Motivation and monetary incentives: A closer look

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Abstract

Do higher levels of variable pay reduce salesperson intrinsic motivation? The pattern of findings from past sales management studies is intriguing and may suggest self-determination concepts are applicable. Testing this applicability on a cross-section of industrial salespeople, we found pay plans with higher variable proportions can lead to higher levels of intrinsic motivation. As hypothesized this relationship is stronger for younger salespeople. Younger salespeople may be reacting to the autonomy and competency implications of receiving incentive-based compensation. Results from this sample indicate that a salesperson's age has both an interactive and direct effect on his or her level of intrinsic motivation.

Keywords: sales compensation, self-determination theory, industrial sales

INTRODUCTION

Salespeople, like most of us, want to get paid well for work they enjoy doing. Thus, sales management seeks to design a compensation package that financially rewards its sales force while fostering intrinsic motivation. Some argue too much incentive pay crowds out intrinsic motivation. However, empirically that argument has not been consistently supported. The controversy regarding the relationship between incentive pay and intrinsic motivation has been extensively addressed in non-sales settings within the self-determination theory stream of research (Deci, Koestner and Ryan 2001; Gagne and Deci 2005). This body of work may provide sales management with important insight regarding the association between variable compensation and a salesperson's satisfaction with his or her work. Given the crucial role of intrinsic motivation in building buyer trust and in relational selling, pursuit of this possibility is well worth the effort. Specifically, this study will attempt to better understand the pattern of findings on this topic within sales management research, draw inferences using self-determination theory to explain this pattern, and finally to subject these inferences to an empirical test.

Self-determination theory offers a parsimonious explanation of the effect of extrinsic rewards on intrinsic motivation[1]. Briefly, self-determination theory (SDT) contends that human behavior is driven in large part by the need to feel competent and autonomous. All forms of feedback (e.g. a verbal evaluation or a financial reward) are interpreted by the recipient in terms of the degree to which his or her competence and autonomy needs are being met. Receiving a bonus or financial incentive, therefore, can confirm or inform a salesperson's self-awareness of his or her level of competence or autonomy. Because salespeople may not share the same level of self-knowledge, variable pay is likely to have differential effects. The possibility of differential effects as well as further discussion of the basic tenants of self-determination theory (SDT) is addressed in the subsequent sections.

SALESPERSON INTRINSIC MOTIVATION AND PAY: PATTERNS OF PAST STUDIES AND SDT

Sales management studies examining this relationship can be characterized as having taken three different approaches to measuring compensation plans: interval, categorical, and perceptual (See Table #1). Studies taking the interval approach, measured the proportion of either fixed or variable income, and reported correlations with intrinsic motivation levels (Cravens et al 1993; Oliver and Anderson 1994; Roman, Ruiz and Munera 2005). Results in this set of studies purport intrinsic motivation to be *unrelated* to compensation method (i.e. proportion of fixed or variable). A second group of studies adopted a categorical approach to compensation measurement and the findings here are *mixed*. While one study found highest levels of intrinsic motivation amongst the approximately equal mix of variable and fixed compensation, others failed to find categorical differences (Oliver and Anderson 1995; Yilmaz 2005). In a qualitative three categories (i.e. straight salary, straight commission and combination plans) Pullins (2001) suggests clarity of requirements will be more important than the reward.

[1] Intrinsic motivation refers to the pleasure and inherent satisfaction derived from a specific activity (Vallerand 1997). Specifically intrinsic motivation is experienced when a salesperson obtains a sense of accomplishment from his or her work, feels a sense of personal growth and development and derives feelings of stimulation and a sense of challenge from work.

Results from a third set of sales management studies (i.e. those measuring perceptions regarding variable forms of compensation) consistently found *significant positive* relationships (Babakus et al 1996; Baldauf, Cravens and Grant 2002; Miao and Evans 2007). If more incentive pay leads to higher levels of intrinsic motivation, then the same conclusions using subjective measures should be reflected in those using objective measures. They do not. It is only when sales management studies include measures of the salesperson's cognitive evaluations of compensation that a consistently significant relationship emerges. These cognitive evaluations, we contend, may be explained through self-determination theory.

