the best position for capitalists is not when industry is fully employed, but when there is considerable unemployment – in this case, around 7 per cent. In other words, the so-called 'natural rate of unemployment' and 'business as usual' are two sides of the same power process: a process in which business accumulates by strategically sabotaging industry.

Differential Accumulation and Dominant Capital

Now, power, argue Bichler and Nitzan, is never absolute; it's always relative. For this reason, both the quantitative and qualitative aspects of capital accumulation have to be assessed differentially, relative to other capitals. Contrary to the claims of conventional economics, say Bichler and Nitzan, capitalists are driven not to maximize profit, but to 'beat the average' and 'exceed the normal rate of return'. Their entire existence is conditioned by the need to outperform, by the imperative to achieve not absolute accumulation, but *differential accumulation*. And this differential drive is crucial: to beat the average means to accumulate faster than others; and since the relative magnitude of capital represents power, capitalists who accumulate differentially increase their power (to emphasize, for Bichler and Nitzan capitalist power relates not to the narrow neoclassical notion of 'market power', but to the broad strategic capacity to inflict sabotage).

The centrality of differential accumulation, claim Bichler and Nitzan, means that the analysis of accumulation should focus not only on capital in general, but also and perhaps more so on *dominant capital* in particular – that is, on the leading corporate-state alliances whose differential accumulation has gradually placed them at the centre of the political economy.

Figure 4 plots the differential accumulation of dominant capital in the United States since 1950. Dominant capital is approximated here using two slightly different measures: one is the largest 100 firms in the Compustat universe (comprising firms listed in the United States); the other is the largest 100 U.S. firms in the Compustate universe (comprising firms that are both incorporated and listed in the United Sates). The constituents of each group are determined annually on the basis of market capitalization (the reason for using two different measures is that aggregate data for market capitalization cover all listed firms regardless of their country of incorporation, whereas the aggregate profit data of the national accounts pertain only to U.S.-incorporated firms). The chart shows two differential series – one for capitalization, based on the first definition of dominant capital, and another for net profit based on the second definition of dominant capital.

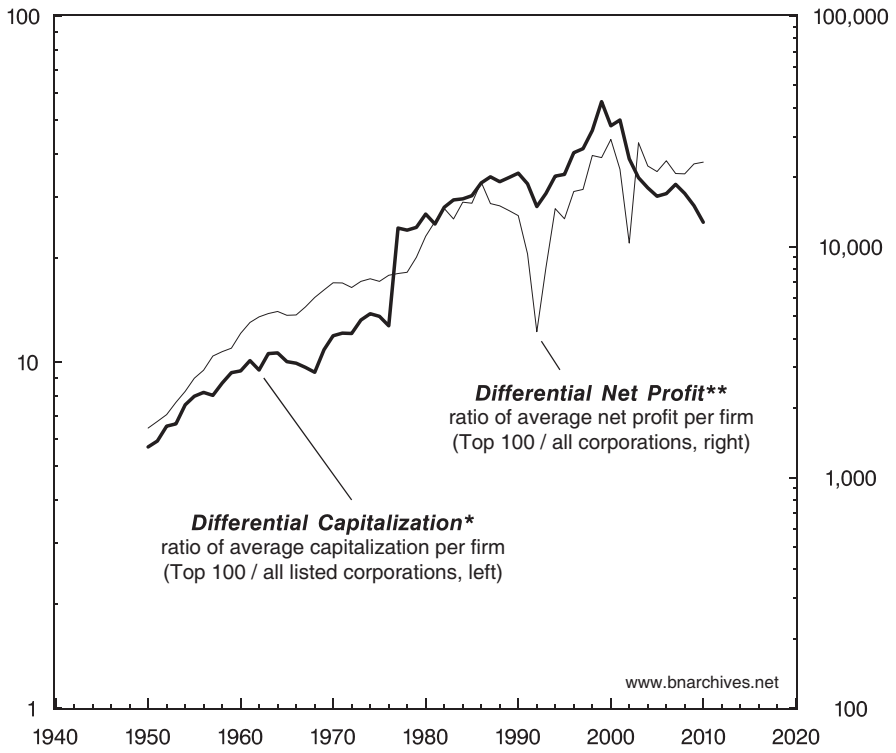
Differential capitalization denotes the ratio between the average market value of dominant capital (U.S.-listed firms) and the average market value of all U.S.-listed firms. The series shows that, during the 1950s, a typical dominant capital corporation had 7.4 times the capitalization (read power) of the average listed company. By the 2000s, this ratio had risen to 35.5 – nearly a fivefold increase.

This measure, though, significantly underestimates the power of dominant capital. Note that the vast majority of firms are *not* listed. Since the shares of unlisted firms are not publicly traded, they have no 'market value'; the fact that they have no market value keeps them out of the statistical picture; and since most of the excluded firms are relatively small, differential measures based only on large listed firms end up understating the relative size of dominant capital.

