How the basic structure and the behaviour of the capitalist firm shape the economy

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Abstract

The modern economy has been largely created by capitalist firms – firms characterised by the employer/employee relationship. By describing their basic *structure* and mode of *operation*, one can generate an account of their *impact* on the economy. This illuminates features of the specifically capitalist economy, such as persistent economic growth and non-frictional unemployment. It is now possible to base such an account on evidence, of widely different types, rather than assumptions.

First, corporations are extremely diverse. Their sizes vary as a smooth continuum, from firms with few employees to massive multinational corporations. Typically, firm sizes are distributed as a power law; this arises causally from differential success in competing, with self-reinforcement properties ("preferential attachment"). Heterogeneity is seen also in productivity, input intensity, efficiency, innovativeness and indicators of profitability; these characteristics are highly persistent over time.

The core *structural* feature of the corporation is the authority structure, with a group of directors who initiate the firm and control its direction (plus a possibly separate ownership), and a workforce. Their mode of *operation* is a set of behaviours that are orientated to competition, notably decision making on investment and employment. The ability to adjust employment, equipment, location, etc so as to maintain/enhance market position is a feature of capitalist firms, so that production methods and unit costs can be radically altered. Competition is an arms race between firms that drives down unit costs, and thus prices, for the sector as a whole. Similarly, this flexibility of capitalist firms means the ability to easily alter the nature of the product. The *impacts* are therefore the production of existing goods with ever-lower real inputs, and a profusion of new products [Joffe 2011]; additionally, unemployment is better analysed in terms of employers' actions than of workers' choices [Manning 2003].

The modern world has been created by capitalism. Unfortunately, this term has multiple meanings that can denote very different real-world phenomena. It is often used in relation to various aspects of the financial sector, such as banking or the stock market that date respectively from the middle ages in Italy and from 1602 in Amsterdam. In this paper, I am using it to indicate something more recent in origin, which will be the focus of the analysis: a real economy dominated by *capitalist firms* – i.e. firms that are characterised by the employer/employee relationship [Hodgson 1999].

This definition of the capitalist firm is rather sparse compared with traditional accounts. It is designed to highlight the transformation that occurred historically with the advent of large-scale employment by a single employer, as with the factory system in the England of the industrial revolution. This is still visible today, in the differential performance of capitalist firms versus those that rely on family labour and others with a limited workforce. There is an argument for also specifying production for profit in the basic description of the capitalist firm, but this is a feature of any type of firm, even if it is perhaps more pronounced among capitalist firms.

Another element frequently found in descriptions of capitalist firms, and generally assumed to be a typical attribute, is that they are privately owned. Whilst this has been true of most capitalist firms historically, and remains so in most places, recent experience in post-reform China and Vietnam has been that State-Owned Enterprises (SOEs) can behave in a remarkably similar manner to privately-owned firms, albeit typically with lower productivity. This attribute is therefore disregarded here as being non-essential.

The advantage of retaining just one criterion is that it provides a clear focus: why has the relationship between employer and employee made such a difference? I answer this question by looking in turn at the structure of the capitalist firm, its resulting mode of operation, and the consequent impact on the economy and on society more generally.

Structure

Describing the structure of “the” capitalist firm is made rather difficult by the extreme heterogeneity of organisations that fall within the definition. Many are quite modest in size, whereas others bestride the world and dominate it – or at least its economic aspect – with all gradations in between. This is a consequence of differential success: there is abundant evidence of large variations in productivity and in virtually every other aspect of performance, and these features are highly persistent over time [Bartelsman & Doms 2000; Grazzi 2012]. It results in firm sizes being distributed according to a power law [Gabaix 2009], probably reflecting the reproduction of advantage (otherwise known as preferential attachment, or the Matthew effect) because firms already in an advantageous position, e.g. with high profitability, have the resources to further improve their position.

Their legal status also varies between different jurisdictions and over time, and even within the same country at the same time there are various available forms – for example, in the United Kingdom there are differences between sole traders, business partnerships and limited companies. The terminology here can be confusing, because in the United States the term “corporation” is generally used for large businesses but “company” has broader applicability, whereas in Britain the reverse is true.