More specifically, salespeople are making cognitive evaluations regarding the degree to which the compensation method is allowing them autonomy or providing information about their competency level. Deci and Ryan (1985) argued that performance-contingent rewards have the potential to communicate both competence and control. It is because of the dual nature of performance-contingent rewards that their impact will depend critically on the interpersonal context and resultant individual perceptions. For example, when salespeople believe the commission system is based on achieving quality results, intrinsic motivation levels tend to be higher (Baldauf, Cravens & Grant 2002). Performing quality activities requires a certain level of competence. When the results to be rewarded are described in clear terms and are based on challenging but realistic standards employees tend to extract information concerning their competence level (Pullins 2001; Remedios & Boreham 2004). Salespeople who feel competent are more likely to take on more tasks and enjoy the pursuit of those tasks (Guay, Boggiano and Vallerand 2001; Vallerand and Reid 1984). This can only happen when the salesperson has met or exceeded those performance standards. In this manner the reward is task contingent, the task has a priori been described as a challenging one - and the receipt of more reward conveys the level of both achievement and hence competence.

These feelings of competency, according to self-determination theory, must be experienced in combination with sufficient levels of autonomy. Salespeople, therefore, will react to the degree of autonomy they experienced under the compensation plan. Outcome-based systems, which rely on a higher proportion of variable pay, allow high levels of salesperson autonomy (Kunz & Pfaff 2002; Oliver & Anderson 1994). Commission pay programs can empower the salesperson by allowing the salesperson to select methods that will bring about improvements. In fact Babakus et al 1996 found commission was more important than the other variables studied (i.e. training and organizational support) in predicting intrinsic motivation levels. This positive link between compensation driven motivation and task enjoyment was also evidenced in more heterogeneous cross-sectional studies (Miao&Evans (2007). In accordance with self-determination theory (SDT), the likely cause of the improvements emanated from the salesperson's feelings of autonomy in selecting the way the job is done. Pay plans with a high variable portion allow the salesperson to select his or her own methods; that is, to be more self-determinant and ultimately more intrinsically motivated.

Self-determination theory has its roots in education - and it is the conversion of findings from the educational setting which points to the importance of age for improving the understanding of the association between compensation and intrinsic motivation. SDT has gained substantial credibility and support when studied in the educational domain (Deci and Ryan 1985). This theory seems well suited to explaining the effect of learning sets of new tasks, of building new skills, and revealing the abilities of the learner. In a sales setting, this phenomenon relating to the acquisition of knowledge and new skills probably is best represented by the younger salesperson in the early years of a sales career.

Self-determination theory claims that every reward contains both informational and controlling aspects for the recipient. Given the potential autonomy and ambiguity surrounding the field salespersons' work environment and task, these two components (information and control) are likely to have a potent effect, particularly on young salespeople. Younger salespeople would be more likely than older, more experienced, salespeople to lack self-knowledge and would therefore generally be more keenly seeking this knowledge by means of these two components provided to them in their system of rewards. Financial rewards provide tangible evidence and a form of validation much sought by those early in their career (Cron, Dubinsky and Michaels 1988; Hafer 1986; Pappas and Flaherty 2005). Because commission ties itself directly to the achievement of goals, it could be seen as having a high informational value (even a form of much needed validation). Salary, on the other hand, provides less information about the achievement of short-term specific outcomes. Thus it can be argued that the highly specific nature of the immediate feedback provided variable pay may be particularly valued by the unsure, younger salesperson. As a result, the younger salesperson may be expected to react more strongly to the information provided by variable pay.

As stated above, one might expect that the greatest reaction to one's method of compensation is likely to occur early in one's sales career. Over time, however, the impact of receiving a reward lessens, becomes more expected, and thus has less effect on intrinsic motivation (Eisenberger and Cameron 1996). For the salesperson that has been a participant in a compensation plan for a longer period of time, the effect of the receipt of either salary or commission is dampened. In the case of the older and more experienced salesperson, the strong and positive relationship between getting a bonus and feeling task enjoyment that exists for the younger salesperson who is new to the reward system will be less so for these salespeople with more years under that plan. Thus the following hypotheses are proposed:

H_{1a} The proportion of variable pay contained in the compensation plan will have a <u>strong,</u> positive influence on the intrinsic motivation level of younger salespeople.

H_{1b} The proportion of variable pay contained in the compensation plan will have a <u>moderately</u> positive influence on the intrinsic motivation level of older salespeople.

METHOD

Data was collected from field salespeople employed with manufacturers located in the southeastern region of the United States. Each participating firm distributed an explanatory packet to each of their field salespeople. To assure confidentiality, responses were mailed directly to the researchers' university address. For purposes of this study, a total of 280 usable responses were received, resulting in a 24.7% response rate (280/1134). Respondents were employed with both small and large manufacturers (See Table #2 for Revenue and Number of Employees). The demographic profile of the respondents was consistent with that of manufacturers' field salespeople (See Table #3 for Demographic Profile of Respondents).

