1. Introduction

There appears to be a broad consensus that inequality of income within modern firms is greater in the modern era, specifically since the widespread adoption of performance based pay for senior executives, particularly in USA and UK. In popular accounts, this inequality is often described in simple ratio terms, for example CEO pay expressed as a multiple of average, median, or lowest pay within the firm. ‘CEO pay’ is generally taken to refer not merely to salary, but to leveraged packages in which major elements might be viewed in economic terms, strictly speaking, as assets rather than income. It is also seen as a general phenomenon, even though data exist for the UK—presented below—to indicate that these multiples vary across firms and standard industry classification categories.

Although there has been wage stagnation in UK for periods since the financial crisis, the growth in inequality is often seen primarily to stem from increases in executive compensation, rather than from massive cuts to nominal or real earnings at the base of the income ‘pyramid’.

In this paper, we examine the intra-firm processes that accompany the growth in inequality within firms. Specifically, we ask the following question; what have been the changes to the organisational

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2 There is a separate and equally important question about how best to measure intra-firm inequality and inter-firm variances in inequality. Multiples, as referenced here, are easy to calculate but potentially misleading. More sophisticated measures, for example organisational-level equivalents of Gini coefficients or Atkinson Inequality Indices, are complex and impossible to calculate based on published information. While we make some reference to this issue below, we intend to address the technical issue of measuring intra-firm inequality more fully in a separate paper.

3 The median salary of FTSE100 CEOs in 2000 was £475,000. By 2015 this had risen to £927,000, an annualised growth rate of 4.5%. During the same period FTSE100 CEO median total earnings increased from £884,000 to £4,284,000, an annualised increase of 11.1%. (Source: Income Data Services). The difference between these two rates of growth is largely attributable to the pervasive use of long-term share-based incentives as well as significant increases in annual bonuses.
processes that generate inequalities of income within firms, and how do they relate to the increase in intra-firm inequality? Where relevant we use in particular data relating to UK FTSE100 and FTSE350 companies to illustrate our points. We begin in section 2 by reviewing the literature on changes to the management of large firms; this literature focuses on the ‘financialisation’ of the firm, particularly in the US and UK, which stresses the importance of capital market oversight in determining change to firm structures and processes. It emphasises, in particular, moves away from ‘organisational’ towards ‘market’ influences on employment practices. In section 3, we attempt to extend this literature by arguing that there are in fact two sets of changes of importance for intra-firm inequality. The first consists of the erosion of administrative solutions to inequality and the second consists of a move to greater reliance on market forces. However, it is crucial that this involves reliance not only on labour market forces but also capital market forces. Section 4 illustrates the operation of these market forces using data from the UK; these data show that a reliance on capital market measures for executive pay and labour market measures for low pay exacerbates intra-firm inequality. The section also examines sectoral variance on one measure of intra-firm inequality. Section 5 summarises and concludes.

2. Managerial Capitalism?

One of the more pervasive ideas in the business strategy literature is Alfred Chandler’s (1962, 1977) idea of ‘managerial capitalism’. Based initially on rather casual empiricism, it came to denote a set of circumstances underpinning the operation of large oligopolistic corporations, in which managerial freedom of action was pronounced, in the absence of regulation by either government or capital markets. Chandler was not the first to make the observation. Drucker (1949, 22) argued that the managerial corporation was “the decisive, representative and constitutive institution” of the US social order. Wright –Mills (1956) was concerned with the emergence of a managerial ‘power elite’ in the US. Later Vogel (1978, 58) argued

“In the US, the professionally managed, oligopolistic, multi-divisional firm literally exists for a generation without the modern equivalent of the state”
More recently, Davis (2009) saw the traditional US corporation as an institution that fulfilled many of the functions of states – dispensing or funding social welfare benefits such as health care, running internal procedural justice systems like internal courts, developing foreign policies about where they do business, and in some cases having their own air fleets. He remarks:

“Some American multi nationals look more like European welfare states than does the US government” (2009; 59).

British business differed in some respects, but not in the basic picture of a set of corporations run primarily by managerial agents rather than owners, and with their internal processes insulated from direct regulation by government (see Channon, 1973).

There is a substantial literature documenting the decline of managerial capitalism, particularly since the liberalisation of financial markets in the 1980’s. Much of it relates to the USA. Pfeffer (1997) argues that firms have on average become smaller, more unequal, with much changed employment practices and with much more severe capital market oversight. Davis (2009) argues that firms are ‘managed by markets’, specifically that they are driven by the conception of shareholder value to maximise their market value and minimise their direct ownership of assets. Krippner (2011) shows that US firms are increasingly reliant for revenue and profits on ‘financial’ activities such as ownership of common stocks, lending and asset management.

