HOW INTERNAL TRANSACTION COSTS
DRIVE COMPENSATION OF MANAGERS AND
SALESPEOPLE IN BUSINESS-TO-BUSINESS FIELD SALES

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Abstract

Two key issues in business-to-business (B2B) sales force management are 1) how much a given sales role should be compensated (pay level) and 2) how much of the compensation should be fixed versus variable (pay structure). We examine the paychecks drawn by people in over 14,000 selling jobs and over 4,000 sales management jobs in five B2B industry sectors in five European countries. We show that both the level and nature of compensation are keyed to the job's challenge. For salespeople, more challenging jobs pay better at a constant rate, while for sales managers, pay increases at an increasing rate for job challenge. This suggests that sales managers make a particularly valuable contribution. We also show that the structure of pay appears to reflect decision makers' desire to reduce internal transaction costs. In particular, variable pay appears to be used as a way to delegate the most contentious compensation judgments to a third party—the customer base.

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Introduction

In many B2B industries, personal selling in the field is a critical marketing function. One of the most pressing issues concerns compensation. How much should a salesperson earn (the question of *pay level*), and how much of that pay should be guaranteed (salary) rather than contingent on achievement (the question of *pay structure*)? Some practitioners believe that an even more important issue is the level and structure of pay not for salespeople but for the managers who supervise them. Managers are thought to be critical because their supervisory skills vary greatly and can have a powerful multiplier effect on results, short and long term. Elling et al. (2002) assert that a poor manager can ruin a number of salespeople and seriously reduce the achievements of each one, while an excellent manager can develop great salespeople, each of whom consistently generates high returns.

Research has not kept pace with management's need to understand the level and structure of sales compensation. A recent review by Brown et al. (2005) points out that while research on sales manager compensation is sparse, the salesperson literature is divided into several camps, each focusing on its own issues and paradigms to the exclusion of others. In particular, insights have been generated by a self-contained literature on optimal salesperson compensation, based on economic theories (Albers 2002). However, Brown et al. (2005) concludes that it is difficult to apply these insights to many selling situations, in particular given that the field sales role is becoming more complex, longer in its time orientation, and less individualistic (Jones et al. 2005).

A parallel stream of empirical research adopts a fallback position: given that it is difficult to know what is optimal, it is useful to know what patterns, if any, characterize industry practice in

compensating salespeople. Such research rests on the premise that broad-based empirical regularities have survived a market test. Although these revealed prevailing practices may be suboptimal, they may have a good reason to exist—even if managers are unable to articulate that reason, or are unaware of the pattern. For example, John and Weitz (1989) observe that when selling roles have a high component of service, pay *structures* tend to rely on fixed compensation, *as if* firms have discovered their costs are higher than their competitors' costs when they pay incentives for jobs that require little actual selling. Most empirical salesperson compensation research concerns pay structures rather than pay levels, and research on compensation of sales managers is almost nonexistent. Albers (2002) points to the great difficulty of getting detailed and accurate data on compensation in sales, a subject firms consider sensitive.

We develop insights from secondary data covering more than 14,000 sales roles and more than 4,000 sales manager roles operating in five European countries and in five B2B industry sectors. The data are unusually comprehensive and authoritative. Key variables are compiled by the Hay Group, a leading human resources consultant, which uses them for consulting and/or to generate benchmarking reports by industry and country. The central variable is the Hay point, an index of the job challenge of each sales or sales management role, painstakingly calibrated by Hay consultants in conjunction with personnel from human resources and sales management within each company. Company archives provide data on the pay level and composition (fixed versus variable) actually earned by the individuals filling these thousands of jobs. We supplement with privately commissioned data about each country's taxation, as well as publicly available data on cost of living. With this multi-source, multi-country secondary data, we discern patterns in pay level *and* structure (which are seldom studied together). We do so not only for salespeople but sales managers. Ours is the first study to examine the sales (or sales manager) role itself at a

micro level. Prior research, which has ignored managers, has examined the person filling the selling role (e.g. age, education), and/or has averaged across sales roles, usually based on survey data about "typical" sales positions inside a firm.

We show that internal transaction costs, or anticipated frictions inside the firm, appear to play a major role in sales compensation. The pay level and pay structure of over 18,000 jobholders vary as if employers negotiate with their employees to induce job performance while containing internal transaction costs. Concern about internal frictions appears to drive firms to pay in a manner that reflects not only the economic worth of the work, but also concern for the *appearance* of fairness. Decision makers seem to obey the imperative that pay be seen as *legitimate to internal constituents*, i.e. their own employees (both managers and salespeople).

We also show that sales managers are paid by the same principles that describe salesperson compensation, but with an important distinction. As job challenge increases, salespeople are paid more, but in a linear fashion (like a factory worker). In contrast, manager pay rises with job challenge at an increasing rate (like a Chief Executive Officer). This result is surprising. "Star" salespeople tend to be well paid and highly valued, celebrated internally more than are managers. Further, field sales jobs are autonomous and usually out of the manager's sight. Why should managers in demanding jobs make so much more money than salespeople in demanding jobs? We suggest that challenging sales management jobs involve heavy doses of coaching and enabling. In these roles, managers can substantially improve the performance of multiple salespeople (each of whom books business). Thus, holders of the most difficult sales management jobs can have a multiplier effect on revenue that justifies paying them at increasing rates.

Below, we develop a conceptual as-if model of compensation. We argue that pay level and pay structure are related decisions—and that these decisions are fraught with the risk of internal

transaction costs. We argue that pay level is best conceptualized on an after-tax basis. Drawing

on literature from sales force management and organization theory, we focus on the particularities

of the sales job to develop a conceptual model of compensation level and structure. We focus on

the tension between an economic imperative (to reward employees for superior effort and ability)

and an internal sociological imperative: to have compensation be perceived as equitable and

appropriate, both by lower-ranking salespeople and by higher-ranking general and sales managers.

Our results indicate that actual take-home pay levels and compensation structures (the weight of

fixed versus variable pay) may be a compromise between these opposing economic and

sociological forces. We make no claims of optimality, but do suggest managerial implications, as

well as future research directions.

<center>A CONCEPTUAL MODEL OF COMPENSATION LEVEL AND STRUCTURE</center>

Compensation and the Nature of the Personal Selling Function

Face-to-face selling on the customer's premises (field selling) is particularly important in

the B2B sector, in which skilled salespeople work to solve customer problems to create a sale, and

then work within their own firms to ensure that obligations to the customer are honored.

Salespeople can have a great impact on the firm's profitability and on the evolution of its

competences. Accordingly, top salespeople may be paid astonishingly well. Concerning pay

structure, the unusual nature of B2B field selling suggests that contingent pay is more feasible and

justifiable than in almost any other occupational setting (Gomez-Mejia and Balkin 1992). The

work is autonomous and carried out away from the manager's view, making it hard to monitor.

Information is asymmetric; unlike most jobs, the jobholder is better informed than the superior.

Salespeople know their territories, customers, and competitors much better than management can

because they are in the field, and territories are idiosyncratic. For many sales jobs, it is difficult to

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specify the best route to success, and the job demands considerable skill and initiative. These factors suggest that the monitoring and assessment of subjective performance are difficult. All of this complicates a first-line sales manager's efforts to calibrate appropriate salary levels, person by person, year by year—and to convince both her superiors and her subordinates that her multiple judgments are correct. The stage is set for internal friction.

However, salespeople *do* generate visible outcomes for which they can be held (at least somewhat) accountable. Thus, many salespeople are at least partially compensated on a contingent basis (variable pay—commission or bonus—hinged to completed transactions).

Total pay (the sum of salary and contingent pay) is unquestionably of enormous importance in motivating any employee, as pay determines how comfortably an employee can live and how much s/he can save (Milkovich and Newman 2002). The pay-lifestyle connection suggests that income after taxes is of central concern to employees. Labor economists (e.g. Gottschalk and Smeeding 1997) study the impact of taxes on earnings, because after-tax income differentials can be compressed to levels that leave employees wondering why they should work harder. Sales compensation research has focused on pre-tax pay, usually in the U.S., under one national tax regime. While salespeople do care about gross pay for comparison purposes, they are highly motivated by what they live on--net pay. Hence, we study differences in take-home pay.

Pay Dispersion: Difficult to Harness, Impossible to Ignore

Why should two people working for the same company, doing the same type of work, be paid different amounts? This "pay dispersion" question is highly controversial (Bloom 1999). Job satisfaction is contingent on social comparison processes: people respond not only to how much they make but to how others are paid (Baron and Kreps 1999). Paying different amounts to people in the same job category readily arouses feelings of injustice, which sets off a string of negative

consequences. For example, Pfeffer and Langton (1993) show faculty react to pay dispersion by becoming dissatisfied and collaborating less on research. More generally, pay dispersion may make social relations more antagonistic, increase turnover (Pfeffer 1998), damage motivation, and encourage such undesired behavior as shirking and ethical violations (Heneman and Judge 1999).