Intrinsic motivation was measured using a five-item scale adapted from Oliver and Anderson (1994). The standardized coefficient alpha of this scale was .899. The sales compensation questionnaire item asked respondents to describe the compensation method used by their company. For purposes of this analysis, straight salary was coded as zero proportion (of variable pay) and straight commission was coded as one hundred percent (variable pay). For those respondents operating under a combination plan, coding ranged from 10% to 90% variable pay proportion. Approximately 46% (131) of the respondents to this survey were paid using

some form of combination method (every combination from 10% to 90% variable pay was represented in the final sample). Of the balance, 86 salespeople (30.7%) reported receiving a straight salary and 63 (22.5%) were compensated based on straight commission.

RESULTS

A comparison of a set of regression models was used to test for the presence of a significant interaction. By comparing a series of unfolding regression models, we can test for the existence of meaningful incremental effects. In short, this method provides more rigor than testing one inclusive model. (See Table #4) The full model (age, compensation, compensation*age) provides a significant improvement in variance explained over those models with main effects alone. The F-statistics of 4.2685 and 41.27 for these comparisons lend support to the hypothesized relationships. More variation in the intrinsic motivation levels of these respondents is explained through the combined effect of both variable pay and age.

Because the differences between the two main effects models are also significant, (See Table 4)$_1$ F statistic of 37.5299, age would more accurately be described as a quasi-moderator (Sharma, Durand and Gur-Arie 1981). While results support the proposal of significant interaction, this support should be tempered with the label of 'quasi' to recognize the fact that age can also act as a predictor variable as well.

The overall regression analyses show positive relationships between main effects but mixed for interaction effects. The graphical representation (See Figure #1) clarifies the nature of this interaction effect. As expected, younger salespeople react more dramatically (and positively) with higher intrinsic motivation when paid on plans with higher incentive proportions. Results reveal that the positive effect of variable pay on intrinsic motivation is less pronounced as a salesperson enters middle to later years. Older salespeople do tend to be intrinsically motivated, but based on these current findings, this motivation is not spurred on by pay plans with higher proportions of incentive.

CONCLUSIONS AND DISCUSSION

Using a cross-section of a range of compensation plans, these results suggest that the receipt of incentive compensation may not crowd out intrinsic motivation among salespeople. A few studies testing self-determination theory in the work setting, rather than in an educational environment, have done so using a restricted range of variable pay plans. For example Kuvaas (2006) sampled from a population with a variable proportion equal to no more than 8% of base salary, and Heneman, Ledford&Gresham (2000) discuss the effect of a 5 to 10% incentive. Thus, one contribution of this current effort is the exploration of the effect of a full range of variable pay on intrinsic motivation; possibly providing a more thorough examination of possible relationships. While the less restricted range used here allowed for tests of linear relationships, future research using larger sample sizes could potentially explore curvilinear associations.

Using objective measures (proportion of variable pay), results from this sample reveal significant relationships (with intrinsic motivation). Past sales management studies have had similar results (significance) only when the research incorporated subjective measures (i.e. attitudes about compensation). To what degree this convergence adds strength to the applicability of self-determination theory remains unknown. At a minimum it may suggest the possibility that more research examining the cognitive evaluations underlying the link between

variable pay and intrinsic motivation is merited. Future studies that measure feelings of competency and autonomy and test their impact would provide support for what this study suggests.

Results here run counter to those of studies reporting no correlational relationship between proportion of fixed/variable pay and intrinsic motivation. Given the current findings regarding age of salesperson, this divergence with results of past research may be attributable to the wide array of ages included in this specific sample of manufacturer salespeople. This may suggest self-determination theory is useful in explaining the effect of changing reactions to rewards as salespeople move through various career stages. Salespeople may be shifting from competence needs to autonomy needs over the course of their career. Younger salespeople may be seeking knowledge of their competence and finding the most tangible form of feedback or confirmation of this in the form of financial rewards. Older salespeople may value autonomy and view more commissions as a more moderate indicator of their freedom. At the very least, results suggest that age is a variable worth more conceptual and empirical attention with reference to examining the relationship between compensation and intrinsic motivation. While SDT has clear applications for understanding younger (learners), this theory has yet to be thoroughly explored among older individuals (Ryan and LaGuardia 2000).