What were the implications for intra firm inequality? Again, the published data come mainly from the US. Davis and Cobb (2010) argue that there are relationships between the market for corporate control in the firm and inequality. For the US, they identify three broad periods:

- 1950’s-1970’s: the ‘high tide’ of managerial capitalism where conglomerate mergers increased employment concentration and inequality declined.
- 1980’s: when bust-up takeovers split up these conglomerates and inequality increased slightly.
- 1990’s: when the ‘shareholder value’ approach dominated and inequality increased rapidly.
Perhaps paradoxically, managerial independence of action is associated with more limited intra firm inequality in income (though perhaps not in other respects). It is interesting to note how these time frames map onto the data on income inequality in Anglo-Saxon countries for the period 1910-2010 provided by Piketty and others (see Cassidy, 2014). This shows a distinct “U” shape, with the share of the top percentile in total income falling from 1910 to 1970 and rising thereafter, so that by 2010 inequality had almost regained levels not previously seen since the start of the 20th Century.

Davis is concerned primarily to analyse the death of managerial capitalism in the USA and its replacement by a ‘functional’ approach to corporate governance characterised by a devotion to shareholder value; this in turn implies a lively market for corporate control, divestment of non-essential activity, and alignment of manager and shareholder interests through the use of stock options. In his words:

“The corporation has increasingly become the financially-oriented nexus described by its theorists” (2009; 63)

It is perhaps in analysing what these ‘theorists’—primarily in economics and finance—saw as the problems of managerial capitalism that we may find a clue to its relevance for inequality. In its key contributions (see Jensen and Meckling, 1976, and the collection in Jensen, 1998), the essential focus is on share-price underperformance rooted in managerial behaviour. The argument goes back to the work of Williamson (1975, 1985) and it is at core an agency problem. Managers (it goes) act in their own interests not those of shareholders, they are risk averse in under-utilising assets, preferring organisational survival over investor returns, pursuing growth rather than profitability, and over valuing their own competence over market signals. They seek predictability and security over maximising returns.

This shift away from managerial capitalism to the financialised firm is associated with major shifts in employment practices, broadly from what Jacoby (2005) has termed an ‘organisational’ to a ‘market’
orientation. The former is associated with job security, internal hiring, talent development and full
time employment relationships. As Bidwell et al (2013; 62) have put it ‘an employment system that
was closed, inwardly focused and hierarchically governed’. The latter is associated with market based
pay, use of incentives, shorter job tenure, and non-standard employment contracts. Crucially, the
former is associated with concerns for internal equity in pay relationships, whereas the latter is
associated with greater pay variance within and across jobs (see also Cobb, 2016).

The argument here is that this relates to the mechanisms for control of intra firm inequality preferred
under managerial capitalism. We shall refer to this here under the broad heading of 'administered
inequality'. This is not to imply that firms had a view about the desirability of specific inequality
outcomes, rather that managerial capitalism exhibited a preference for organisational outcomes
dominated by intra-organisational processes. Inequality outcomes are included here. We may, at the
risk of oversimplification, suggest two sets of administrative processes in the managerial corporation,
both of which set limits on inequality outcomes.

3. Administered Inequality

The story of ‘administered inequality’ is essentially a story about internal labour markets. Internal
labour markets, whether for manual, white collar or managerial categories of employee are
multipurpose devices that develop job-specific skills, rationalise hierarchies and, crucially, provide a
legitimation device for inequality (Doeringer and Piore, 1971; Dobbin et al 1993). They tend to
compress pay disparities (Cobb, 2016; 332). They also prioritise the internal coherence of hierarchy
over market mechanisms for pay setting. We focus on the two mechanisms for pay setting most
common in managerial corporations: collective bargaining and job evaluation. They have often
overlapped, but are distinct. Both tend to exert limits on intra firm inequality. Crucially, the both
involve the firm in offering some justification for inequality outcomes.
Collective Bargaining