A major reason why pay dispersion evokes feelings of injustice is that employees do not trust their managers to rate their performance objectively. Hence, they believe both distributive justice and procedural justice (Kumar, Scheer, and Steenkamp 1995) are lacking (Baron and Kreps 1999). When pay dispersion is due to salary differentials (which are under management discretion), employees suspect their superiors of organizational politics and personal preferences. They put up so much resistance that many firms practice pay compression, only going to the effort to differentiate pay at the extremes of high and low performance (Zenger 1992).

On the other hand, egalitarian pay systems may satisfy more employees, but may make it difficult to attract, motivate, and retain the best performers. These people also sense injustice, feeling under-valued and under-rewarded. Thus, high performers shirk, or take their talents to another employer (Cappelli 1999). Zenger (1992) shows what happens when management buys peace by only acknowledging the extremes in their compensation outcomes: the better performers in the undifferentiated middle group leave.

Pay structure is one force creating pay dispersion, because pay-for-performance systems can rapidly create spread in realized incomes for the same job. Thus, pay level and pay structure should be studied together—although, in practice, they seldom are (Brown, Sturman, and Simmering 2003). Indeed, linking the two introduces complexity, because the decision to pay a position above, at, or below market levels is driven by different concerns than when deciding how much to differentiate pay across jobholders (Milkovich and Newman 2002).

Shaw, Gupta, and Delery (2002) argue that when employees perceive that pay differences are indeed based on legitimate grounds, pay dispersion is accepted and functional—and that pay for performance *is* normatively viewed as legitimate. The challenge is to devise a ratings system that truly captures performance—and is seen to do so. One solution is to devise a formula that ties variable pay to an objective indicator or set of indicators that management cannot manipulate.

Economic researchers find this task daunting. Baker, Jensen, and Murphy (1988) point out that people will focus too narrowly on what is being measured in contingent pay systems, and will lobby to influence both the specification and the implementation of the formula. The result is pay for spurious performance, or even negative performance, if firms cannot manage to specify and measure outcomes properly (Ouchi 1979) and link them to the formula (Lambert, Larker, and Weigelt 1993). This, in turn, becomes more difficult to do as jobs become more complex and less routine, i.e. as task programmability declines (Eisenhardt 1985). Here, Beatty and Zajac (1994) point out that agency theory does not offer a unified perspective. Normative agency theory argues that finding some way to tie pay to performance is the best solution wherever feasible: substituting costly behavior control ("monitoring") is a second best solution. In contrast, positive agency theory celebrates the benefits of monitoring, saying little about its costs, and is skeptical about the superiority of "pay for performance." However, both literatures agree that as tasks become complex, appropriate output measures become difficult to specify and combine, which economists call "multi-tasking concerns" (Prendergast 1999).

Baron and Kreps (1999) note that pay-for-performance systems can dull intrinsic motivation and can put too much downside risk on the employee. Further, it is easy to get the parameters of the formula wrong, yet difficult to adjust these parameters (even in response to environment or task changes) because pay systems have inertia. Gomez-Mejia (1994) adds that

such systems oblige a firm to pay when results materialize, which can become very expensive. And management loses discretion: in the limit, once they have set their formula, managers are left to forecast pay rather than allocate pay. One peculiar outcome is that subordinates may earn more than superiors. Baron and Kreps (1999) argue that this inversion is widely accepted as legitimate if it is not built into base salaries.

In short, is pay dispersion good or bad? While arguments abound, empirical evidence of the performance impact of pay dispersion is mixed. Most of the evidence concerns managers only, and comes from specialized populations (Bloom and Michel 2002). Pfeffer and Langton (1993) argue that effects should be specific to situations, of which field selling is one.

In field selling, Ramaswami and Singh (2003) note that compensation is critical (because salespeople care more than do most employees about pay), but so is perceived fairness. Salespeople will give best efforts when they believe distributive justice is present. They are quick to suspect it is not. Most employees consider themselves underpaid (Heneman and Judge 1999) and field salespeople are no exception (Anonymous 2001): 69% think they deserve more pay (whereas only 39% of sales managers think their subordinates are underpaid). Variable pay, while seemingly objective, can be particularly problematic, not only because salespeople do not completely control their results given their territory, but because management assigns territories, and these assignments alone explain up to 40% of variance in sales (Ryans and Weinberg 1987).

How Job Challenge Influences Pay Structure

Lazear (1995, p. 260) reviews the empirical labor economics literature and notes the curious omission of task characteristics (job demands), even though "the entire notion of a 'job'…seems central to the thinking of businesspersons and administrators." This is understandable because it is difficult to compile detailed data on role demands. Consider sales

roles. Superficially, all sales jobs look alike. However, conceptually they are scalable from low to high job challenge (Davenport 2001). Low-challenge sales jobs demand relatively little know-how or problem solving. They are routine, simple, delimited, and individual, typically involving repetitive small sales to transactional customers. High-challenge sales jobs have the opposite profile, involving consultative relationship management of jumbo accounts. These jobs demand leadership of internal cross-functional teams on the supplier's side, which work with corresponding teams on the customer's side. Sales cycles are long and uncertain, customer requirements change frequently, and customers, given the high stakes, are demanding of prospective suppliers. The same considerations apply to sales managers, whose responsibilities range from simple to complex as well, but are qualitatively different. Their job challenge may come from supervising more challenging sales roles, or from supervising the supervisors (i.e. managing beyond first-line sales management), as well as from representing their functional perspective inside the organization (e.g. taking part in strategy formulation).

The more challenging the sales job, the more it is in the firm's interest to motivate the jobholder to work harder and apply more capability to the job. At first glance, this suggests increasing the portion of take-home pay that comes from contingent pay. However, challenging sales jobs are nonprogrammable, making it difficult to specify and measure the appropriate outputs and to build them into a variable-pay formula. Failure to do so will encourage gaming, discourage teamwork, and shorten the jobholder's time horizon.

Taking these arguments together, job challenge should create different *pay structures* as follows:

> The greater the role challenge, the lower the proportion of take-home pay generated by pay-for-performance formulas
> H1a: for salespeople
> H1b: for sales managers.

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How Job Challenge Influences Pay Level

Compensation structure influences compensation level because pay-for-performance schemes can create compensation bonanzas for jobholders. If firms reduce the proportion of take-home pay that is variable in response to job challenge (H1), will they also choose to reduce take-home pay itself? This is unlikely. Organizations will need to pay more to motivate people to take difficult jobs, continue serving in them, and exert best efforts to carry them out (O'Shaughnessy, Levine, and Cappelli 2001). Sales managers can argue to their superiors that higher pay for salespeople is justified because more challenging sales jobs have the potential to generate much higher returns to the organization.

Does the same argument apply to sales managers themselves? One viewpoint, common among salespeople, is that their first-line supervisors are mere "paper pushers" who have little impact on sales district outcomes. The functions, and therefore the value added, of sales managers are poorly understood, making this argument plausible. However, better sales managers can make a difference, by influencing their organization's market behavior, by enabling and coaching their subordinates, and by securing organizational resources for promising customers (Anderson 1996). High-challenge sales management positions involve high levels of coaching and enabling of salespeople who themselves have high potential to achieve. Therefore, empowering a number of these salespeople has multiplier effects on revenue and other customer-mediated outcomes that are critical to the organization. This may call for compensating sales manager roles not at constant but at increasing rates to job challenge.

We posit that job challenge drives compensation levels as follows:

H2a: The *level* of take-home pay increases with job challenge for salespeople.
H2b: The *level* of take-home pay increases at an *increasing rate* with job challenge for sales managers.

How the Tax Environment Magnifies Internal Transaction Costs

Our fundamental argument is that economic considerations drive firms to single out and reward high performers in challenging jobs, but internal transaction costs hamper a manager's efforts to do so. Pay for performance (a compensation structure tilted toward variable pay) is an imperfect solution because more challenging jobs are less programmable. These arguments apply to any environment. Factoring in *national taxation systems* introduces a new complication by magnifying internal transaction costs. Hence, tax variation enables us to assess indirectly the internal friction explanatory mechanism.

A burdensome ("oppressive") national income tax regime 1) calculates taxable income and imposes levies such that effective tax rates are high, <u>and</u> 2) is steeply progressive, meaning rates increase sharply with income.[1] Thus, employees keep small shares of what they earn. Taxation follows culture, among other things: collectivist cultures favor burdensome tax regimes as a means of reducing income inequality and offering a decent lifestyle to low-income citizens (Gottschalk and Smeeding 1997). Rewarding sales-related performance is problematic even with zero taxation. Burdensome tax regimes exaggerate the problem in two ways. First, to insure that post-tax differentials among performance levels are large enough to be motivating, a firm must pay at a high level. When personal income taxes are heavy, it is tempting to abandon compensation and attempt to motivate employees by other means (e.g. job climate). It is an empirical question whether firms tend to do so, or whether they simply pay more and count it as a cost of doing business, given they have chosen to operate in a high-tax country. We argue the latter, on the premise that high-performing sales personnel are not willing to overlook token take-home pay differentials. Nor, for that matter, will they accept "management's excuses" about taxation and agree to live on less in high-tax countries. Firms will be obliged to pay a high-performing sales

employee whatever it takes to make sure that motivating pay premiums are still in the employee's bank account after s/he pays taxes.

