Compensation policies and comparative capitalisms

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Abstract

A widespread rhetoric suggests that market-like rules dominate employment relationships, and particularly compensation, but empirical evidence is inconclusive. This research examines organisations' compensation policies in clusters of European capitalist economies to test such a hypothesis. Four fuzzy clusters emerged from EU-SES (2014) data, namely Standard, Internalised, Competitive, and Incentive, which illustrates a division between organisation- and market-based models. Collective pay rules characterise organisation-based model and this is the predominant model in all countries except for the liberal market economies. Firms from different models of capitalism rely on internal labour market pay rules, suggesting that the scope of liberal market system is narrow. Differences within clusters of capitalist economies suggest a role for agency and hidden labour market specificities in each grouping. The similarities of pay policies open room to identifying capitalist economies differently.

Key words: compensation policies; capitalist economies; Europe; fuzzy clustering.

Introduction

Labour market regulation and flexible employment relationships have been subject to widespread debate. It has been argued that employment relationships are increasingly being shaped by market forces (Bidwell et al., 2013), with European capitalist economies seeming to be converging on a spiral of deregulation and decentralisation of bargaining (Dølvik et al., 2018). However, Piore (2002) notes that the internal labour market model persists over time, but with particular forms; Osterman and Burton (2006) argue that empirical evidence suggests that not all firms are moving in the same direction, while Davis et al. (2009) defend firms respond slowly to market forces. This raises an important question: does the market-like model prevail in all European countries, diluting the differences between coordinated and liberal economies, or between northern and southern Europe?

Our study attempts to answer those questions by examining the compensation policy patterns of firms operating in European countries. There is research focusing on comparative human resource management practices in general (e.g. Brewster, 2004; Goergen et al., 2012) but it mostly fails to detail pay systems. Comparative research on pay systems has explored the association between pay dispersion and collective bargaining regimes (Plasman et al., 2007); changes of labour market regulation, including collective bargaining across countries (Dølvik et al., 2018); the gap between private and public wages (Castro and Steiner, 2013); or inter-firm wage differentials (Simón, 2010). Research on patterns of compensation policies is almost always limited to single countries (Suleman et al., 2019; Sgobbi, 2013). It is known that firms' compensation policies reflect the norms and assumptions of societies and respond to labour market regulations (Pedrini, 2016). Within any context, though, firms have some agency and may adopt different solutions to manage their human resources (Lasierra, 2007). So, research on types of compensation policies across countries deserve further scrutiny.

The comparative capitalisms literature (Amable, 2003; Hall and Soskice, 2001) has addressed employment relationship models in different institutional contexts but paid insufficient attention to pay systems. We use this literature to underpin our examination of the

relationship between firms' compensation policies and the different regulatory frameworks captured by clusters of capitalist economies. In other words, we submit to empirical test the possible association between firms' options regarding pay and reward system within the characteristics of capitalist economies in Europe. This exercise helps ascertain to what extent market-like rules dominate compensation.

Our study draws on the Structure of Earnings Survey (2014) to examine the pay practices of 93,201 establishments in14 European countries. We provide patterns of compensation policies, estimated through a fuzzy cluster analysis that gives a picture of main typologies and overlapping characteristics of those policies. Subsequently a Tobit regression model is used to examine the association between typologies of compensation policies and clusters of countries as proposed by comparative capitalisms theory (e.g. Amable, 2003; Hall and Soskice, 2001). The outcome helps explore whether available groupings of capitalist economies are sensitive to pay practices of firms, as well as the degree of variance within market economies (Walker et al., 2014).

The paper takes the following form: first we examine what is known about pay policies, and how the differences between national systems may be correlated with forms of comparative capitalisms. From that we draw our hypotheses. The methodology approach used to evaluate those hypotheses is then outlined as well as the extensive database we were able to draw upon. Next the results are presented and discussed. Finally, we suggest conclusions and further research directions arising from our work.

Compensations policy patterns

The economics and human resource management literatures provide insightful typologies of employment relationships, but a dual model is most frequently used in such studies, though some studies examine multiple patterns. For example, Doeringer and Piore (1971) divided the internal organisation of firms into internal labour markets (ILMs) and external labour markets (ELMs). Wages in ILMs are determined by institutional processes and are attached to a hierarchy of jobs rather than to workers; the scope for employer discretion is limited; differences in pay between levels, and internal promotion from one level to another, provide incentive mechanisms; wages are expected to grow with tenure rather than relying on performance evaluation or any other form of incentive pay; and wages are shielded from the competition of the external labour market and therefore do not adjust to the business cycle or other external factors. In an ELM-focused organisation, economic theory argues that wages play a large role in the adjustment process as organisations adjust nominal or real wages according to supply and demand shocks (Baker et al., 1994) or make extensive use of contingent pay schemes and flexible work arrangements (Bidwell et al., 2013).