In both USA and UK, union density increased throughout the early part of the era of managerial capitalism. It peaked at just under 30% in USA in the early 1960’s but continued to rise in UK until 1980 peaking at nearly 55%. In the UK, although public sector trade union membership density increased rapidly in the 1970’s, private sector union membership and collective bargaining coverage was substantial through the post war period to 1980. Unionisation and the emergence of internal labour markets for manual workers tend to be more closely associated in the USA than UK (Doeringer and Piore 1971) but in both countries there is evidence to associate collective bargaining with the compression of pay differentials; specifically, unionised workplaces show lower wage dispersion than non-unionised (Metcalf et al, 2001; Freeman and Medoff, 1984). Collective bargaining appears to have compressed differentials not just within bargaining units but between them; the most influential theorist on the growth of white collar and managerial unionism saw the extension of unionisation into clerical and managerial occupations as a ‘credit’ effect on the success of manual trades unionism at protecting real incomes (Bain, 1970). There is more recent evidence based on US data indicating the presence of unionism exerts a downward effect on senior management pay (Gomez and Tzioumis, 2006).

In both countries the period of the rapid break up of managerial capitalism identified by Davis, the 1980’s saw a sustained decline in union density (Gomez et al 2010). Union density tends to understate collective bargaining coverage but both density and coverage tend to be greater in larger firms (Freeman and Medoff, 1984). Successive survey evidence from WERS for the UK shows that union membership and coverage of collective bargaining fell consistently from the 1980’s. Between 1989 and 2014, union density fell overall from 38% to 25% (Millward et al 2000; van Wanrooy et al 2013). By 2013, collective bargaining coverage in the private sector in the UK stood at only 16% (LFS data); as we show below, pay determination at the ‘base’ of the organisational pyramid has a very different underlying process in most modern firms.
Job evaluation

Job evaluation can be defined as:

“A systematic process for defining the relative worth or size of jobs within an organization in order to establish internal relativities and provide the basis for designing an equitable grade and pay structure, grading jobs in the structure and managing relativities” (Armstrong et al 2003; 4).

Its coverage in the UK is substantial, not least because the idea of an ‘equitable’ measurement of job content and worth has relevance for the implementation of equal pay and opportunities legislation (Boxall and Purcell, 2011). Similar legal considerations seem to have been behind the spread of internal labour markets in USA (Dobbin et al., 1993); a key point of job evaluation is that it does not measure the market value of a job incumbent, simply the content and thus worth of the job. Surveys in the UK cited in Armstrong et al (2003; 7-9) show coverage levels of 45-50% in surveyed firms 1995-2002 with many non-covered firms expressing intent to adopt. A key point is the prevalence of use of job evaluation for managerial jobs.

Job evaluation is often based on proprietary packages sold by management consultants and by far the largest of these in the UK is the Hay guide chart method, which does two things. First, it ‘scores’ a job in terms of a set number of ‘points’. Second, it assigns a financial value to each ‘point’; its objective is to establish a uniform value for a Hay point across firms, using a proprietary database. Since a ‘point’ is worth the same in lower and senior management jobs, this exerts an influence on the relative pay of jobs; it dampens kurtosis at the upper end of the income distribution. A CIPD survey in 1994 found 30% of all job evaluation usage in the UK was by the Hay method.

The effect of such a method is to control variance in income, but only within the scope of the scheme. It is thus significant that the Hay scheme often covered very senior management positions, notably in
retail banking in the UK. Where salary is defined for senior managers by this system, and salary is the major component of income, then inequality will be constrained by this sort of administrative process. However, where senior managers reach escape velocity from such a scheme, or where the outputs of the scheme are only a small proportion of pay, inequality within the management hierarchy will increase.

Let us illustrate with a hypothetical example. Firm A and B are in the same sector and identical in the composition of the workforce. Each has two sets of employees, managerial and manual. Firm A might, for example, be one of the many formerly state-owned industrial companies which were privatised during the period of the UK Thatcher Government of the 1980s. In firm A, the managerial employees are all covered by a job evaluation scheme and the manual employees all have their pay set by collective bargaining. Inequality in Firm A is entirely administered and the firm may be said to have oversight on the extent of inequality it manufactures. In firm B, job evaluation schemes do not extend to senior management, who are primarily rewarded by stock options – i.e. by reference to capital market measures. There is no collective bargaining and manual workers’ pay is set by reference to the legal minimum wage or movements thereof – i.e. the annual percentage increases in the minimum or living wage are applied to existing pay levels. Other things equal, Firm B will have greater inequality than firm A except under circumstances where the absolute increases of those on the minimum wage calculus are greater than the capital market returns to those holding stock options.