Some capitalist firms, but not all, have the specific legal property of limited liability that protects the investor from claims that result from the firm’s debts. It is important to realise that limited liability was rare during the first half of the nineteenth century when Britain became “the workshop of the world”, and the early rise of the United States also occurred without it. Other sources of heterogeneity include whether the firm is family owned, listed on the stock exchange, etc. There are also important differences in different countries – “varieties of capitalism”, e.g. between the United States, Germany and Japan – for example in their relationship with the financial sector. And as already mentioned there can even be state ownership as in China and Vietnam.

Within this immense diversity there is a core element, that is responsible for the major characteristics of capitalism (in the real-economy sense used here) – across different jurisdictions and historical periods. It is well known that firms have a separate legal personality, and that this gives them the status of juridical persons, as contrasted with natural or physical persons – a property they share with numerous other types of organisation, including sovereign states, municipalities, trades unions, etc.

For the capitalist firm, the central feature is entity shielding [Blair 2003; Hansmann et al 2006]. This protects the firm as an entity from its own shareholders, a mirror image of limited liability which does the reverse. Historically, in England, entity shielding was a response to the growth of industrial firms in the first part of the nineteenth century, whereas limited liability was introduced later, following lobbying from *rentiers* who were increasingly important as London expanded as the financial centre of the expanding British Empire [Ireland 2010]. In addition, entity shielding provided some defence against sequestration of the firm by outsiders, including the state and those who might sue. Similar legal provisions have been introduced across the world as capitalism has spread.

A further consequence of entity shielding is that governance can be separated from financial capital. Usually a small group of directors is in charge. They are responsible for the direction of the firm, along with the managers that they employ. This is what gives the firm its agency, in the sense of the ability to act in the world – to make decisions that have a causal influence on the firm’s destiny, including its future degree of success. It is the reality behind the “legal fiction” of a separate legal personality.

The central defining feature of capitalist firms, the employment relationship, is intimately related to the feature of possessing agency in this sense. The firm employs workers whose own agency, whilst not necessarily being entirely removed, is channelled and subordinated to that of the firm. Thus a central implicit feature of the employment contract is that employees are prepared to do this, in the interests of the firm. They remain formally free, but a proportion of their time is made available to the firm, under conditions specified by the firm.

The other corollary of the firm as a distinct entity with causal powers is that it owns and controls the means of production, including land, premises, equipment and raw materials, as well as the product as it is generated. Whereas under the pre-capitalist putting-out system, and in early factories, workers owned the tools that they used, this is no longer true in modern capitalist firms.

Mode of operation

Common to all firms – not only capitalist ones – is the universal central imperative to make a profit, or at least to break even, under conditions of competition. But whereas non-capitalist firms – petty producers, sole traders, peasants or firms based on family labour – are highly restricted in what they can do, there is no intrinsic limit to the scale of operation of a capitalist firm. The only limitation is the combination of managerial capacity [Penrose 1959], and the firm's access to resources including a workforce with particular skills and other types of tacit knowledge, plus equipment and other more tangible assets. The ability to buy in the appropriate range of labour and equipment is central to the global dominance of capitalist firms as a category, as well as to the degree of success of individual firms.

This is a direct consequence of the capitalist firm's ownership and control of the means of production, and of its ability to enter into employment relationships. These features mean that such a firm can in principle vary all aspects of its production process, including its location and its technology. This also makes it relatively simple to introduce new products. Thus, if the existing workforce and/or equipment are inappropriate for a proposed new productive process and/or product, this can be rectified, as long as these resources are obtainable and the money can be raised to purchase them. In practice, however, it is (fortunately!) more difficult to dispose of a workforce that is no longer needed.

Because there is no intrinsic limit to the scale of production, capitalist firms can conquer the markets of their rivals. In a pre-capitalist economy, each village had its own blacksmith, food shops, etc – each as an independent operator. With capitalism, successful firms are not limited by the workers who happen to be available, e.g. family members and/or apprentices; they can purchase the required labour. It means that they can take over their competitors' market share, and market structure consequently changes over time, as noted previously. Businesses such as manufacturing that do not have to take place close to their market are constantly transformed by this process of conquest of market share [Joffe 2011]. And this is even without major process or product innovations, which as we have seen are especially easy for capitalist firms to introduce because they control the means of production. These are the causal processes underlying "creative destruction" – in Schumpeter's vivid phrase – and they result directly from the structure of the capitalist firm.