In order to get around this limitation, Bichler and Nitzan plot another differential measure – one that is based not on capitalization but on net profit – and that measure includes all U.S.-incorporated firms, listed and unlisted. The computational steps are similar. They calculate the average net profit of a dominant-capital corporation (the total net profit of the top 100 Compustat companies incorporated and listed in the United Sates divided by 100); they then compute the average net profit of a U.S. corporation (total corporate profit after taxes divided by the number of tax returns of active corporations); finally, they divide the first result by the second.

Figure 4

Differential Capitalization and Differential Net Profit in the United States



* Ratio between the average market capitalization of the top 100 Compustat corporations listed in the United States (ranked annually by market capitalization) and the average market capitalization of all corporations listed in the United States. (The 1976-77 jump in differential capitalization is the result of adding the NASDAQ to the universe of listed companies [the NASDAQ started to operate in 1971, but data for total capitalization are available only from 1976 onward]. At the time of its inclusion, the NASDAQ listed very small firms, so its addition brought down the capitalization of the average corporations.) The last data points are for 2010.

** Ratio between the average net profit of the top 100 Compustat corporations incorporated in the United States (ranked annually by market capitalization) and the average net profit of all U.S. active corporations (listed and unlisted). The number of U.S. active corporations for 2008–2010 is extrapolated based on recent growth rates. (The drop in the series during 1992–93 is due primarily to the one-time SFAS 106 accounting charge, a regulation that required firms to report in advance the future cost of their post-employment benefits. Since the rule applied almost exclusively to large firms, it had a big effect on the numerator but a negligible one on the denominator.)

SOURCE: Compustat funda file through WRDS (series codes: CSHO for common shares outstanding; PRCC_C for share price; NI for net income); Global Financial Data (number of listed corporations on the NYSE, AMEX and NASDAQ till 1989); World Federation of Exchanges (number of listed corporations on the NYSE, AMEX and NASDAQ from 1990); U.S. Internal Revenue Service (number of corporate tax returns for active corporations); U.S. Federal Reserve Board's Flow of Funds through Global Insight (FL893064105 for market value of corporate equities); U.S. Bureau of Economic Analysis through Global Insight (ZA for profit after taxes).

As expected, the two series have very different orders of magnitude (notice the two log scales). But they are also highly correlated (which isn't surprising, given that profit is the key driver of capitalization). This correlation, say Bichler and Nitzan, means that we can use the broadly based differential profit indicator as a proxy for the power of dominant capital relative to *all* corporations. And the result is remarkable. The data show that during the 1950s, a typical dominant capital corporation was 2,586 times larger/more powerful than the average U.S. firm. By the 2000s, this ratio had risen to 22,097 – nearly a ninefold increase.

Capital as Power in Middle-East Energy Conflicts

Bichler and Nitzan's research offers various historical studies of differential accumulation in which they examine the quantities and qualities of capital as power. One of these is their work on the Middle East. Figure 5 shows the differential performance of the world's six leading privately owned oil companies relative to the Fortune 500 benchmark. Each bar in the chart shows the extent to which the oil companies' rate of return on equity exceeded or fell short of the Fortune 500 average. The gray bars show positive differential accumulation – i.e. the per cent by which the oil companies exceeded the Fortune 500 average. The black bars show negative differential accumulation; that is, the per cent by which the oil companies trailed the average. Finally, the little explosion signs in the chart show the occurrences of 'Energy Conflicts' – that is, regional energy-related wars.

Now, conventional economics, say Bichler and Nitzan, has no interest in the differential profits of the oil companies, and it certainly has nothing to say about the relationship between these differential profits and regional wars. Differential profit is perhaps of some interest to financial analysts, and Middle-East wars are the business of experts in international relations and security analysts. But since each of these phenomena belongs to a completely separate realm of society, no one has ever thought of relating them in the first place. And yet, these phenomena, argue Bichler and Nitzan, are not simply related. In fact, they could be thought of as two sides of the very same process – namely, the *global accumulation of capital as power*. They point to three remarkable relationships depicted in the chart.