We would argue that empirically these latter circumstances are unlikely. However, they do point to some limiting conditions. Where wage inflation is greater than stock market returns (as for much of the 1970's), then Firm B income inequality will not grow rapidly. Firm A senior management may be better off than firm B. For the USA for the immediate post war period, Lewelen (1968) identifies widespread use of stock options for executive pay, but nevertheless in the early 1950's production worker pay grew faster than executive compensation. Murphy (2011) makes the generic claim for the
USA that under a combination of stagnant stock returns and high marginal taxation such as occurred in the 1970’s, firms switch from direct rewards reportable during disclosure to less visible ‘perks’ such as private jets and country club memberships, or to deferred compensations such as ‘golden parachutes’ (exit packages) and generous pensions. However, as we shall argue below, where price inflation is relatively low and increases in the value of equities is high, as has been the case since the financial crisis, then the pay mechanisms for Firm B will tend to generate greater dispersions.

What is likely, however, is that the institutional arrangements of Firm A have become much less common, and the institutional arrangements of Firm B more so. One may refer in the terms used above to the arrangements in Firm A as ‘administered inequality’. Firm B on the other hand may seem to be more market oriented in its pay setting arrangements. However, what hypothetical example of Firm B illustrates is that it is not sufficient to make this broad contrast in order to understand trends in inequality within the firm. One needs to ask which market processes are being relied upon to set pay. In Firm B, the two tails of the income distribution are referring to very different markets and market indicators. Let us examine each.

4. Outsourced Inequality

Two seminal articles published in the mid-1970s and early 1980s had a profound impact on academic thinking about executive compensation. Agency theory (Jensen & Meckling 1976) argued, inter alia, that in order to motivate executives (agents) to carry-out actions and select effort levels that are in the best interests of shareholders (principals), boards of directors, acting on behalf of shareholders, must design incentive contracts which make an agent’s compensation contingent on measurable firm performance outcomes. Tournament theory (Lazear & Rosen, 1981) extended the agency model by proposing that principals structure a company’s management hierarchy as a rank-order tournament, thus ensuring that the highest-performing agents are selected for the most-senior management positions. Tournament theory postulated that executives compete for places in a company’s upper
echelons via a sequential elimination tournament. It predicted that compensation is an increasing convex function of an agent’s position in the management hierarchy, with increases in remuneration between levels in the hierarchy varying inversely in proportion to the probability of being promoted to the next level. By implication, the compensation of the CEO, ranked highest in the tournament, would typically be substantially more than the compensation of executives at the next highest level.

The popularity of the two theories in academic circles was accompanied by changes in management practice, as an increasing proportion of senior executive pay was delivered in the form of stock options and other types of equity incentive. The pervasiveness of these instruments was not even affected when, in a large scale empirical study in the US, Jensen and Murphy (1990) were unable to find a strong connection between CEO pay and performance, noting that CEOs lost only $3.25 for every $1,000 loss of firm value, an effective equity stake of just 0.3%. Somewhat perversely, given that agency theory had been advanced as a positive theory (of what is) rather than a normative theory (of what should be) Jensen and Murphy concluded that the weak empirical connection between changes in CEO pay and changes in firm value meant that companies should be providing a greater proportion of compensation in the form of stock. That is indeed what subsequently happened in practice. For example, in the UK the proportion of FTSE 100 CEO pay delivered in the form of stock options or long-term share-based incentive plans (LTIPS) increased from 12.7% to 48.8% between 2000 and 2015 (source: Income Data Services). The use of LTIPS in the UK was given further encouragement with the publication of the Greenbury Report in 1995, which recommended the use of long-term performance-based equity incentives to align the interests of shareholders and managers.

Paradoxically, however, senior executives have gradually become disillusioned with share-based incentives. Many executives feel that they failed to meet their main objectives. Various reasons are given. Commonly cited is the complexity of most LTIPs. In a study by Pepper, Gore and Crossman (2013) one CEO is quoted as follows:
“Deferred share schemes are basically somewhat poorly understood, and pretty arbitrary. In the old days share options were easily understood, but pretty arbitrary. These new schemes are extraordinarily complex... and still pretty arbitrary.”