Jacoby (2005) adopts the same dualism and distinguishes two ideal types: employment relationships are based on organisational rules or based on market rules. In the former model, employees are protected from market forces and are loyal to the organisation. In the latter, employees' pay is subject to market criteria and employees change employer more frequently, seeking the highest pay. Based on this model, Cobb (2015) describes the key features of each model: organisational oriented wage setting is based on job evaluation and hierarchy, administrative rules, and lower pay variance within and across jobs. The compensation policy guarantees pay equity and reduced costs of social comparison. Market-orientation rules include external market mechanisms to set wages, linked to skills and performance. There is large pay dispersion within and across jobs. The goal is to create incentives and increase worker productivity.

An additional example of the dual model approach involves the comparison of horizontal and vertical dispersion (Gupta et al., 2012). The former consists of differences between job levels and attempts to reward skills and other individual attributes, while vertical dispersion is used to give jobs (tasks) different value. Other examples of dual models include high-pay versus low-pay (Abowd et al., 1999; Sgobbi, 2013). Efficiency wage models predict that organisations benefit from paying higher wages by attracting more productive candidates (Akerlof, 1970).

In contrast to the dual models, Suleman et al. (2019) argue that duality does not provide a comprehensive enough picture of decisions on pay practices and limits the potential segmentation of organisations. Accordingly, they show evidence of multiple compensation policy patterns, notably 'competitive' and 'incentive' schemes, illustrating market-oriented policies, and 'internal labour markets' where wage hierarchy and tenure-related pay rules prevail.

Another stream of the literature indicates that the ILM or organisation-oriented wage settings are being eroded, but that this trend is not uniformly applied to all firms and ILMs are still important for pay determination (Osterman and Burton, 2006). Baker et al. (1994) show that internal wage rules protect incumbents from market pressures. In practice, when deciding their wage levels, organisations tend to merge internal options and external labour market information to position themselves in the labour market (Della Torre et al., 2015). Davis et al. (2009) suggest that human resources practices are quite persistent over time and firms respond slowly to market forces.

The earlier cited texts point to a predominance of a single model, whereas the later ones notice a more complex pattern that results from a combination of different models. This leads us to propose the following hypothesis:

H1: *Firms tend to combine pay rules of different compensation policy models, with however, one model tending to prevail over others in each typology.*

Explaining compensation policies: comparative capitalisms

Attempts to understand differences in the institutional base of business systems in the developed countries have resulted in theories of comparative capitalisms (e.g. Amable, 2003; Hall and Soskice, 2001; Witt et al., 2018). Different sets of theories suggest that clusters of countries have specific labour market regulations and that organisations consequently behave differently in these different contexts (Witt and Jackson, 2016).

Hall and Soskice (2001) distinguished between coordinated market economies (CMEs), mainly the Rhineland states and archetypically Germany, where wage setting was centralised at industry-level, and liberal market economies (LMEs), basically the English-speaking countries, where ELMs dominated and market-led wage setting prevailed. Other authorities expanded this dichotomy to a wider range of types of capitalisms, typically by dividing up the CME category. Amable (2003) identifies five ideal types of capitalism. As with all comparative capitalism theories, he places the LMEs (he calls them 'market-based') as one category. However, he divides the CMEs into Continental European (CEC), like Hall and Soskice's Rhineland focus, the Nordic social-democratic economies (SDE), the Asian economies (AC) and Southern European economies (SEE). Other categories have been added notably one for the Central and Eastern states of Europe (CEE) that were communist in the twentieth century and only developed capitalism after 1990 (Morley et al., 2018). It is still unclear which model of capitalism is exactly being developed in this cluster – some have suggested a form of state-controlled capitalism. In wage-labour terms, the SDEs have less regulation than the CECs, higher trade union membership and greater consensus around the role of unions and wage setting, the SEEs have a dual labour market with government organisations and large firms being considerably more formal and more unionised than the informal and usually family-owned small and medium-sized businesses. More recently, Witt et al. (2018) suggested nine clusters among sixty-one economies. Their empirical evidence reinforces Hall and Soskice seminal typology, with a set of sub-groups inside this duality. However, Hancké and colleagues (2007) argue that these frameworks are flexible, i.e. countries can fall outside the dichotomy of LME and CME, whilst that dichotomy maintains its analytical contrast.

Institutional arrangements shape HRM practices (Pedrini, 2016) and studies suggest that centralised bargaining tends to reduce wage inequalities, whereas decentralisation gives employers more scope for adjusting wages to market conditions and for rewarding skills (Bastos et al., 2009). However, the impact of the different bargaining regimes varies across countries and the findings for a set of EU countries are discrepant (Plasman et al., 2007). On the other hand, employers use the wage cushion, that is, pay wages above the level standardised by

collective agreements, to gain flexibility of their wage policy in the context of multi-employer bargaining (Cardoso and Portugal, 2005).

The comparative capitalisms literature finds it difficult to respond to change: if institutions within a society are complementary (Antonelli et al., 2012) then it is not obvious how change occurs, except perhaps as a response to a major shock (Heyes et al., 2012). It has been pointed out, though, that institutions can be compensatory, so that systematic weakness in some rules and regulations may be compensated for in others (Crouch 2005), thus allowing more scope for change. When change does occur, a key issue concerns the direction of change – in particular the potential convergence towards decentralised bargaining and consequently the emergence of the firm as the key place of wage setting. Dølvik and colleagues (2018) provide examples of northern Europe countries moving towards market-based regulation but reject what they call 'north-south contagion' - coordinated bargaining continues to be decisive for competitiveness in those countries.