The degree of success of a capitalist firm thus depends on the managerial capacity that it possesses, that is able to combine the potential forces – including those that have to be brought into existence *de novo* as with workforces far away, and novel equipment – into a reality that generates profit. The gap between the *ex ante* possibilities and the *ex post* result is large, because of the passage of time and because of the radical uncertainty involved in predicting the outcome of a particular initiative.

But it also depends on finance. As with any economic activity, both direction and capacity are needed, involving respectively information-based decision making and material flow. Financial backing may already be available, particularly in existing firms that are able to use retained profits, which is how existing firms normally fund new investment. If it is necessary to attract external finance, e.g. as with start-ups, a variety of sources are possible including local financial networks and venture "angels", as well as the formal financial sector via debt or equity [Bhidé 2006; O'Sullivan 2007].

Attracting external finance requires a convincing case that the new firm or investment will turn out to be profitable. It therefore depends on the extent to which the firm's directors are able to devise a plan that shows promise – this ability is their degree of *ex ante* strength. In addition, *ex post* strength is provided by retained profits and other existing resources, plus the firm's already-achieved capacities, e.g. the ability to produce output at a lower unit cost than competitors.

The decisions that the firm takes involve both a long-term strategic perspective, and more day-to-day or at least month-to-month tactical adjustments. Strategic decisions mainly occur at the time of major investments, and include location, technology, number and types of workers required, wage levels, etc.

Important decisions include the price and quantity of the various lines of production. Price setting involves a mark-up over unit costs, using a variety of different methods [Lee 1999; Downward 1999]. It has been known for 75 years that the textbook account of this process is completely unrealistic [Hall

& Hitch 1939; Lee 1999]. Firms that are in a relatively strong position are able to take the initiative in price setting, whether this results from a marketable new product or from an existing product that can be produced at relatively low unit cost [Joffe 2011]. These decisions are partly strategic, but are then reviewed on a tactical basis, adjusting prices (e.g. in sales) and/or quantities in response to market conditions.

Employment is another area that is of first-order importance in firm decision making, corresponding to the centrality of the employment relationship in the capitalist firm. In general, the firm specifies the location and nature of the various types of jobs it provides, the associated wage level (or at least a fairly narrow range), and the associated skills and technology required. This tends to be ignored in labour economics, which treats employment symmetrically as a result of the matching of firms and workers, with matching frictions that give rise to search costs and unemployment [Pissarides 2000]. A dissenting view, that firms set wages, has been proposed within the neoclassical framework based on the idea of firms having monopsony power [Manning 2003]. This is still a market-based viewpoint, which has no strong implications for the employment decision. In contrast, in the perspective presented here, unemployment results because there are no more investment opportunities that are perceived as being potentially profitable under realisable market conditions – even if very low wage rates were offered.

Investment is the strategic decision that largely determines the firm's long-term future. The degree of success depends both on the quantity and the quality of investment. The conventional focus is on the amount of money spent, the cost, as represented in the production function. Similarly, accumulation of capital is typically seen as central to the growth of the firm, and at aggregate level, of the economy. This places undue emphasis on the *quantity* of material flow, to the relative neglect of the *quality* of information-based decision making. More broadly, this perspective favours owners and stockholders, who are allotted a centre stage position, giving insufficient recognition to the role of the directors and managers who steer the firm.

Impact

To a very great extent, the state of the real economy results from the sum total of the decisions made by all its component firms. The types of decision just listed are taken by each firm, taking its economic environment into account, in the light of what it perceives as likely to contribute most to long-term profitability. At the aggregate level, the quantity and price of the goods and services offered for sale, the level of employment and of wages, and in the longer term the productivity of the economy are all results of firm-level decisions. Mainstream economics has difficulties in explaining these phenomena, because its accounts of price setting, wage levels and employment determination are at variance with the evidence on what actually occurs, and the qualitative aspects of investment are ignored.

However, it would be an over-simplification to see this as a matter of simple aggregation in the sense of the addition of individual behaviours. A system perspective is essential, to understand how the capitalist real economy operates – and especially, its unique property (when successful) of dynamism. Firms compete, and this is best understood as an arms race, which can be seen most clearly in the case of cost-based competition. A firm with comparatively low unit costs is in a strong position in relation to its competitors, so that firms attempt to reduce their unit costs. To the extent that a firm is successful, it erodes the margins of its rivals – but they are all trying to do this. At aggregate level, the consequence is that in the sector as a whole, unit costs are continually reduced [Joffe 2011]. As a further effect of competition, margins are under pressure so that prices also fall over time, effectively increasing the buying power of customers [Cox and Alm 1997].