Other participants in the same study comment on risk, ambiguity and time discounting. In another study, Pepper & Gore (2014) found that executives were much more risk averse than financial theory predicts, preferring fixed outcomes to risky, yet potentially more rewarding, alternatives. They also attached a heavy discount to complex incentives. The second study found that executives are very high time discounters, typically marking-down the value of complex long-term incentives at a rate in excess of 30% per year, reducing the perceived face value of a three-year deferred incentive by over 65%. Pepper & Gore conclude that the pervasiveness of shared-based incentives is actually contributing to inflation in executive pay; they conjecture that boards of directors, acting on behalf of shareholders, increase the size of long-term incentive awards to executives to compensate them for the perceived loss of value when compared with less risky, more certain and more immediate forms of reward.

As evidence of these points, during the period 2000-2015 (a period which, incidentally, includes the financial crisis of 2008-9) the annualised rate of increase of the total earnings of FTSE100 CEOs was 11.1% and for FTSE250 CEOs was 9.2%. During the same period the annualised increase in the retail prices index was 2.5% and the annualised increase in average nominal earnings was 3.3%. The median total pay of FTSE100 CEOs in 2015 was £4,284,000 compared with average wages of £25,029, a ratio of 171:1. In 2000 the equivalent statistics were £884,000 and £15,800, a ratio of 56:1 (source: Income Data Services and Office for National Statistics; see also Figure 1)
Thus it can be seen that in the UK, from the mid-1980s onwards, senior managers were increasingly being rewarded on capital market measures not evaluation of jobs. At the same time, given the collapse of collective bargaining, many lower paid workers have had their income increases pegged to statutory measures. In these circumstances, administrative processes for the firm to regulate intra firm equity gave way to capital market and statutory influences in the tails of the distribution respectively in such a way that the firm cannot easily control inequality within its boundaries.

The key statutory influence on all-employee pay in the UK is the National Minimum Wage (NMW), introduced in 1999. Since then, it has been regularly increased at a rate above conventional cost of living indices but just below the growth of GDP. Specifically, since its introduction in 1999, the NMW has increased by 86%, which is greater than the increase in average UK earnings (63%) and both influential measures of inflation (RPI 57% and CPI 39%), but lower than the GDP (95%) (Low Pay Commision, 2016; 5). The coverage and influence of the NMW has gradually increased on a number of measures (Low Pay Commission 2016). The number of employees paid the NMW has increased. However, there is evidence from survey data that impact on those paid above the minimum wage is substantial. Bryson and Luccino (2014) use WERS data on pay settlements in the private sector to analyse this broader influence. They find that 30% of workplaces refer to changes in the NMW in considering the level of annual pay settlement. Large workplaces and those without unions are particularly likely to do so. As a consideration, it ranks only behind the financial performance of the firm as an influence on employee pay increases. They argue that the NMW ‘steps in’ in the absence of collective bargaining. They note that many firms have shifted their annual pay increase date to October, to coincide with the increase in the NMW.

The remit of the Low Pay Commission (LPC), which oversees NMW increases, is to assess the affordability to firms of a specific increase. This refers both to the impact on firm performance and also to employment levels. The concern is to avoid setting the NMW at levels which would cause
increases in employment, particularly amongst vulnerable labour market groups. It surveys employers and employers' associations regularly and these surveys indicate that increases in the NMW tend to increase the ‘bite’ of the statutory measure. By ‘bite’ they mean the percentage of average or median earnings taken up by the NMW, and there is some evidence that where the NMW increases are higher, differentials among those close to the bottom of the income distribution tend to compress (LPC 2016; 21-23)⁴

From 2000-2015, the income of FTSE 100 directors – lead or other – has increased by over 300%. In the same period the adult NMW has increased by just over 80%. The relative movements of capital market and labour market indices are not the whole story. Executive pay movements in Figure 1 are distressingly unaffected by the financial crash. NMW measures have moved above both inflation measures. However, the data indicate the importance of focusing on the different markets in which the pay of different sets of firm employees are set if we wish to understand the growth of intra firm inequality. Executive pay is set by formulae related ultimately to the movement of financial markets. Since pay rises (not necessarily pay levels) are set in many private sector firms by reference to NMW movements for those closer to the bottom of the income pyramid then, to the extent that capital market returns exceed inflation, the pay setting process themselves will tend to increase intra firm income inequality measures over time. The figures on executive pay and low pay respectively from 2000 clearly bear this out.