But the second taxation complication is harder to wave away. In burdensome tax regimes, employers run faster to fall further behind. Because of progressive tax rates, increasing pay not only boosts employees into higher brackets of income tax—it boosts *employers* into higher brackets of *payroll tax* as well. The combined tax burden—employee and employer—becomes a large factor in the total compensation strategy. To create visible, meaningful post-tax performance differentials, firms must create extremely large pre-tax performance differentials in gross pay and enormous differences in the employee's cost to the company.

This raises internal transactions costs. Even if employees focus on post-tax pay, they track and make social comparisons on gross pay differentials. When management decides via salary mechanisms who will receive these tax-exaggerated pay premiums, the usual negative effects of pay dispersion will be worsened. Anticipating extra resentment from below and extra scrutiny from above, managers charged with salary decisions will expend too much effort to monitor and compare performance. Yet, they will still face charges of unfairness (from below) and misallocation of resources (from above). Scrutiny, resentment, argument, and resistance are internal transaction costs, or frictions upward and downward.

The solution is to shift the contentious decision to a third party that cannot be manipulated by management—the customer base. Variable pay systems empower customers, whose orders trigger compensation. When the customers' collective decisions designate the high or low performer, it is more difficult to accuse management of errors in judgment. Customers don't collude on their "performance judgments," and their self-interested agendas are independent of internal supplier politics. Shifting to variable pay is akin to bringing in an arbitrator to resolve

high-stakes disputes. Therefore, tax regimes, by heightening internal friction, influence pay

structure as follows:

> The proportion of take-home pay that is due to variable sources increases as the
> *employee's* taxation burden increases
> H3a) for salespeople,
> H3b) for sales managers.

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> *employer's* taxation burden increases
> H4a) for salespeople,
> H4b) for sales managers.

The Relation of Pay Structure to Pay Level

Many arguments as to why employees may dislike variable pay center on the pay

dispersion it creates. Another objection to variable pay centers is the budget volatility it creates.

Individuals whose pay rests largely on variable sources must forecast not only their pay check but

their tax bracket. The same is true for organizations relying on variable pay: they must forecast

not only their payroll but their payroll taxes. Pay for performance not only shifts downside risks

from the organization to the individual but obligates the firm to pay potentially huge sums when

high-powered incentives motivate the jobholder to new performance heights. Both parties may

object. Individuals typically are highly averse to downturns (Gerhart 2001). Organizations, taken

aback by the sums they owe, may regret having promised pay for performance and may even try to

renege (dismissing stellar achievement as a "windfall"). Management often concludes (after the

fact) that high payouts for high performance were not necessary, implicitly believing that

performance would have occurred anyway (Gomez-Mejia and Balkin 1992, Hill 2001).

Yet, for sales jobs, firms can't afford *not* to reward salespeople who generate high results,

or they may shirk or quit. Firms that forgive poor performers will lose transactions—and retain

those poor performers. One way to reward sales-related outcomes is to have sales managers assess

performance and vary salary accordingly. But supervisors in general factor objective results into their ratings with a low weight (Heneman 1986), and sales supervisors are no exception (Rich et al. 1999). We conjecture that it is similarly necessary to reward high-performing sales managers for customer-mediated outcomes attributable to their efforts.

How can the firm focus sales personnel on customer-mediated outcomes? One way is to build compensation systems that rely on variable pay, so that it is difficult to achieve high take-home pay on salary alone. Weiss (2001) argues that firms that embrace variable pay can outbid firms that rely on salary because they can distribute pay disproportionately to high performers, while offering low take-home pay to low performers. Variable pay thus removes from the firm the risk that it will pay high salaries in the expectation of performance that does not materialize. This risk reduction appeals to upper management. Variable pay also has an appeal to lower-ranking employees. Such systems may be seen as equitable because they are unstable (jobholders can change performance quarter to quarter, allowing poor performers to move up) and because pay volatility can be viewed as a form of risk, which deserves (even requires) the possibility of offsetting higher returns. This holds for sales managers as well: their variable pay may be hinged to the performance of their subordinates.

In summary, it is unlikely that firms will pay well when they assume all the risk of poor performance. Lower net pay is the price of salary-only pay systems. We therefore posit:

> The level of take-home pay increases with the proportion of pay due to variable
> sources
> H5a: for salespeople
> H5b: for sales managers.

Baseline Influences on Pay Level and Pay Structure

Our premise is that sales personnel care about how well their compensation allows them to live, to the point that management must factor this into pay structure and pay level. If so, the *cost*

of living in a country should influence pay levels, which should be adjusted upward to reflect high costs (Milkovich and Newman 2002).

Industry factors should also matter. Multi-industry studies typically do find industry effects, which may capture important elements of the competitive and task environment (Milkovich and Newman 2002), as well as industry-specific norms (Gomez-Mejia and Balkin 1992).

Firms that operate in only one country (*national* firms) may not follow the same compensation strategy as multi-country (*international*) firms. International firms have reason to harmonize practices over countries, whereas national firms are free to reflect local norms.

The *size of the employer* is an important factor, but the nature of its impact is controversial. Concerning pay level, it is taken for granted that large firms pay better than small firms for all jobs, though it is unclear why (Milkovich and Newman 2002), and the difference is rapidly fading away (Hollister 2004). Concerning pay structure, does firm size influence reliance on variable pay? The limited literature that addresses this question empirically suggests that small firms rely more on variable pay and less on salary, perhaps because they cannot afford overhead. However, in a study of over fourteen thousand middle and top managers, Gerhart and Milkovich (1990) find the reverse. Misra, Coughlan, and Narasimhan (2005) and John and Weitz (1989) study field salespeople, and also find that larger companies turn to variable pay. Misra, Coughlan, and Narasimhan (2005) argue that this arises from two factors: lower risk aversion in large versus small firms, and higher sales productivity in large firms. John and Weitz (1989) explain the size result as a reaction to internal transaction costs: the larger the firm, the more judgments must be made, and the more difficult it is to keep these judgments consistent and to explain them convincingly to salespeople.

MODEL DEVELOPMENT AND ESTIMATION

Sample

The Hay Group, the world's largest compensation consulting firm, uses a highly

formalized job evaluation methodology, adopted by over 40% of the Fortune 1000 companies,

based on its own proprietary position evaluation methodology, described by Sperling (2001) and

O'Shaughnessy, Levine, and Cappelli (2001). Hay collects data on position requirements through

discussion of information compiled for each job title by a team of managers, employees holding

those jobs, and Hay consultants. Detailed questions on tasks, duties and responsibility are

discussed, and then combined to provide a measure of skills or job requirements.

Our dataset contains fixed and variable compensation in 2002 for 14,424 salespeople and

4,957 sales managers from national or international organizations operating in five European

countries (France, Germany, Italy, the Netherlands, and the United Kingdom), and five industrial

sectors (consumer, financial, industrial goods, trade and other sectors).[2] Roughly two thirds of

salespeople and half of sales managers work for national companies. Other data collected by Hay,

featuring measures of job characteristics and compensation, have already served as samples for

previous studies of managerial pay systems in industrial relations (e.g. O'Shaughnessy, Levine

and Cappelli 2001). In the sales arena, researchers have followed human capital theory, typically

relying on measures of sales *people* characteristics - *averaged at the sales force level*- to

investigate sales personnel compensation issues (e.g., Coughlan and Narasimhan 1992, Krafft

1999, Misra, Coughlan, and Narasimhan 2005). Examining sales job characteristics rather than

salespeople's, as the Hay data permits us to do, is likely to substantially enrich our understanding

of sales compensation. See Tables 1 and 2 for the structure of the sample.

Measures

    Take home pay. Total compensation measures are adjusted to account for income and social taxes, country by country, bracket by bracket. Ernst & Young, a prominent international tax accounting firm that regularly computes such figures for the business press provided the 2002 tax figures for every €5,000 earnings ranging between €5,000 and €250,000, assuming sales personnel are prototypical, i.e. married with two children under 16 (see Appendix for more detail). Using those tax figures, we estimated employees' taxes through piecewise regression analysis. This approach abstracts from the principles of tax systems and gets directly into actual taxes, given actual pay ranges for real people in each country. Because the resulting figures for take-home pay vary substantially across industries, we standardize take-home pay by industry (mean=0 and standard deviation =1). See Tables 1 and 2 for raw figures and Tables 3 and 4 for descriptive statistics.

    Firm size is operationally defined as the average of firm sales and total number of employees (each expressed as a z score). Corporate sales range from €9 million to €8,000 million with a mean of €1,128 million (using individual salespeople as units of analysis). Total employees range from 50 to 20,000 with a mean of 4,179 employees. The average corporation studied would place about 2500th in the AMADEUS (2004) ranking of European companies for sales turnover. The average total number of employees for an observation in our dataset is the same as the average for the 2000th to 2500th European companies. Thus, although the companies we study were not randomly selected, they appear typical in some key respects.