We therefore submit the following hypothesis for empirical test:

H2: *The market-like model prevails in all EU countries. Therefore, it dominates in LMEs as well as in CMEs*.

Methodology

Sample

We draw our empirical analysis from the European Union's Structure of Earnings Survey (SES) data. The EU-SES dataset is harmonised, linked, employer-employee microdata collected at establishment level (for details see Du Caju et al., 2011) and we used the sample of 14 European countries. The sample includes only employees engaged in an employment relationship and receiving a wage in the reference month (October 2014). All other workers, notably those working exclusively by commission, owners, self-employed and unpaid voluntary workers were excluded.

The potential of EU-SES dataset for studying wage differentials can be ascertained by the studies that have used it, notably to explore the wage gap between public and private sectors (Castro et al., 2013); inter-industry wage differentials (Du Caju et al., 2011; López-Andreu, 2019); the impact of minimum wages (Caliendo et al., 2017); the wage inequality and inter-firm wage differentials in nine EU countries (Simón, 2010); and the association between wages and collective bargaining regimes in three EU countries (Plasman et al., 2007). However, there has been less use of the EU-SES data for examining how compensation policies vary across organisations. In this case, the unit of analysis is the firm rather than the individual. Lazear and Shaw (2006) followed this line of reasoning to compare organisations' wage structures and hiring and mobility patterns in eight European countries. We aggregated the data on wages provided by EU-SES into coarse-grained establishment level data and used that to construct indicators of compensation policies, as in Lazear and Shaw (2006).

The available dataset does not contain some key variables around compensations policies. For example, it lacks data on fringe benefits, bonus characteristics, rules for distribution of bonus, and firms' characteristics that might affect those policies. Firm's compensation policies comprise norms and customs, and firms use pay system strategically to achieve specific goals, but relevant information on some observable, and of course, unobservable firm characteristics is missing. There is a possibility that this might affect our outcomes and calls for caution in the interpretation of the results.

Variables

Our variables followed the different dimensions and the associated rules of compensation policies reported in the economics literature. The dispersion variables use the occupational levels as defined in the International Standard Classification of Occupations (ISCO)[i]. In the next step, we opted to exclude outliers, by eliminating the 2.5% lowest and highest values in each occupational group of each country in order to exclude the extreme cases that could result from misclassification, misfit between the value hour and the worked hours, or existing exceptions to pay policies. The sectors of activity were grouped by the EU's statistical classification of

economic activities (the NACE classification), and the typology of Krueger and Summers (1988)[ii]

Our final sample is composed of 93,201 establishments, divided by comparative capitalisms. In the Social-Democratic Economies (Norway, Sweden) we have n=22,640; in Central and Eastern Europe (Bulgaria, Czech Republic, Hungary, Poland) n=31,239; in the Southern European Economies (Italy, Portugal, Spain) n=8,200; in the Western Continental European countries (Belgium, France, Germany, Netherlands) n=30,691; and in the Liberal Market Economy (United Kingdom) n=611.

A set of ten variables associated with compensation policies were calculated, and grounded around four wage dimensions (pay structure, pay level, pay definition and pay flexibility) that allow examining the market competitiveness and incentive devices, including horizontal and vertical dispersion (see Table 1).

'Table 1 about here'

Fuzzy clustering model

To examine how the different pay characteristics relate to each other, and to check evidence of distinct patterns, we carried out a fuzzy clustering of the organisational data. For this fuzzy clustering we used the data of all countries together, providing a comprehensive view of compensation policies of all countries and, of course, to examine our hypotheses, a comparison of the behaviour of firms within different forms of capitalism. A fuzzy cluster analysis deals with both the imprecision and the expected overlapping of these policies (Baker et al., 1994; Suleman et al., 2019). In the first step, the cases are segmented on the basis of practices associated with pay policy: this helps unveil the configuration of organisations' compensation policies in each country. In the next step, we perform a Tobit regression to examine the factors associated with a compensation policy, notably the country and the industry affiliation. Thus, we are not expecting all organisations to belong precisely to a single cluster, but rather to share characteristics of more than one cluster in different degrees.

We opted for a method akin to archetypal analysis (Cutler and Breiman, 1994; Suleman, 2015) to seek for the more extreme profiles prevalent in the data. In such an analysis the fuzzy c-partition is represented geometrically by a polytope with c extreme points or vertices, which correspond to the location of the archetypes. For example, when $c = 3$ the polytope is a triangle, and we can number its vertices as 1, 2 and 3. The organisations sharing all characteristics of profile 2, are represented by the vector (0,1,0); those that share only the characteristics of profiles 2 and 3 have the first coordinate equal to zero, e.g. (0, 0.3, 0.7), and so on. In the latter case, the characteristics of profile 3 are predominant but we can expect them to be mixed with those of profile 2; no characteristic of profile 1 is expected in those organisations. The goodness of fit of the fuzzy model is based in two validation indices: an Akaike information criterion (AIC)-like measure provided in Suleman (2017) and the normalised partition entropy (PE) coefficient (Bezdek, 1975); in either case the minimum value indicates best fit. We realised that for the first measure, the minimum occurs for c = 4 extreme points while the same number leads PE to its first relative minimum (Table 2). We therefore consider our sample as represented by a fuzzy 4-partition.