We referred to the pattern of income setting processes under managerial capitalism as ‘administered inequality’. We refer to this pattern of dual reliance on capital markets on the one hand and the statutory processes of the NMW on the other as ‘outsourced inequality’. The firm no longer co-ordinates the pay of the highest and lowest incomes within its boundaries. It relies on market mechanisms but the crucial thing is that it refers to different markets at either end of the income

⁴ The proposal is for a National Living Wage from 2017 which will be explicitly targeted at 60% of median earnings by 2020.
distribution. The production of inequality by the firm does not any longer – as it did under managerial capitalism – to a set of intra firm processes; it refers at the tails of the distribution to different markets. We return to the implications of this in our conclusion. First, however, we need to address the issue of variation in intra-firm inequality measures.

5. **UK Data Regarding Intra-Firm Inequality**

The UK is generally regarded as having led the way when it comes to the disclosure of executive pay. Disclosure of individual directors’ pay has been required for over 25 years and is now included in a directors’ remuneration report. The Directors’ Remuneration Report Regulations 2002 require that every quoted company submits a remuneration report to members at the company’s annual general meeting each year. This report gives full details of each director’s remuneration and be presented in a way which is clear, transparent and understandable to shareholders. The remuneration report must provide details of base salary, benefits, cash bonuses, long-term incentives and pension contributions for each individual director. Extensive disclosure of participation in employee share plans is also required. Nevertheless, there are a number of problems. First, it is increasingly the case among large UK companies that the CEO and CFO are the only executives who sit on the main board; other board members are all non-executive directors. Other executives sit on an executive committee, management board, or equivalent, to which the directors’ remuneration report regulations do not apply. While a few companies voluntarily disclose details of the pay of senior executives who are not main board directors, the majority do not. Secondly, the remuneration of all employees is generally only disclosed in aggregate, without any information about pay dispersion. While it is possible to calculate mean pay and the ratio of mean pay to CEO total remuneration based on public information, median pay is not provided as a matter of course and more sophisticated measures of pay dispersion are not required. This means that a sophisticated evaluation of intra-firm inequality in UK companies is rarely, if ever, possible, given current regulations.
In the USA, publication of the ratio of CEO to median pay, which is a somewhat better measure since the latter does not include the former, is required by the Dodd-Frank Act. However, the calculations are complicated and the SEC is still in the process of issuing guidance on the regulations covering it (see Appendix 1).

Figure 2 uses a simple and often cited measure of intra-firm inequality, the ratio of CEO to average pay for FTSE 100 companies in 2008 broken down by a simple industry measure. This measure is unsatisfactory in several respects - notably that the average measure contains the CEO measure - but it can be calculated by publicly available UK data on CEO pay, total salary bill and the number of employees. The variance on multiples is substantial, from under 25 to over 200. It is in some ways surprising. By 2008, most CEO’s of FTSE 100 companies were on substantially leveraged stock based reward packages, and simple inspection of the industry categories reveal that this variance is unlikely to be explained by variance in the value of such packages. Consider the two sectors of financial services (multiple approximately 30) with general retailing (multiple over 200). This variance is more likely, we submit, to be driven by the denominator than by the numerator.

The most obvious point to make here is the ease with which firms may manipulate the figures on intra-firm inequality that can be calculated from publicly available data in the UK. There are in fact at least two possibilities. The first is to outsource low paid work. The sectors that cluster to the left of Figure 3 almost certainly do so. Those, for example, in retailing at the right of the distribution find it harder to do so and contain many employees paid at or close to the NMW. The second is to reduce the executive compensation figures that are published.

FIGURE 2 ABOUT HERE

Again consider a hypothetical (unrealistic) example to illustrate this dynamic. In 2015 Firm A and Firm B both paid their CEO £1,000,000. Firm A has average pay at the UK average (approximately £27,000).
Firm B has average pay at the UK minimum wage for a 35-hour week (approximately £12000). Firm A shows a multiple of CEO/average of under 40 and Firm B over 80. This may point to the importance of different occupational structures as an influence on intra firm inequality. However, it also indicates the importance of choice of firm boundaries. Let us take two examples of prominent firms in general retailing and financial services respectively. Tesco has a very wide range of income to judge from the sectoral multiple. It has senior managers on heavily leveraged stock packages (which are ‘highly competitive’ to judge from the business press). It also employs many people in stores on minimum or living wage, in activities such as shelf stocking and checkout. The CEO/minimum multiple is probably much higher than those in Figure 2. Goldman Sachs is in financial services and, at the apex has senior executive rewards at least as high as those of Tesco. However, its multiple is lower because it has few if any low paid workers. A visit to their Fleet St offices will involve encounters with cleaners, security guards, and catering assistants but (probably) none of these will be employees of Goldman Sachs. These activities will be outsourced and thus disappear from the calculations possible from public data. Outsourcing non-core activities in this way has become standard operational practice which the capital markets welcome as value-enhancing. Conveniently, of course, it also helps to disguise intra-firm inequality by shifting the legal boundaries of the firm. These UK examples are probably not extreme; it is almost certain that any measure of similar multiples for the Apple global supply chain would be much broader than one confined to Apple employees.