This dynamic quality of the capitalist real economy has led to growth of a magnitude unrivalled in all of economic history [McCloskey 2010]. Poverty has reduced as a result. In addition, capitalist firms have altered land use, directly by industrialising, and indirectly by fostering urbanisation. The natural world has altered out of all recognition, with a massive reduction in biodiversity, together with global climate change following large-scale fossil fuel burning, both by industry itself and by households whose consumption levels have risen with economic growth.

An implication of the heterogeneity of firms is that whilst capitalist firms have, as a category, transformed the world, their degree of influence is unequal. The impact of any particular firm depends on its relative strength. This applies whether the source of strength is in process innovation that has

made items affordable that used to be luxuries, or in product innovation, leading to the profusion of products and services available in modern economies.

Unemployment, as seen in capitalist economies, is traceable to the mode of operation of capitalist firms. Their major direction is set by the investment decision, which includes the determination of the overall size and nature of the workforce, whose role is to put into operation the potentially profitable initiative. At the aggregate level, this sets the overall level of employment in the productive sector, which is often less than the working-age population, leading to unemployment. In contrast, other systems do not have the capitalist form of unemployment, but may well have underemployment, e.g. when the number of potential workers is more than would be required to work the quantity of available land.

Business cycles also result from the capitalist real economy. For example, Goodwin [1967] combined profit-rate-motivated investment with employment-rate-motivated wage demands, and showed that they generated fluctuations in economic activity in the form of a closed limit cycle in employment and income distribution. More recently, Keen has shown that whilst Goodwin's model generates cycles, it does not produce breakdown unless money and banks are added to the model, leading to chaotic behaviour [Keen 1995; 2015]. Put in non-modelling terms, this means that an economy dominated by capitalist firms exhibits growth, unemployment and business cycles, but the existence of full-blown financial crises involves also the financial sector, with excessive lending and debt build-up during the boom phase (often involving the property market), followed by a crash.

Capitalist firms' activities have had consequences that go far beyond the purely economic. They have dramatically altered both consumption and production. Consumption patterns are largely shaped by the combination of firms' productive and promotional activities. Firms have introduced products such as cars and fast food. By introducing labour-saving machinery, aimed at reducing costs, they have converted labour from being primarily manual to mainly sedentary. An unintended consequence is a worldwide obesity epidemic, one of the downsides of abundance.

The continual transformation of production has led to a situation where many firms would be able to produce much more than they can sell, especially (but not exclusively) in manufacturing. Marketing has therefore developed as a major activity of many firms, especially the larger ones, and advertising has become an omnipresent feature of modern societies. Advertising is not only highly visible, it is also economically important: it supports such sectors as newspapers and magazines to the extent that publishers need to avoid displeasing their advertisers. In addition, sponsorship is central to many events in the arts as well as sport, etc.

Successful capitalist firms generate large quantities of profit. As well as being used to further their economic aims, larger firms use the resulting corporate power to influence the wider society, including government. Considerable resources are spent on lobbying. This may be to oppose regulations that would harm their business, as with tobacco firms, or more broadly with tax avoidance. Their lobbying power can also be used for more overtly political purposes, as with contributions to political parties with the aim of achieving a relatively amenable government, thereby undermining democracy.

Conclusion

The introduction of capitalist firms has had a massive impact on the world. It is not, however, the sole influence. The financial sector has already been mentioned, both as provider of finance for firms, and also a source of financial crises. Another major component of the economy, discussion of which is beyond the scope of the present paper, is the property market – and more generally land. Caring in its various aspects is also important. These are too often ignored in economic analyses that focus on the whole economy as if it were composed of manufacturing.

The state has also played a huge role in the transformation of the world. It has had a complementary role to the firm – they are not rivals, as much current political debate would suggest, except in relation to the provision of certain items such as public services and infrastructure. Their complementarity is seen in the role of the fiscal state, especially the navy, in the industrial revolution [O'Brien 2004]; in protectionism and infrastructure construction in early capitalist development [Chang 2007]; in human capital development [Lindert 2004]; in East Asian growth [Amsden 1989; Wade 1990]; and in fostering entrepreneurship [Mazzucato 2013].

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