'Table 2 about here'

The Tobit regression model uses a latent construct as the dependent variable, which potentially positions each organisation in the structure set out by the fuzzy 4-partition. It is suggestively called $pos(k)$, i.e. the position of the k^{th} firm, and explores the impact of each type of capitalist economy (Model 1) and each EU country in the sample (Model 2). Details about the construction of $pos(k)$ are given in Supplementary File. The Tobit regression analysis is an adequate option when the dependent variable has limited range as is the case of $pos(k)$ function, which belongs to the unit interval [0,1]. It allows the examination of linear relationships between a censored dependent variable and a set of exploratory variables.

Empirical Evidence

Patterns of Compensation Policies

The four fuzzy clusters that emerge from multivariate data analysis represent a combination of ten pay variables, and their predominant pay practices, as illustrated by the figures displayed in Table 3. We note that firms in cluster 1 are more consistent in their compensation policies; that the wage premia of general skills and job hierarchy are the key features of cluster 2; that the strategy of relative pay positioning prevails in cluster 3; and that high dispersion characterizes cluster 4. We label these clusters therefore as Standardised, Internalised, Competitive, and Incentive.

'Table 3 about here'

Examining this typology, we find two clusters with lower dispersion and lower competitiveness. The first, which we labelled Standardised, points to a more balanced relationship between newly hired workers and older workers (a low ratio of entry level) and tenure-based pay is the smallest in the sample. This suggests that establishments probably adhere to the rules stipulated in collective agreements and employers make less use of their discretionary power to design their own compensation policies. The second cluster, which we designated Internalised, tends to be more hierarchical, signalled by greater vertical dispersion but low within-job dispersion, and provides an education premium. Establishments here protect incumbents and reward specific skills. These two first clusters provide evidence that although Standardised clusters share some similar characteristics as Internalised clusters, they give less value to the 'rules' for attribution of wages (tenure, education, job level).

The other two clusters, Competitive and Incentive clusters, could be conceived as two facets of ELM systems. Establishments in the third cluster pursue an external competitiveness strategy, paying more than the general and industry-specific labour market. Establishments in this cluster offer incentives such as regular payments added to base pay to reward higher performers. Establishments are hierarchical (second highest correlation between job and wages) but have the largest within-job dispersion. In the fourth category, having the highest vertical dispersion, the distance between levels is high and suggests that, in addition to monetary rewards, employers use promotion as an additional incentive. This cluster shows characteristics that are closer to the ILM model. The high correlations between tenure and wages and job levels and wages indicate that establishments using incentives erode some of the principals of a pure ILM, thus indicating a strong presence of individualised pay strategies. In sum, some of the variables used to ascertain compensation policies help make clear distinctions between the four fuzzy clusters. These clusters are distinct due to the variables of pay dispersion, market positioning, and correlations with rules of attribution. They show that firms combine rules of different models. Nevertheless, the rules of one model prevail in each typology, which leads us to validate our Hypothesis 1. Furthermore, we notice that it surpasses the dichotomy of internal and external labour market, showing a multiple segmentation of establishments of the sample. The next step of our analysis concerns the relationship between compensation policy patterns and clusters of countries according to the comparative capitalisms classification.

Variation of compensation policy: Comparative capitalisms

Figure 1 reports the proportion of establishments in each estimated fuzzy cluster by model of capitalism. As can be seen, Standardised policies are most common (have the highest proportion) in SDEs (75.7%) but report the largest value in all the other capitalist economies, apart from the LME. In the LME it is the Incentive model, the one with highest vertical and horizontal dispersion, that prevails (47.2%). Since the Standardised cluster presents characteristics of ILMs and the Incentive cluster presents characteristics of ELMs, these results lead us to reject the null Hypothesis 2; market-like rules play a subsidiary role in pay systems. It should, however, be noted that there are varying degrees of combination of ILM and ELM rules in each cluster of capitalist economy.

Some clusters of countries show a polarised economy, with the CEC having establishments adopting a Standardised policy (44.7%) and others with strong incentive pay systems (26.1%). The Southern European Economies follow a different polarisation: while most of the establishments adopt a Standardised policy (42.1%), a non-negligible proportion implements the Competitive model (25.0%). Finally, two models prevail in the CEE transition economies, the Standardised and Internalised, which is more in line with the predictions that we initially made for CEC; this indicates more consistent solutions by employers in CEE and that CECs have been exposed to less regulation over the past 40 years. On the other hand, CEE still has institutional aspects derived from the previous centralised economic regime, which explains why the establishments are more alike in belonging to Clusters 1 (Standardised) and 2 (Internalised).