A further problem is that labour markets for senior executives are imperfect. An efficient market requires many buyers and sellers, homogenous products (or at least good substitutes), free market entry and exit, plentiful information, and little economic friction. The trouble with labour markets for senior executives is that practically none of these conditions holds good (Pepper, 2006). Worse, companies face a prisoner’s dilemma when it comes to CEO pay. To demonstrate this let us assume that all CEOs are paid broadly equal amounts, with only marginal variations in pay justifiable by reference to job size, industry, specialist expertise, and so on. Assume also that in the available
population of CEOs 20% are superior to the others and would, if they worked for your company, increase the value of the firm by more than the average. 10% are inferior to the others and would, if you employed them, potentially reduce the firm’s value. If all companies offered modest remuneration, then it would be in the interests of an individual company to defect and pay over the odds. By doing so they might attract top talent and (potentially) be more successful than their competitors. Conversely, a company would not want to find itself in the position of paying significantly below average. To do so might mean it could only attract inferior chief executives; no one will congratulate a company’s remuneration committee for its financial prudence if the result is a second rate management team. Thus offering higher salaries is the dominant strategy, even though by doing so companies will generally be no better off than if they all paid modest salaries. On the other hand this is better than risking being in the bottom 10%. The result is upwards pressure on the pay of senior executives without the constraints imposed by an efficient labour market, in contrast with the more disciplined labour markets for employees generally.

6. Summary and Conclusions

Where firms account for a very high proportion of total employment in an economy, then intra- and inter-firm inequality become important in explanations of societal inequality. We have limited our focus here to a discussion of intra-firm inequality which, on all measures, has increased in the last few decades. The literature on inequality in the firm has approached this in terms of a move from organisationally focused systems for setting employee income to market based processes. We have followed this logic a little further. Where firms ‘make’ inequality by overseeing a system of income determination which is designed within the firm and insulated from market pressures, we have spoken of ‘administered inequality’. The premise for this is of course that the firm may appropriate rents and then redistribute them according to a system defined by organisational processes internal to the firm, specifically job evaluation and collective bargaining, both of which tend to compress income
differentials. We have characterised this circumstance as a feature of managerial capitalism, in which accountability to markets is limited.

There is a substantial literature describing or asserting the end of managerial capitalism and the emergence of more market accountability, visible in a number of ways but specifically for our purposes in the exposure of employment systems more rigorously to market processes. Greater intra-firm inequality is seen to emerge from this. It may well be the case that markets generate more inequality than hierarchies (see Kay, 2004). However, our argument, which we have tried to illustrate with UK data, is that it is not enough to talk about market influence. One has to ask – *which market?* A peculiarity of the current system is that different groups of employees are exposed to different sets of market influences.

We have focused primarily on the tails of the intra-firm income distribution in the UK. In the right tail, incomes are defined in terms of capital market measures. In the left tail, incomes are defined increasingly in terms of statutory mechanisms such as the NMW. There are a variety of linkages to market indices in both cases, but generically executive pay is defined in terms of increases in the price of common stock of the employing firm and lower paid workers are tied to increases in the NMW. Neither of these sets of indices is easily controlled by the firm, hence we have used the term ‘outsourced inequality’ to describe a system in which the firm no longer ‘makes’ inequality but ‘takes’ it. The firm is no longer in control of rent distribution to the same extent as under managerial capitalism.

Figure 3 is a heuristic that may be used to illustrate the argument. The firm may generically be said to operate in at least three markets; capital, product and labour (Willman, 2014). All may ‘import’ inequality. Capital markets as we have shown influence executive pay. Labour markets influence the supply price of particular skill sets. Product markets import inequality through their impact on firm
performance and profitability. The firm may be differentially exposed to the impact of each market 
(Fligstein, 1990). Under managerial capitalism, firms imported inequality primarily from product and 
labour markets. Under financial capitalism, they import it from all three, but the role of capital 
markets is primary. Growth in intra firm inequality measures is driven primarily by what is happening 
in the right tail of the intra firm income distribution.