    Job challenge. The Hay point system is considered a standard scale for measuring the "value" of a job both within and across organizations (Baron and Kreps, 1999, p. 285). The scale is comparable across jobs and across firms. It is not, however, linear (Sperling 2001). A given

position can gain an increment only if it is at least 15% more challenging than the closest lower job, on grounds that smaller differences are not noticeable enough to be measured reliably (or appreciated by employees). For example, if a job rates 100 Hay points, the next job cannot have fewer than 115 points. If a job exists at 115 points, the next job cannot have fewer than 132 points (115% of 115 points). Going from 100 to 200 points can cover no more than five job steps (115, 132, 152, 175, 201), while going from 200 to 300 points can cover no more than three job steps (231, 266, 306). This minimum 15% gradient in measurement could introduce convexity into the relationship between Hay points and take-home pay, although most firms exhibit linear relationships for most jobs (Sperling 2001).

The Hay process of job analysis includes a number of consistency and reliability checks thoroughly described in Sperling (2001) and O'Shaughnessy, Levine and Cappelli (2001). Hay points capture the skills needed for a job through a combined measure of know-how (i.e., capabilities, knowledge and specialized techniques), problem-solving (i.e., requirements to deal with unusual situations) and accountability (i.e., empowerment, authority and magnitude). As indicated in Tables 3 and 4, the average number of Hay points in our study is 405 for a salesperson and 600 for a sales manager. Salespeople's Hay points range from 104 to 994, whereas managers' Hay points range from 285 to 997.

Ratio of variable to fixed pay. We divide percent of total cash compensation that is variable (setting the minimum at .01) by the percent that is fixed. We log this odds ratio, which is interpretable as the relative emphasis on variable versus fixed, in order to decrease heteroscedasticity, as recommended by Cooper (1993). On average, 13% of take-home pay comes from variable pay (implying that the average odds ratio would be 13 divided by 87, or 0.149; and the average log odds ratio would be the log of 0.149, or -1.90).

Cost of living. We used the 2002 comparative price levels (Organization for Economic Cooperation and Development, 2003), which measure price-level differences between countries for a representative basket of consumer goods and services.[3]

Employee's tax burden. We calculate the proportion of income employees keep after taxes. This is a proxy for the weight of tax burden on the *employee* side, and is reverse scored, as it is *lower* in burdensome tax regimes.

Employer's tax burden. The tax burden faced by companies is operationalized by calculating the ratio of corporately-paid social taxes triggered by variable pay (i.e., the difference between company social taxes given total cash compensation and company social taxes on only fixed salary) and variable pay. This shows how much of variable pay must be matched by payroll taxes. This is a proxy for the weight of tax burden on the *employer* side, and is *higher* in burdensome tax regimes. By focusing on the proportion triggered after salary, we capture the payroll tax brackets into which performance pay moves an employer in a given tax regime.

Estimation Procedures for Salespeople

Based on the hypotheses described previously, we estimate the parameters of the following model specifications for salespeople.

Take Home Pay$_{industry}$ = $\alpha_0 + \alpha_1$ Job Challenge $+ \alpha_2$ Job Challenge^2 $+ \alpha_3$ Firm Size

$+ \alpha_4$ Cost of Living $+ \alpha_5$ ln[Ratio Variable to Fixed Pay]$+ \varepsilon_1$ (1)

ln[Ratio Variable to Fixed Pay$_{industry}$] $= \beta_0 + \beta_1$ Job Challenge $+ \beta_2$ Firm Size $+ \beta_3$ Proportion of

Employee's Income Retained after Taxes $+ \beta_4$ Employer's Tax Burden $+ \varepsilon_2$ (2)

Equation (1) specifies pay levels, equation (2) specifies pay structure, and both dependent variables are standardized within industry. As noted earlier, the mean and range of sales pay is ordinarily industry specific, in part because of different conditions in different industries. We conducted extensive subgroup comparisons, which suggest that the overall patterns of coefficients

within industries differ in magnitudes but are comparable in signs. Our interest is in testing

substantive explanations; hence, we focus on the direction of effects.

Since a subset of independent variables and the observations are common to both models,

there is a possibility of correlation between the error terms in the two equations. Thus, we treat

the two equations as SUR (Seemingly Unrelated Regressions) to maximize the efficiency of the

estimation (Gatignon 2003). In addition, we estimate the parameters of the equations (1) and (2)

using OLS (Ordinary Least Squares). The OLS estimators in the two equations are comparable

and significant across the two approaches (i.e., separate OLS regressions or SUR system).

However, the levels of significance for SUR coefficients are higher due to the model's efficiency.

Further, we check with the Breusch-Pagan LaGrange Multiplier test (Breusch and Pagan 1980)

whether the system is more efficient than single equations and find it is highly significant.[4]

Finally, we estimate separate models for national and international firms, whose

compensation practices may reflect a need to harmonize compensation over all the locations in

which the international firm operates (Gooderham, Nordhaug and Ringdal 1998). Results appear

in Table 5.

Estimation Procedures for Sales Managers

We use the same procedure as above to calibrate models (1) and (2), using OLS and SUR

to estimate these coefficients for sales managers. We once again carry out the estimation

separately for international and national companies. The OLS estimators in the two equations are

generally comparable and significant across the two approaches. As expected, the levels of

significance for SUR coefficients are higher. We test the model's efficiency using the Breusch-

Pagan LaGrange Multiplier test. This highly significant test confirms that the system approach is

more efficient than single equations.[5] The SUR estimates of the parameters of the two equations are presented in Table 6.

In addition to OLS and SUR analyses presented above, we performed a number of alternative analyses to test the stability of our results for both salespeople and sales managers. The results were substantially similar to the SUR regression results, in both direction and significance of impact.

RESULTS

Salesperson results (Table 5) and sales manager results (Table 6) are remarkably similar in the qualitative nature of the effects. Further, international and national companies are also remarkably similar in the nature of effects, although the magnitudes vary. In the following discussion, it should be kept in mind that all dependent variables (though none of the independent variables) are standardized within each of the five industries.

Our parsimonious model of net-pay level and variable-pay usage yields four systems of equations (international and national firms for managers and salespeople). System variance explained is respectable, ranging from 44 to 53 percent. Results largely conform to the hypotheses. In particular, the premise that pay structure and pay level should be studied together is borne out. Take-home pay rises with the fraction of pay that is keyed to performance (H5a and H5b). This applies to any type of company, and to sales managers and salespeople ($\alpha_5 = .43$, p $<$ .0001 and $\alpha_5 = .54$, p $<$ .0001 for salespeople working in international and national companies respectively; $\alpha_5 = .51$, p $<$ .0001 and $\alpha_5 = .49$, p $<$ .0001 for sales managers working in international and national companies respectively).

We now turn to the impacts of job challenge, beginning with the fraction of variable pay in the employee's paycheck (calculated pre-tax).[6] A lower fraction of pay is based on objective

performance indicators and awarded in incentive pay (and hence, salary is a higher fraction of total pay) as jobs become increasingly challenging (H1a and b). This applies to any type of company, and to sales managers and salespeople ($\beta_1 = -3170 \times 10^{-6}$, $p < .0001$ and $\beta_1 = -5340 \times 10^{-6}$, $p < .0001$ for salespeople working in international and national companies respectively; $\beta_1 = -2360 \times 10^{-6}$, $p < .0001$ and $\beta_1 = -3170 \times 10^{-6}$, $p < .0001$ for sales managers working in international and national companies respectively). Job challenge operates differently for take-home pay levels. The more demanding the job, the more employees are paid (H2a and b). This effect is linear (in Hay points) for salespeople (Figure 1 and 2), but convex for sales managers (as indicated by the positive and significant coefficient of squared job challenge) (Figure 3 and 4). For salespeople, the squared term is statistically significant but adds nothing to explained variance, and is therefore dropped from the analysis. Therefore, take-home pay rises in step with Hay points for salespeople ($\alpha_1 = 6039 \times 10^{-6}$, $p < .0001$ and $\alpha_1 = 5809 \times 10^{-6}$, $p < .0001$ for salespeople working in international and national companies respectively) but spirals upward for sales managers ($\alpha_2 = 2.62 \times 10^{-6}$, $p < .0001$ and $\alpha_2 = 2.518 \times 10^{-6}$, $p < .0001$ for sales managers working in international and national companies respectively). With a mean of 600 points (standard deviation 146), many managers operate in a much higher zone of Hay points than do most salespeople (mean 404 points, standard deviation 121).

To give institutional meaning to these coefficients, consider the example of a salesperson working for an international company in the consumer goods sector, paid with a variable remuneration representing 50 % of his/her total compensation, who is promoted to a job with 100 more Hay points. This salesperson's ratio of variable to fixed pay is predicted to decrease by 33%, which implies a new variable pay representing 40% of his/her total compensation. A similar

case for a sales manager implies that a sales manager's variable pay decreases from 50% to 44% of his/her total compensation[7].