'Figure 1 about here'

In addition to the descriptive statistics displayed in Figure 1, we estimated a Tobit regression to further explore the association between compensation policy patterns and a set of country variables (Table 5). The Tobit linear regression model (Amemiya, 1984) is suitable for our dependent variable, which varies between 0 and 1. An establishment with a value of *pos* close to 0 means its compensation policy is close to the low horizontal and vertical dispersion policy, whereas values near to 1 indicate a proximity to the high horizontal and vertical dispersion compensation policy model.

Table 4 summarises the Tobit estimates based on Model 1, which explores the impact of type of capitalism, controlling for industry affiliation, and other establishment and workforce characteristics[iii]. Model 2 (Table S1 in Supplementary File) indicates the separate impact of each EU country. This empirical strategy allows reassessing the typology of capitalist economies examined in Model 1.

Before going into details regarding types of capitalisms and country analysis, we note that women and low-skilled occupations prevail in establishments with Standardised policies, while graduates are more likely to work in firms that adopt Incentive compensation policies (see negative/positive signs associated with the ratio of the female workforce; service and sales workers, as well as skilled agricultural, forestry and fishery workers; and graduates in Table 4). Furthermore, Tobit estimates show that temporary workers are more likely in establishments that use high levels of within and between job wage dispersion (Incentive). Finally, here, we note that the different types of collective bargaining regimes tend to push firms towards compensation policies; national-level agreements increase the probability of Standardised types of policy.

The Tobit estimates show, in addition, the association between compensation policy patterns and industry affiliation. The financial sector (0.267) appears to be closer to the Incentive model than other sectors when compared with public administration (the reference category). Alongside manufacturing, the mining, construction, and wholesale and retail, sectors are closer to high-dispersion compensation policies than others in the sample.

'Table 4 about here'

At a first glance, we underline that in all other types of capitalisms the compensation policies show less closeness to Standardised policies than they do in SDEs (Table 5). However, that distance is more pronounced in the LME, which shows the highest estimate in Model 1 (0.668), followed by CECs (0.363). On the other hand, CEE appears as the group of countries that is closest to the levels of adoption of Standardised policies found in the SDEs (0.229).

In the second step of the empirical analysis, we examined the impact of individual countries on the type of compensation policies. Initially, we examined the proportion of each type of compensation policy by country (Table 5) and then we replaced the cluster of countries of Model 1 by single countries (Model 2; Table A1). The goal was to reassess the typology of capitalist economies and identify potential deviations.

The distribution of compensation policies across countries shows five paths (Table 5). First, there is a group of countries (Belgium, Norway) with the highest incidence of organisation-based policies, with around 90% and more. A second group (Czech Republic, Sweden, Poland, Bulgaria) of countries includes those with between 70% and 80% (or a little more) of establishments adopting Standard and Internalised pay systems. A third group comprises Spain, the Netherlands and Hungary and has 60% or more using Standardised compensation systems. A fourth group of countries is characterised by a duality between organisation-based (52%-53%) and market-based (46%-48%) systems. In this cluster, we found Germany, France, Italy, and Portugal. Finally, consistent with previous analyses, the United Kingdom has 66.5% of plants adopting market-based policies. This descriptive picture unveils a new clustering of countries.

The combination of countries based on marginal effects of Tobit estimates and statistically significant association are reported in Table S1 (in Supplementary File) and indicates that the LME cluster is consistent, and distinctive, that some countries remain in the original cluster (e.g. Bulgaria, Czech Republic and Poland in CEE) but that others show a different membership. The most striking findings involve Sweden, that clusters with CEE, while Hungary appears aggregated with SEE (Spain) and CEC (Netherlands) countries. There is also a mix of countries between CEC and SEE: Portugal, Italy, France, and Germany cluster together. The results indicate that the clusters of capitalist economies used in the existing literature hides detail on the countries' specificities. The new groupings deserve further analysis but show that the typology of countries in the comparative capitalisms' literature might not fully reflect the diversity of firms' behaviour in each country in relation to the critical issue of compensation.

<<Insert Table 5 about here>>

Discussion

We examined how compensation policies vary across the clusters of European countries suggested by the comparative capitalisms literature. The empirical findings can be summarised as producing three major outcomes: first, we reveal the patterns of compensation policies of establishments in a set of European countries; second, we identify the prevailing model policy in each capitalist economy; and third, we explore cross-country differences within each pre-clustered capitalist economy. The most meaningful finding, and one worth underlining, is that organisations do not have pure compensation policies (Baker et al., 1994) and nor do establishments in particular capitalist economies adopt a single model. Mostly, a dual model prevails among organisations and among economies - it is however an impure duality (Sgobbi, 2013). Although it is an intuitive finding, the fuzzy clustering helped us to quantify the mix of models.

Fuzzy clustering provided four types of compensation policy that can ultimately lead to a dual model: Standardised and Internalised versus Competitive and Incentive. The former follows collective rules that meet ILM characteristics (Doeringer and Piore, 1971), while the latter are closer to an ELM model and create space for extensive differentiation between employees. Using the proposal by Jacoby (2005), the former are examples of organisation-based policies, while the Competitive and Incentive types can be regarded as market-based. The market-based type opens room for individualisation (Dølvik et al., 2018).