We spoke of the disintegration of administered inequality processes such as job evaluation and 
collective bargaining that, we argued, tended to compress income distributions by subjecting them to 
internal oversight. The question thus arises – what organisational processes have replaced them? 
Unsurprisingly, the answer is fragmentation and lack of any unified oversight. In the absence of 
collective bargaining, pay determination for the lower paid in the firm tends to be the responsibility of 
the human resources function – not normally in the UK a Board function – which may find the 
anchoring of pay increases in a statutory process legitimising. By contrast, the pay of senior executives 
is set by a firm’s remuneration committee, the primary accountability of which is to shareholders, but 
which normally incorporates Board executives. The two pay setting mechanisms are not generally co-
ordinated. The result is increasing intra-firm inequality, corresponding to the general rise in wealth 
inequality in the later part of the 20th century and early part of the 21st century which has been 
highlighted by Piketty, Atkinson and others.

However, our argument differs from that of Piketty in terms of the precise processes in operation. 
Piketty’s argument is that it is impossible to measure the marginal contribution of each 
“supermanager” (as he calls them) to a firm’s total output. Their remuneration is therefore 
determined by hierarchical superiors or, at the top level, by compensation committees comprising 
non-executives who are, or were, senior executives in other companies, where they have also been in 
receipt of very high earnings. In saying this, Piketty is therefore following the “managerial power” 
hypothesis (the proposition that an elite group of managers in effect determines its own pay on a tacit
reciprocal “you scratch my back, I’ll scratch yours” principal) originally advanced by Bebchuk and Fried (2004).

Piketty comments that top pay is determined in the context of a social norm of “meritocratic extremism” which has become prevalent in modern society, led by the US – the apparent need to designate certain individuals in all forms of life as “winners” and to reward them according. He also points to the decrease in the very high top levels of income tax in the US and UK after 1980, which provided an incentive for senior executives to seek higher pay awards, knowing that they would retain a much greater share of their total remuneration.

Our argument is, perhaps paradoxically, that the decline in ‘managerial capitalism’, itself a period of almost complete managerial autonomy from investors, has led to an increase in intra firm inequality. Managers have become more subject to capital market oversight, but those senior managers who have their remuneration set to capital measures have benefited both absolutely and relatively to a substantial degree.
* Typically CEOs

Figure 1: FTSE 350 Senior Executives – Indicative Total Earnings 2000-2014
Figure 2: CEO average multiples, FTSE 100, 2008
Source: Lee, 2013
Figure 3: Firms and Markets
References


Doeringer, P. and M. Piore (1971); *Internal Labour Markets and Manpower Analysis*, Lexington, D. C. Heath.


Appendix 1: Pay Ratios under Dodd-Frank

Section 953(b) of the Dodd-Frank Wall Street Reform and Consumer Protection Act 2010 (Dodd-Frank Act) requires the SEC to design rules to implement the requirement that a public corporation should disclose the ratio between the total compensation of the CEO and all other employees. After some debate and consultation, especially over total compliance costs, the SEC adopted final rules for pay ratio disclosure on 5 August 2015.

The rule addresses concerns about the costs of compliance by providing companies with flexibility in meeting the rule’s requirements. In particular:

- A company will be permitted to select its methodology for identifying its median employee and that employee’s compensation, including through statistical sampling of its employee population or other reasonable methods;
- The median employee can be identified once every three years and the company can choose a determination date within the last three months of its fiscal year, i.e., the calculation does not have to be done at the balance sheet date;
- Non-US employees from countries in which data privacy laws or regulations make companies unable to comply with the rule can be excluded.

A company is required to calculate the CEO’s annual total compensation according to existing SEC rules and to calculate the annual total compensation of the median employee on the same basis. Thus the process appears to allow companies to:

1. identify who is the median employee on any consistent basis applied across the whole workforce using statistical sampling if necessary; then
2. re-compute the earnings of the median person using the same calculation method as used for CEO pay.

Companies are required to include all employees, US and non-US, full-time, part-time, temporary and seasonal, employed by the company or any of its subsidiaries. Individuals employed by unaffiliated third parties or independent contractors are not considered to be employees of the company. Certain exceptions are possible (e.g. non-US employees from countries in which data privacy laws or regulations make companies unable to comply with the rule).

Disclosure is required for fiscal years (i.e., accounting periods in UK parlance) beginning after 1 January 2017.

In summary, a good deal of estimation is permitted in this calculation, balanced in some ways by the fact that the methodology used must also be disclosed.