A rival explanation for these findings is that firms reward not the job but the jobholder, and that challenging jobs are staffed by people with high levels of human capital. Hence, the most skilled people, not the most demanding jobs, are the recipients of income paid in a convex fashion. Common indicators of human capital are job tenure and age. For the France sample, we have these measures, which offer a partial test. Their correlation with job demands (Hay points) is statistically significant but modest: .15 for job tenure and .21 for age. For the sales occupation, the relevant human capital is difficult to identify (Churchill et al. 1985). The data thus suggests that firms appear to use cues other than demographics (e.g. tenure, age) to fill sales jobs.

Firms turn to variable pay to compose pay packages as tax regimes become more burdensome (H4). On the employer side, as increasing pay forces employers to assume higher payroll tax burdens, firms respond by increasing their reliance on variable pay to fill out the paycheck ($\beta_4 = 4.85$, $p < .0001$ and $\beta_4 = 5.00$, $p < .0001$ for salespeople working in international and national companies respectively; $\beta_4 = 6.70$, $p < .0001$ for sales managers working in international and national companies). Put differently, firms in burdensome systems easily enter into zones of high payroll taxes. They prefer to do so when the customer generates results, rather than relying on sales managers to decide the salesperson is performing enough to award more salary.

The same phenomenon appears on the employee side (H3). The less employees can keep of their performance pay, the more burdensome the tax system (i.e. reverse scoring). Negative coefficients therefore indicate that burdensome tax regimes on the employee side drive firms to base more of the paycheck on variable pay ($\beta_3 = -15.58$, $p < .0001$ and $\beta_3 = -17.17$, $p < .0001$ for

salespeople working in international and national companies respectively; $\beta_3 = -20.68$, $p < .0001$ and $\beta_3 = -21.42$, $p < .0001$ for sales managers working in international and national companies respectively) . Tables 3 and 4 indicate that when governments burden the taxpayer, they also tend to burden the employer. Nonetheless, these two effects are separable and operate on variable pay in the same way.

Turning to baseline influences, most operate as expected. As noted earlier, the national/international nature of the company and the type of industry play roles in terms of magnitude of effects. Firms do offer more take-home pay in countries with higher costs of living ($\alpha_4 = 7.07$, $p < .0001$ and $\alpha_4 = 5.40$, $p < .0001$ for salespeople working in international and national companies respectively; $\alpha_4 = 8.31$, $p < .0001$ and $\alpha_4 = 5.82$, $p < .0001$ for sales managers working in international and national companies respectively). And, surprisingly, larger firms offer lower take-home pay to salespeople, whether they are national or international ($\alpha_3 = -.08$, $p < .0001$ and $\alpha_3 = -.05$, $p < .0001$ for salespeople working in international and national companies respectively). For sales managers, larger international firms also pay less, though there is no difference between larger and smaller national firms ($\alpha_3 = -.10$, $p < .0001$ and $\alpha_3 = -.02$, $p > .05$ for sales managers working in international and national companies respectively).

For both national and international firms, the larger the firm, the higher the fraction of pay that is linked to performance, both for salespeople and sales managers ($\beta_2 = 0.12$, $p < .0001$ and $\beta_2 = 0.10$, $p < .0001$ for salespeople working in international and national companies respectively; $\beta_2 = 0.06$, $p < .01$ and $\beta_2 = 0.08$, $p < .0001$ for sales managers working in international and national companies respectively).

DISCUSSION

Husted and Folger (2004) propose that the greater the perceived unfairness of a governance mechanism (such as a compensation system), the greater the transaction costs created by that mechanism. Our results are consistent with this reasoning, because they show that the realized compensation levels and compensation structures of over 18,000 people in sales roles appear to reflect concern for internal frictions. Ours is an as-if model: we do not know the actual process by which firms set pay.

Our findings are consistent with the hypothesis that firms target net pay, knowing that employees compare themselves to each other on pre-tax pay but are motivated by what they live on (their take-home pay). This explains the finding that firms pay more in expensive (i.e. high cost-of-living) countries. Further, the firm cannot content itself with merely being equitable pre-tax and ignore the tax environment. To attract, motivate, and retain employees for their sales roles, firms must adapt to the tax environment to make sure that after-tax pay rewards differentials in performance in a meaningful way.

The cornerstone of personnel administration is the notion that some jobs are more demanding and/or more valuable to the organization than others. Therefore, organizations peg their compensation to job demands, which involves breaking roles into associated tasks and paying more for tasks which are more difficult or for which performance has higher payoff to the employer (Milkovich and Newman 2002). Job analysis is complex and necessarily subjective. Nonetheless, take-home pay for field sales is clearly tied to job design. In spite of the potential negative side effects of pay dispersion, organizations do pay more to motivate people to take higher-level sales jobs, continue serving in them, and exert best efforts to carry them out. Our

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results indicate that job demands are *not* a surrogate for human capital: the correlations among features of the individual and demands of the job are small. This mirrors O'Shaughnessy, Levine, and Cappelli (2001), who study over fifty thousand managerial and professional jobs. Also using Hay points to measure job design (demands for know how, accountability, and responsibility), they find (p. 20) that Hay points offer "a far more complete measure of skill and job requirements than those used in the past to explain wage outcomes." Such measures include age, education, tenure, and experience, traditional variables in the sales force compensation literature.

In short, take-home pay is fitted to the job (though it may also be adjusted to the individual). These results show that firms do consider that managerial jobs are particularly valuable. Salespeople who step up Hay points in a field selling job gain a linear increase in take-home pay, as do production workers. But for sales managers, take-home pay increases at an increasing rate, turning up noticeably for the most challenging jobs.[8] Firms consider the contribution of the most demanding sales management jobs to be particularly valuable. A great sales manager can enable and empower a number of sales people, directly (first-line supervision) or indirectly (higher orders of supervision). Further, such a manager can mold corporate strategy. The multiplier effects on the top line of the income statement and on the terms of trade negotiated with the customer (contribution to profit) may well justify such net-pay spirals. This is in marked contrast to the view that increasing rates of pay increases reflect merely a return to rank, or that sales managers do little but "push paper and keep score."

The structure of pay influences the level of pay. Sales personnel cannot achieve the highest levels of net pay on salary alone. Overall, the greater the proportion of pay that is contingent on performance, the higher is the level of net pay. In other words, volatility is one price of high take-home pay. In this way, firms both auto-fund high pay and reduce their risk of

overpaying (in salary) salespeople who fail to achieve. Using contingent compensation, firms can

avoid offering top compensation without obliging sales personnel to generate transactions, directly

(salespeople) or indirectly (sales managers), and thus building high base pay into compensation

systems. The variable-pay game restarts continuously. This supports agency theory's contention

that pay for performance solves many incentive problems.

However, variable pay is not a panacea. The more challenging the job, the less firms rely

on pay for performance, *ceteris paribus*. A likely explanation is that, even for field sales,

performance becomes very difficult to specify and monitor in a timely way. Task

programmability declines, time horizons extend, and work becomes interdependent. To elicit

teamwork, encourage a long-term view, and reduce gaming, firms cut back contingent pay and

rely more on salary. This creates a tension: firms do use some variable pay to achieve high take-

home-pay levels, but they are obliged to reduce reliance on contingent pay. Thus, firms must offer

very high salaries for very challenging jobs—and high salaries create internal frictions, or

transaction costs.

This friction accounts for the surprising finding that burdensome tax regimes drive firms to

more transparent compensation structures that are more directly linked to employee output.

Burdensome regimes (high effective tax rates and progressive tax rates) force firms to create

yawning pre-tax compensation differentials in order to have meaningful post-tax differentials,

because relatively little of the money the employer expends stays in the employee's bank account.

Given the nature of the sales function, firms cannot wholly replace compensation with non-

pecuniary means of motivating people. Yet, using salary to set these high-stakes differentials

exposes managers to charges of unfairness (from below) and improper judgment (from above), as

evidenced by the separate impacts of individual income tax and corporate payroll tax. The

transaction costs of asking managers to assess performance in these circumstances are so high that firms appear to "punt it to the customers."[9]

Under variable pay, customers commit the firm's money (employee gross pay and employer payroll tax) to both salespeople and sales managers. Collectively, without collusion, and without becoming involved in supplier politics, customers make fine-grained distinctions, which would be difficult for first-line managers (of salespeople) or upper managers (of sales managers) to make and to justify. When customers designate minute degrees of performance and then management applies a pre-announced formula to convert these to very large differences in money, employees accept the judgments more readily—and perhaps so do other managers in the company. In this way, the firm overrides the manager's tendency to give low weight to objective results.

This study is one of few that examine pay systems outside the U.S. (and across nations). We argue, following Freeman (1994), that countries are a complex of policies and institutions that react to produce an effect. Given that we have accounted for tax regimes (which reflect culture) and costs of living in our five countries, it is not surprising that countries can be compared directly, after accounting for the effects of industry and whether the employer is national or international. Importantly, the directions of impacts are comparable across industries, types of companies, and countries. Indeed, the overall similarity of our results over subsets of the database is striking. Even for sales managers versus salespeople, the only substantive difference in the nature of effects is the relationship of take-home pay with respect to Hay points of job challenge (convex for managers, but linear for salespeople).