The Standardised model is the predominant one in the sample with almost 60% of establishments in our European sample having pay systems that follow collective and predictable rules. Organisations do seem to reduce the relevance of internal labour market rules to respond to market pressures, but this happens to varying degrees (Pedrini, 2016). The pay practices set by institutional processes remain relevant even in the context of pressures of individualisation and contingent pay systems (Bidwell et al., 2013).

Our findings give no significant support to the argument that flexible and market-oriented strategies command the design of compensation policies, implying that the rules of the ILM model are irrelevant (Bidwell et al., 2013; Osterman and Burton, 2006). We show that some establishments in the sample use compensation policies in the Competitive pattern, and

high dispersion in the Incentive model, but mostly adopt Standardised policies (49.7% of the total sample) and Internalised (21.7% of the total sample). This to say, 71.4% of the sampled establishments implement organisation-based policies. The market-based clusters (3 and 4) seem to be a secondary solution and the practices vary substantially, being more represented in CECs and LMEs.

Furthermore, we note that different pay practices may represent different routes to attain a similar goal of becoming closer to the market i.e. achieving incentives or being competitive, but that the intensity of these practices varies across models of compensation policies. It is definitely more pronounced in Incentive models but also exists in Internalised models (Table 3). Our findings match those of Suleman et al. (2019): even in the Internalised model, organisations seek incentive devices. It seems that firms have assimilated incentive pay systems probably in an additive way; they reward high performers but maintain a collective regulation of employment.

These devices coexist with pure ILM rules, at least in some workplaces. For example, the protection of incumbents in the Standardised model and the hierarchical structure in Internalised policies represent distinctive features of the ILM model. Furthermore, the Incentive category shares features of the ILM, notably the job-wage hierarchy and tenure-based pay. Seniority-based pay seems to be an ILM practice that persists (Lee, 2015), at least in many of the sampled organisations. In sum, the patterns provided by fuzzy analysis corroborate previous research showing that compensation policies are not pure models – in fact, they are a combination of the practices described in different models (Baker et al., 1994; Suleman et al., 2019).

The relationship between compensation policy patterns and comparative capitalisms is covered in Hypothesis 2. Here, too, we found a dual distribution of compensation policies across capitalist economies. Not surprisingly, the Standardised model prevails in SDEs, the highest proportion of Internalised policies were found in the CEE, while market-led compensation policies are a distinctive feature of the LME. Our findings corroborate the description of comparative capitalisms by Amable (2003) and Hall and Soskice (2001) but add that CECs and SEEs are somehow polarised clusters of countries. While the Standardised model prevailed in all models except the LME, the market-led, model also played a role across all countries. For example, Standardised policies coexist with the Incentive model in CECs, and with Competitive policy in SEEs. Probably, this illustrates the reduced coverage of coordinated bargaining in countries from the former cluster (e.g. Germany) and low-cost competition strategy of SEEs (Dølvik et al., 2018). It shows, additionally, a convergence towards a combination of coordination and marketisation across capitalist economies. The mechanisms and the degree of such combinations contribute, however, to the persistence of the groupings.

Finally, our research looked at individual countries to re-examine the typology used in the previous analysis. This was an exploratory attempt but showed that available groupings are somehow sensitive to variables associated with patterns of compensation policies. Our analysis showed that the UK remained as the single country of LME; some countries remained within their original cluster (Bulgaria and Poland in CEE; France and Germany in CEC) but the SEE cluster was broken up. We noticed that Portugal clustered with Germany and France, showing a dual model of compensation policies: organisation- and market-based. These countries also clustered with Italy, which has a slightly higher proportion of plants with organisation-based policies (64%).

This analysis deserves further scrutiny with additional variables regarding the employment relationship. It might illustrate that the cluster of countries hides specificities in each labour market in Europe, allowing the compensation-setting patterns room for agency; or reveals flexibility of clusters to accommodate those specificities without losing their analytical validity. It shows that sometimes different institutional settings lead to similar outcomes; this seems to be evidence of the variety of solutions adopted by firms to manage their workforce. We tentatively suggest a reassessment of the classification of countries using fuzzy clustering analysis; this approach would provide a more accurate (i.e. quantified) picture of pure and mixed capitalist economies.

Concluding Remarks

This study uses comparative capitalisms theory to contribute to our understanding of the pay practices that organisations use to design their compensation policies.

Before summarising our contribution some limitations of the study should be noted. The dataset lacks some key variables of compensation policies, notably fringe benefits, bonus characteristics, rules for bonus attribution, and firms' characteristics that might affect those policies. Hence, our results are exploratory and, therefore, must be interpreted with caution. Nevertheless, this research provides an accurate picture of the existing patterns of pay policies and additionally would help re-appreciate the clusters of capitalist economies, examine whether the regrouping we found is sound, and understand issues of path dependency in a future study.