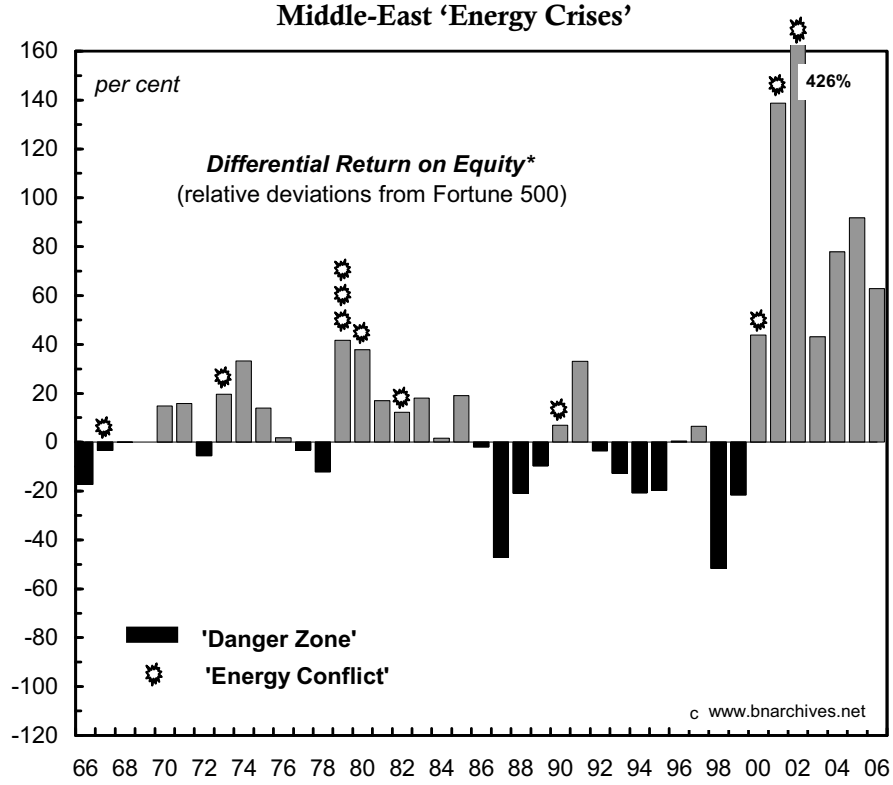
- First, every energy conflict was preceded by the large oil companies trailing the average. In other words, for an energy conflict to erupt, the oil companies first had to differentially *decumulate* – a most unusual prerequisite from the viewpoint of any social science.

- Second, every energy conflict was followed by the oil companies beating the average. In other words, war and conflict in the region, which social scientists customarily blame for 'distorting' the aggregate economy, have served the differential interest of certain key firms at the expense of other key firms.

- Third and finally, with one exception, in 1996-7, the oil companies never managed to beat the average without there first being an energy conflict in the region. In other words, the differential performance of the oil companies depended not on production, but on the most extreme form of sabotage: war.

Figure 5

The Petro-Core's Differential Accumulation and Middle-East 'Energy Crises'



* Return on equity is the ratio of net profit to owners' equity. Differential return on equity is the difference between the return on equity of the Petro-Core and the Fortune 500, expressed as a per cent of the return on equity of the Fortune 500. For 1992-3, data for Fortune 500 companies are reported without SFAS 106 special charges.

NOTE. The Petro-Core consists of British Petroleum (BP-Amoco since 1998), Chevron (with Texaco since 2001), Exxon (ExxonMobil since 1999), Mobil (till 1998), Royal-Dutch/Shell and Texaco (till 2000). Company changes are due to mergers. The Energy Conflicts include: the 1967 Arab-Israel war, the 1973 Arab-Israel war, the 1979 Iranian Revolution, the 1979 first Israeli invasion of Lebanon, the 1979 Soviet invasion of Afghanistan, the 1980 Iran-Iraq war, the 1982 second Israeli invasion of Lebanon, the 1990-1 first Gulf War, the 2000 second Palestinian Intifada, the 2001-2 U.S. invasion of Afghanistan and the launching of the 'War on Terror' and the 2002-3 second Gulf War.

SOURCE: Shimshon Bichler and Jonathan Nitzan (2010) 'Capital as Power: Toward a New Cosmology of Capitalism'. Original data: *Fortune*; Standard & Poor's *Compustat*.

According to Bichler and Nitzan, these relationships, and the conclusions they give rise to, are nothing short of remarkable. First, the likelihood that all three patterns are the consequence of statistical fluke is negligible. In other words, there must be something very substantive behind the connection of Middle-East wars and global differential profits.

Second, these relationships seamlessly fuse quality and quantity. In their research on the subject, Bichler and Nitzan show how the qualitative power aspects of international relations, superpower confrontation, regional conflicts and the activity of the armament and oil companies, on the one hand, can both explain and be explained by the quantitative global process of capital accumulation, on the other.

Third, all three relationships have remained stable for half a century, allowing Bichler and Nitzan to predict, in writing and before the events, both the first and second Gulf Wars. This stability suggests that the patterns of capital as power – although subject to historical change from within society – are anything but haphazard.

Links

- The Bichler & Nitzan Archives.
- Bichler Shimshon and Jonathan Nitzan (2004) 'Dominant Capital and the New Wars' *Journal of World-Systems Research* (10:2).
- Nitzan, Jonathan and Shimson Bichler (2002) *The Global Political Economy of Israel* (London and Sterling VA. Pluto Press).
- Nitzan, Jonathan and Shimson Bichler (2006) 'New Imperialism, or New Capitalism?' *Review* (XXIX: 1).
- Nitzan, Jonathan and Shimshon Bichler (2009) *Capital as Power: A Study of Order and Creorder* (London and New York: Routledge).
- Thorstein Veblen (1904; 1975) *The Theory of Business Enterprise* (Clifton, New Jersey: Augustus M. Kelley, Reprints of Economics Classics).