An intriguing and unexpected finding is that, on the whole, larger B2B companies in Europe tend to pay less, as well as to rely on variable pay more. Reliance on variable pay may be

explained by the internal transaction costs of making and defending salary judgments on a large scale, and has been found in prior studies in the U.S. (John and Weitz 1989). But that larger companies also pay less is unexpected, and is the reverse of overall patterns in the U.S. (Heneman and Judge 1999; Misra, Coughlan, and Narasimhan 2005).

Could this be a European effect? We speculate that it is, for two reasons. First, moving from one employer to another is difficult in Europe. Coming from a large employer is a form of insurance: it opens doors in case an employee wishes (or needs) to find another job. Employees may accept a discount to get this insurance. Second, European firms, relative to U.S. firms, tend to pay employees in a package that is less heavily weighted toward compensation and more heavily weighted toward benefits in kind (Lemieux 1996). Such benefits include education, travel, entertainment, and transportation. Procuring and administering these perquisites requires an infrastructure in human resources. Large firms have economies of scale, and can pay in perquisites much more efficiently than can small firms. Hence, large firms may offer lower take-home pay because they can substitute by offering more perquisites for the same work. Rather than offering salespeople enough take-home pay to afford a lifestyle, large firms may be able to economically offer the lifestyle itself.

Limitations and Conclusions

This study has its limitations. Pay is a complex phenomenon, driven by many considerations and subject to path dependence. Ours is a parsimonious, cross-sectional, as-if model in only five countries. We cannot trace the actual process, nor directly test our posited causal mechanisms. Further, our measures, which come from multiple sources, are approximate and the sampled firms may not be wholly representative of B2B firms, even in Western Europe. Future research would yield more insights, as well as establish the validity of the mechanisms

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proposed here. Nevertheless, the study offers insights based on individual salespeople's and sales managers' profiles, rather than on an average self-reported by the employer, as other studies in the sales force compensation arena have done.

Taken together, these findings suggest that an optimal (first-best) compensation plan may not be feasible. The fundamental compensation challenge in B2B field selling is to reward better efforts and higher ability in the face of an uncertain relationship between the salesperson's (or sales manager's) inputs and the customer-mediated outputs. Internal transaction costs limit a manager's ability to implement pay plans designed to make these distinctions. When managers tie their judgments of merit to salary differentials, most employees are quick to suspect unfairness, while superiors are quick to insist that differences be documented (not easily done in many sales jobs). Add in high income taxes, and the pre-tax salaries distinctions necessary to leave motivating sums in employee bank accounts become very large. This aggravates resentment "downstairs" (by raising fairness concerns) and increases scrutiny "upstairs" (by adding payroll taxes to make employee cost to the company very high). Our results show that firms seemingly delegate the task of making these contentious compensation judgments to the customer base. Managers use "the voice of the market" to reduce internal transaction costs, an important concern that deserves further scrutiny by scholars of sales force management.

Appendix A: Tax Calculations

France

Income and social security taxes (including *Contribution Sociale Généralisée* and *Contribution au Remboursement de la Dette Sociale*).

Germany

The tax payer was assumed to be a member of a recognized church in Germany. As the church tax ranges – depending on the area – between 8 % and 9 %, we assumed an 8 % church tax. In addition, depending on his/her earnings, the tax payer received annually a "child subsidy" from the government in the amount of € 1,848 for each child. This child allowance is granted when it is more favourable for the taxpayer (i.e., the child allowance reduced the taxable income). Finally, the taxpayer was assumed to pay contributions to the Federal social security system in Germany, even though for some levels of income private health insurances might be cheaper.

Italy

The tax payer was assumed to work for a company over 50 employees. In addition, the bargaining agreement of "*dirigenti*" (i.e., executive) of "*aziende commerciali*" was applied. Finally, the tax payer's spouse and children were considered dependent for tax purposes.

The Netherlands

We assumed the tax payer's spouse had no personal income. In addition, we included the spouse's tax credit in the employee's tax calculation, even though this credit can only be claimed by the spouse. Furthermore we took the children credit into account in the tax payer's calculation and therefore the spouse can no longer claim this credit.

The United Kingdom

Contracted-out salary related rates were used when calculating employer social security. This assumes that the employee is in a company providing salary related pension schemes. There would be a slight increase in employer contributions (2.5% on annual salary in the band £4,628 to £30,420) if we used contracted-out money purchase rates (annuity based company pension scheme), but employee contributions would remain the same. If we assumed the employee was not in any types of company pension scheme then employee contributions would increase by 1.6% on the band of salary as above and employer contributions would increase by 3.5%.

Table 1

Summary Statistics for Salespeople by Industry and Country

(n = 14424)

	Take Home Pay (€)		% Variable Pay	
	Mean	S.D.	Mean	S.D.
Consumer Goods (n= 3,638)	34492.59	9522.07	.10	.12
Industrial Goods (n= 6,541)	37978.25	10800.80	.14	.15
Financial Services (n=3,648)	39550.72	12797.51	.16	.18
Trade (n= 362)	26205.46	15475.10	.14	.24
Other industries (n= 235)	32366.83	7071.91	.04	.07
France (n=7,823)	37044.58	11864.86	.16	.17
Germany (n=576)	43995.00	11249.04	.12	.13
Italy (n=1,378)	34266.39	11858.68	.12	.11
Netherlands (n=1,147)	31221.70	6656.32	.08	.08
United Kingdom (n=3,500)	39172.05	10374.72	.10	.14

Table 2

Summary Statistics for Sales Managers by Industry and by Country

(n = 4957)

	Take Home Pay (€)		% Variable Pay	
	Mean	S.D.	Mean	S.D.
Consumer Goods (n= 1828)	51233.31	14135.65	.10	.09
Industrial Goods (n= 2246)	53002.42	11796.94	.15	.13
Financial Services (n= 724)	50381.94	12570.43	.15	.17
Trade (n= 79)	45280.73	9523.01	.17	.20
Other industries (n= 80)	53192.37	16348.21	.09	.14
France (n=3,836)	51200.06	12632.30	.15	.14
Germany (n=427)	57259.83	14236.95	.08	.08
Netherlands (n=152)	51901.61	11462.38	.08	.07
United Kingdom (n=542)	52148.75	13348.72	.06	.09

Table 3

Summary Statistics for Salespeople

(n = 14424)

	Mean	S.D.	1	2	3	4	5	6	7	8
1. Take Home Pay$_{industry}$ [a]	.00	1.00	1							
2. Ratio Variable to Fixed Pay$_{industry}$ [a]	.00	1.00	.46	1						
3. Ratio Variable to Fixed Pay [b]	-2.45	1.39	.46	.98	1					
4. Job Challenge	404.75	91.92	.37	-.13	-.13	1				
5. Firm Size[c]	.11	2.05	.09	.01	.06	-.07	1			
6. Cost of living	.96	.07	.08	-.13	-.11	-.22	.57	1		
7. Employee's Retained Income after Taxes	.74	.05	-.47	-.15	-.15	-.43	-.02	.06	1	
8. Employer's Taxes	.31	.17	-.08	.16	.17	-.10	-.34	-.56	.66	1

Notes:
[a] Those variables were standardized by industry because of heteroscedasticity as confirmed by the Levene's tests of homogeneity of variances (p<.0001).
[b] This variable was measured as a natural logarithm.
[c] This variable was measured as the sum of total employees and sales revenues z-scores.

Table 4

Summary Statistics for Sales Managers

(n = 4957)

	Mean	S.D.	1	2	3	4	5	6	7	8
1. Take Home Pay$_{industry}$ [a]	.00	1.00	1							
2. Ratio Variable to Fixed Pay$_{industry}$ [a]	.00	1.00	.36	1						
3. Ratio Variable to Fixed Pay [b]	-2.41	1.30	.36	.97	1					
4. Job Challenge	599.98	121.02	.47	-.10	-.13	1				
5. Firm Size[c]	-.32	1.27	-.05	-.15	-.18	-.01	1			
6. Cost of living	.96	.04	.05	-.25	-.29	.05	.47	1		
7. Employee's Retained Income after Taxes	.72	.05	-.55	-.01	.01	-.36	.07	-.38	1	
8. Employer's Taxes	.36	.16	-.14	.25	.28	-.13	-.18	-.77	.80	1

Notes:
[a] Those variables were standardized by industry because of heteroscedasticity as confirmed by the Levene's tests of homogeneity of variances (p<.0001).
[b] This variable was measured as a natural logarithm.
[c] This variable was measured as the sum of total employees and sales revenues z-scores.