The four estimated fuzzy clusters show that organisations tend to be concerned with three main dimensions to design their model of compensation policy, notably pay equity and incentives within the organisation, and competitiveness in the labour market. Nevertheless, they privilege collective rules, such as seniority-based-pay, protection of incumbents, and hierarchical structures which are independent from skill or performance pay. Despite popular rhetoric, a careful empirical examination shows that organisations have not abandoned ILM rules. This is also the case for the Incentive model that prevails in the LME.

In summary, our evidence supports the general thrust of the comparative capitalisms literature which argues that systems and complementarities operate differently in different systems of capitalism and tend to be resilient. However, it reinforces arguments that these are not deterministic and that there is room for variation within each strand, thus allowing for change and malleability (Thelen, 2014; Walker et al., 2014).

In addition to collective rules, common factors exist among organisations, with compensation policies tending towards market rules that attempt the individualisation of earnings. While some use pay dispersion, other prefer to be more attractive in the labour market. The extent of individualisation varies across capitalist economies, and the pay practices used to achieve such patterns are different.

Types of compensation policies also vary among country clusters: In the social democratic economies standard pay practices are defined collectively – Standardised policies. However, in the LMEs organisations tend to differentiate their employees through Incentive policies. We found, in addition, marked differences across countries within any one cluster of capitalism. Although exploratory, our analysis shows that some variables of employment relationships, in our case of pay systems, contribute to residually reorganizing capitalist economies differently; mostly the clusters remained untouched.

However, the answer to our main research question is that it is the organisation-based model, instead of the market-like one, that prevails in the capitalist economies examined in this paper; marked differences exist between coordinated and liberal economies. The south of Europe is not so different to the north: both share dual pay systems, although the Portuguese labour market showed similarities with Germany and France.

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[i] Our dataset comprises six occupational groups 1: Managers (ISCO 1); 2: Professionals (ISCO 2); 3: Technicians (ISCO 3); 4: Clerical and service workers (ISCO 4, 5); 5: Skill, craft and establishment workers (ISCO 6, 7, 8); 6: Elementary occupations (ISCO 9).

[ii] 1) Manufacturing (NACE C), Mining (NACE B) and Construction (NACE F); 2) Transportation and storage (NACE H) and Public Utilities (Electricity - NACE D; Water – NACE E); 3) Wholesale and Retail (NACE G); 4) Accommodation (NACE I); 5) Finance, Insurance (NACE K) and Real Estate (NACE L); 6) Professional Services (NACE M), Information and communication (NACE J), Administrative (NACE N), Other services (NACE S); 7) Community services (Health – NACE Q, Education – NACE P, Arts – NACE R); 8) Public Administration (NACE O).

[iii] Previous studies have explored the influence of industry affiliation, workforce and firms' characteristics on distribution of earnings (e.g. Suleman et al., 2019).

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Table 1 – Compensation policy variables

Variable name	Variable specification	Information provided by the variable
	Pay Structure	
Between job levels dispersion	Ratio 90/10 of gross hourly in the company	Differentiation between job level – measure of vertical dispersion
Within job levels dispersion	Average of coefficient of variation of gross hourly in the job level	Internal equity controlling for job level – measure of horizontal dispersion
	Pay Level	
Differential toward market median	Average differential of company gross hourly value comparatively to national market median within job level	Position of firm vis-à-vis the competition in the general labour market of the company country
Differential toward industry median	Average differential of company gross hourly value comparatively to industry median within job level	Position of firm vis-à-vis the direct competitors at industry level
	Pay definition	
Entry level	Ratio between gross hourly value workers less than 3 years by gross hourly value workers with more or equal than 3 years tenure	Differential from initial jobs and more tenure
Correlation hour value/ tenure	Correlation between gross hourly value and tenure (years)	Value attributed to tenure
Correlation hour value/ education	Correlation between gross hourly value and years of schooling	Value attributed to general skills
Correlation hour value / job level	Correlation between gross hourly value and job level (ISCO one digit)	Value attributed to hierarchy
	Pay flexibility	
Wage cushion	Average of the relative value (%) between annual bonus and annual total rewards (gross earnings +bonus)	Incentive devices
Overtime flexibility	Average of the relative value (%) between monthly overtime and shift payments and monthly gross earnings	Overtime importance

Table 2 – Goodness of fit of different cluster solutions

No. of clusters (c)	AIC-like	PE
2	44.906	0.33544
3	29.543	0.33752
4	**27.264**	**0.32796**
5	28.369	0.33471
6	32.778	0.32793
7	31.628	0.31858
8	34.142	0.30803

Table 3 – Estimates of fuzzy 4 partition clusters

	Mean	SD	Organisation-based		Market-based	
			Cluster 1 Standardised	**Cluster 2** Internalised	**Cluster 3** Competitive	**Cluster 4** Incentive
Between job levels dispersion	2.30	3.07	1.72	2.32	2.23	4.28
Within job levels dispersion	.19	.10	0.16	0.17	0.23	0.29
Differential toward market median	1.07	.28	0.99	1.02	1.46	1.10
Differential toward industry median	1.06	.24	0.99	1.01	1.38	1.10
Entry level	.89	.18	0.93	0.87	0.87	0.80
Correlation hour value / tenure	.25	.27	0.23	0.26	0.26	0.31
Correlation hour value / education	.36	.30	0.26	0.63	0.27	0.39
Correlation hour value / job level	.43	.31	0.34	0.71	0.34	0.43
Wage cushion	.05	.06	0.03	0.05	0.07	0.06
Overtime flexibility	.04	.06	0.04	0.04	0.04	0.03

Figure 1 – Proportion of fuzzy clusters within comparative capitalisms (%)

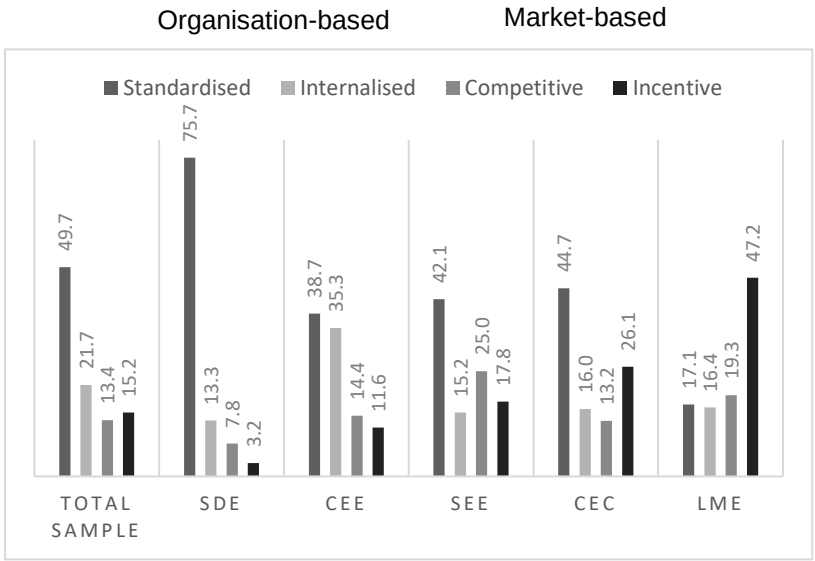

Table 4 - Predictors of compensation policy: Tobit regression model estimates with clusters of capitalist economies

	Model 1	
Variable	**Estimate**	**SE**
Type of Capitalism		
Socio-Democratic (SDE) (reference)		
Liberal Market Economies (LME)	0.668***	0.013
Western Continental European (CEC)	0.363***	0.003
Southern Europe (SEE)	0.310***	0.004
Central and Eastern (CEE)	0.229***	0.004
Industry Affiliation		
Public administration (reference)		
Manufacturing, mining, construction	0.171***	0.006
Transportation & storage; public utilities	0.103***	0.006
Wholesale and retail	0.163***	0.006
Accommodation	0.120***	0.008
Finance, insurance, real estate	0.267***	0.007
Professional services, I&C, administrative, other service	0.146***	0.005
Community services, health, education, arts	0.048***	0.005
Company Size		
Small: 10 – 49 employees (reference)		
Medium: 50 – 249 employees	0.029***	0.003
Large: > 250 employees	0.012***	0.003
Sample of employees per company	0.000***	0.000
Financial Control		
Public (reference)		
Private	0.009***	0.003
Collective bargaining level		
None (reference)		
National	-0.023***	0.005
Industry	-0.104***	0.003
Company	-0.056***	0.003
% female employees per company	-0.148***	0.005
% graduates per company	0.130***	0.005
% employees in ISCO 5,6 per company	-0.180***	0.005
% Temporary employees per company	0.016***	0.005
Constant	-0.019***	0.007
sigma	0.311	0.001

N = 93201; Pseudo R^2 = 0.221; McKelvey & Zavoina's R^2: 0.223;
LR Chi2(22) = 22089.26; p-value = 0.000; AIC = 77935.150.
*** p<0.01, ** p<0.05, * p<0.1; SE: Standard Error

Table 5 – Proportion of fuzzy clusters within each country (%)

	Organisation-based			Market-Based		
Country	**Standardised**	**Internalised**	**P1+P2**	**Competitive**	**Incentive**	**P3+P4**
BE Belgium	60.4	32.1	92.5	4.3	3.2	7.5
BG Bulgaria	50.8	19.3	70.2	20.7	9.1	29.8
CZ Czech Republic	33.6	48.5	82.1	7.8	10.1	17.9
DE Germany	43.2	12.1	55.4	14.4	30.2	44.6
ES Spain	43.4	16.7	60.0	24.7	15.3	40.0
FR France	35.1	18.8	53.9	14.9	31.2	46.1
HU Hungary	30.4	36.9	67.2	17.4	15.3	32.8
IT Italy	44.0	8.2	52.2	28.2	19.6	47.8
NL Netherlands	44.0	23.3	67.3	16.2	16.5	32.7
NO Norway	77.3	12.9	90.2	7.3	2.5	9.8
PL Poland	44.6	27.6	72.2	16.4	11.4	27.8
PT Portugal	33.5	19.4	52.9	21.2	25.9	47.1
SW Sweden	63.2	16.2	79.4	11.7	8.8	20.6
UK United Kingdom	17.1	16.4	33.5	19.3	47.2	66.5