Table 5

Salespeople Compensation Model Parameter Estimates
(T-statistics are given in parenthesis)

	International Companies			National Companies			
	System R^2=.44 $F_{(8, 10702)}$=1035.68****			System R^2=.53 $F_{(8, 18126)}$= 2556.67****			
	Dependent Variable			Dependent Variable			
	Model (1)		Model (2)		Model (1)		Model (2)
	Take Home Pay $_{indus}$		Ratio Variable to Fixed[b] $_{indus}$		Take Home Pay $_{indus}$		Ratio Variable to Fixed[b] $_{indus}$
Intercept	-8.04 **** (-39.67)		11.14 **** (39.25)		-6.31 **** (-44.14)		13.43 **** (71.05)
Job Challenge	6039×10^{-6} **** (59.14)		-3170×10^{-6} **** (-23.82)		5809×10^{-6} **** (62.64)		-5340×10^{-6} **** (-46.84)
Firm Size[a]	-.08 **** (-6.22)		.12 **** (7.73)		-.05 **** (-12.05)		.10 **** (23.96)
Cost of Living	7.07 **** (35.24)				5.40 **** (39.84)		
Ratio Variable to Fixed[b]	.43 **** (56.45)				.54 **** (100.27)		
Employee's Retained Income after Taxes			-15.58 **** (-41.01)				-17.17 **** (-71.33)
Employer's Taxes			4.85 **** (39.69)				5.00 **** (64.66)

****p<.0001   *** p<.001   ** p<.01   * p<.05

[a] This variable was measured as the sum of total employees and sales revenues z-scores.
[b] This variable was measured as a natural logarithm.

Table 6

Sales Managers' Compensation Model Parameter Estimates
(T-statistics are given in parenthesis)

	International Companies				National Companies			
	System R^2 = .47 $F_{(9, 5099)}$ = 502.87****				System R^2 = .48 $F_{(9, 4793)}$ = 491.03****			
	Dependent Variable				Dependent Variable			
	Model (3)		Model (4)		Model (3)		Model (4)	
	Take Home Pay $_{indus}$		Ratio Variable to Fixed[b] $_{indus}$		Take Home Pay $_{indus}$		Ratio Variable to Fixed[b] $_{indus}$	
Intercept	-8.09	****	13.85	****	-6.28	****	15.13	****
	(-17.27)		(28.88)		(-13.07)		(30.15)	
Job Challenge	7.49×10^{-6}		-2360×10^{-6}	****	1436×10^{-6}		-3170×10^{-6}	****
	(.82)		(-16.44)		(1.33)		(-17.41)	
Job Challenge Squared	2.62×10^{-6}	****			2.518×10^{-6}	***		
	(3.83)				(3.08)			
Firm Size[a]	-.10	****	.06	**	-.02		.08	****
	(-5.15)		(2.73)		(-1.77)		(5.94)	
Cost of Living	8.31	****			5.82	****		
	(18.51)				(13.45)			
Ratio Variable to Fixed[b]	.51	****			.49	****		
	(40.50)				(42.69)			
Employee's Retained Income after Taxes			-20.68	****			-21.42	****
			(-30.08)				(-30.98)	
Employer's Taxes			6.70	****			6.70	****
			(31.55)				(32.18)	

****p<.0001　*** p<.001　** p<.01　* p<.05
[a] This variable was measured as the sum of total employees and sales revenues z-scores.
[b] This variable was measured as a natural logarithm.

Figure 1

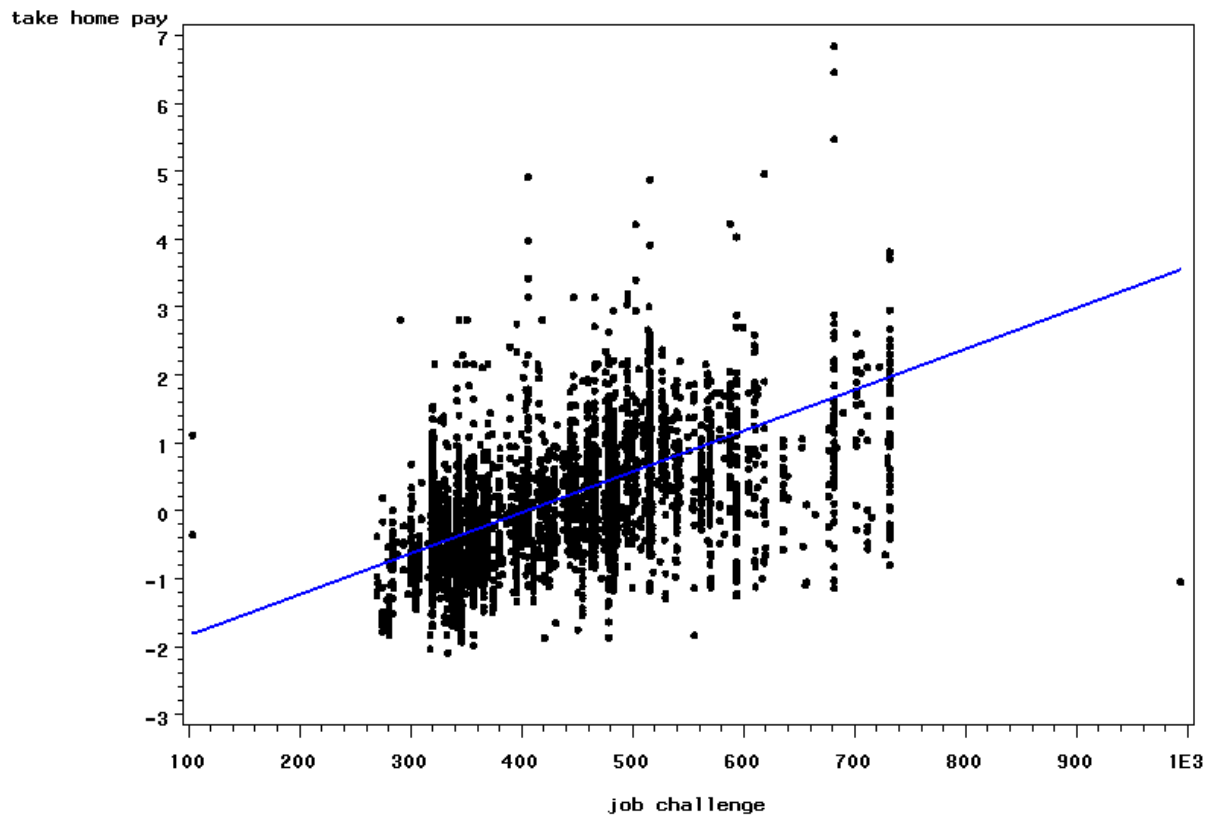Salespeople's Job Challenge and Take Home Pay in International Companies

Figure 2

Salespeople's Job Challenge and Take Home Pay in Local Companies
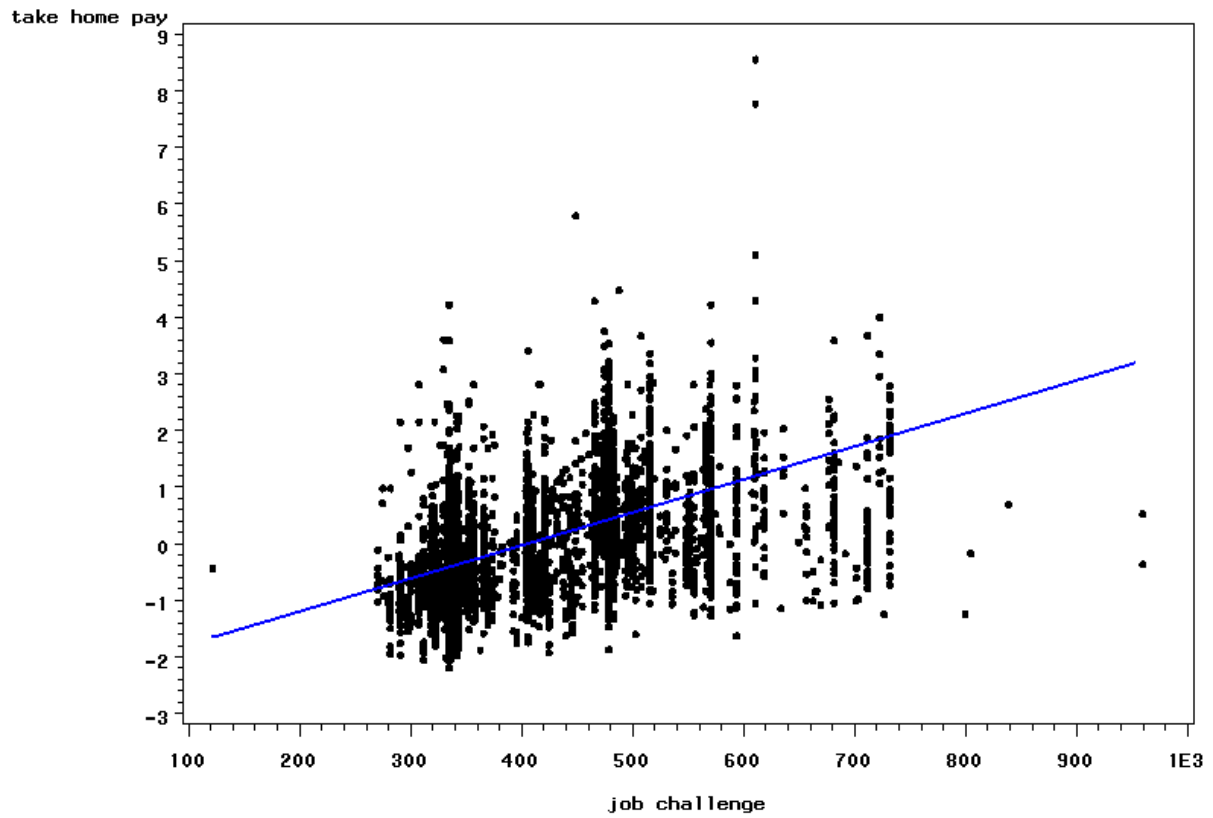
Figure 3

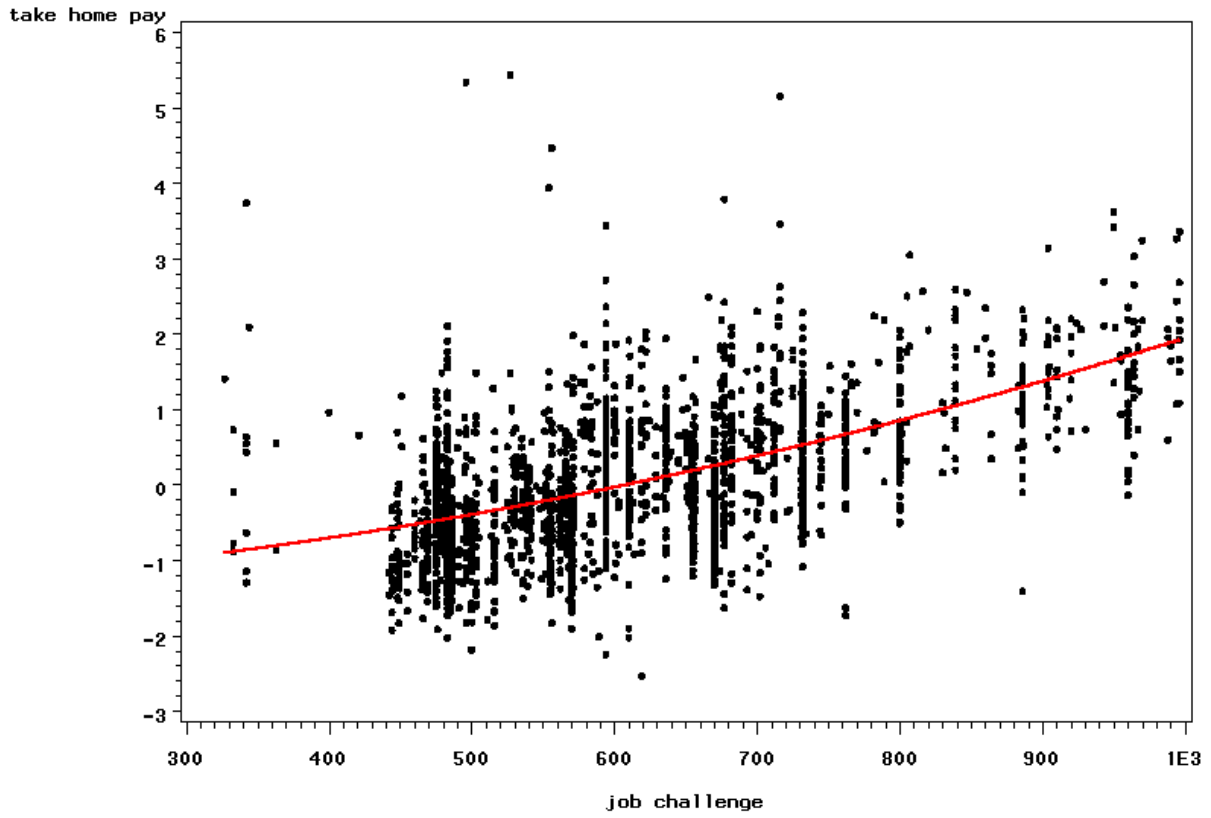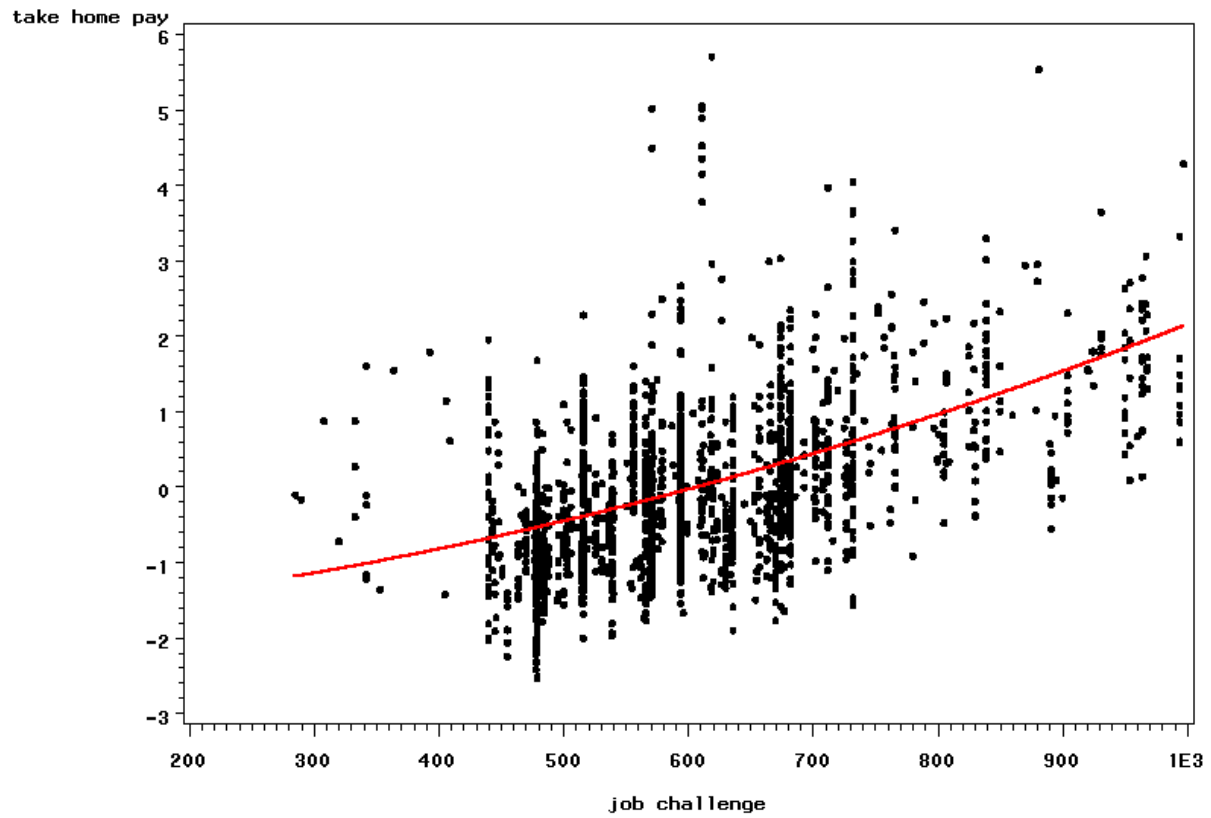Sales Managers' Job Challenge and Take Home Pay in International Companies

Figure 4

Sales Managers' Job Challenge and Take Home Pay in Local Companies

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Endnotes

[1] A tax regime can have high rates without being progressive, or have low rates, yet be progressive. Burdensome tax regimes are heavy <u>and</u> progressive: they leave small fractions of gross income in the bank account of many wage earners.

[2] Salesperson data is for all five countries, while sales manager data are for four countries only (France, Germany, the Netherlands, and the U.K.).

[3] This measure of purchasing power is not dependent on currency exchange rates.

[4] $\lambda_{LM} = 177.11$ and 614.97 for salespeople working in international and national companies respectively, distributed as a chi-square with 1 degree of freedom, $p < .0001$.

[5] $\lambda_{LM} = 185.17$ and 156.05 for sales managers working in international and national companies respectively, distributed as a chi-square with 1 degree of freedom, $p < .0001$.

[6] Our dependent variable in models 2 and 4 is logged. In this log formulation, a linear regression coefficient implies a convex effect on the actual variable/fixed ratio (i.e. the antilog). However, for reasonable changes in the independent variables in our empirical data context, the true effect of any such change is essentially linear. Details of this analysis are available from the authors upon request.

[7] Calculations are available from the authors.

[8] This same pattern fits CEO compensation (Gomez-Mejia 1994), but is highly unusual for most jobs in most companies (Spelling 2001).

[9] Burdensome tax regimes can occur in national cultures that avoid uncertainty (Hofstede 1997). The tax regime (which is itself a product of culture) drives firms to pay for performance. Ironically, this pay structure creates uncertainty for sales personnel.