MANAGERIAL IMPLICATIONS

While not settling once and for all the controversy over the relationship between incentive pay and intrinsic motivation, this study may instead prompt sales managers to revisit a portion of their thinking related to these important topics. A widely held assumption in sales compensation design is that incorporating large amounts of variable pay in a reward system may achieve the firm's revenue objectives, but that it does so at the expense of a salesperson's intrinsic motivation. This notion, drawn from well-accepted agency theory, is based on the belief that high levels of incentive pay result in high levels of salesperson autonomy that in turn harm the extent of intrinsic satisfaction derived from work. In a sense, variable pay is thought to "crowd out" intrinsic motivation.

However, is it possible for managers to have the best of both worlds – salespeople who strive diligently to achieve variable incentive rewards while at the same time are increasingly finding intrinsic satisfaction in their sales activities? The current research may offer sales managers a basis for this pursuit. According to self-determination theory, autonomy (often the result of variable pay) is likely to foster perceptions of self-determination among salespeople; feelings which are then likely to heighten, rather than suppress, intrinsic motivation and love of a task. Results here seem to provide some preliminary support for this possibility. Clearly results of this one study presented here are not conclusive to this debate. However as an initial exploration, our results hint that SDT has promise and merits further scrutiny by sales managers and researchers. Taken in combination with the fact that the long predicted negative relationship between variable pay and intrinsic motivation has not been supported consistently in the sales management literature, our results lend support to the perspective that sales management should at least consider that salesperson autonomy may have a positive rather than negative effect on salesperson intrinsic motivation.

Finally, sales managers should find interest in the differential effects evidenced here. As reported, the strength and nature of the association between variable pay and intrinsic motivation appears to relate to the age of the salesperson. On a practical note, managers cannot design a

separate compensation for each age level. However, awareness of the differences found here may reinforce the notion that a "one size fits all" solution is rarely a complete answer to a problem. If SDT principles apply, different age groups of salespeople may be finding similar motivation (via competence and autonomy need satisfaction) via alternate means. While variable pay may be a particularly strong intrinsic motivator for the younger salesperson, sales managers may wish to acknowledge and satisfy these same needs for competence and autonomy for the more experienced in their employees through managerial feedback, additional responsibilities, and key account assignments. Further support for the ideas presented here can only be provided by additional research on these topics.

Table #1

Intrinsic Motivation and Sales Compensation Literature Summary

	Study	**Compensation Plans: Defined**	**Proportion of Sample**	**Findings regarding intrinsic motivation and compensation**
Interval: Objective	Cravens et al 1993	Proportion of income which is fixed.	Not reported	Not significant bivariate correlation **NS**
	Oliver & Anderson 1994	Percent of salary in compensation plan	Not reported	Not significant bivariate correlation **NS**
	Roman et al 2005	Percent of commission.	Not reported	Not significant bivariate correlation **NS**
Categorical	Oliver & Anderson 1995	*Lo variable *Mid 45/55 var/fix) *High variable	Lo Variable n=91 Mid Variable n=136 Hi Variable n=120	Mixed has highest intrinsic motivation **S positive at mid point.**
	Yilmaz 2005	* Combination * Full Commission	Combin. n=116 Full commission n=50	Model examining link between intrinsic motivation and performance the same for both compensation methods. **NS**
	Pullins 2001	*All Salary *Mixed *All Commission	Hi salary= 1 firm Mixed =14 firms No Salary=4 firms	Depends on clarity of requirements of commission. **Negative when unclear.** **Positive when clear.**
Interval: Subjective	Babakus, et al 1996	One firm: 75% salary and 25% commission.	All respondents from 1 firm	Positive correlation between Intrinsic motivation & commission pay **Significant Positive**
	Baldauf, Cravens & Grant 2002	Ranges from all salary to all commission.	Not reported	Positive correlation between intrinsic motivation & compensation **Significant Positive**
	Miao & Evans 2007	Not reported	Not reported	Positive covariation between compensation & task enjoy. **Significant Positive** Strong covariance between IntrinMotiv and behav ctrl. **Significant Negative**

Table # 2
Profile of Respondent Employers

NUMBER OF EMPLOYEES	ANNUAL REVENUES $2.5 Million to $5 million	$5 million to $10 million	$10 million to $20 million	$20 million to $50 million	$50 million to $100 million	Total
20 to 49 employees	28	3	0	1	0	32
50 to 99 Employees	20	12	1	0	0	33
100 to 249 Employees	39	36	4	0	0	79
250 to 499 Employees	6	27	35	16	0	84
Over 500 employees	0	4	3	43	2	52
Total	93	82	43	60	2	280

Table # 3
Demographic Profile of Respondents

		Frequency
Experience	(Number of Years of experience in current industry)	
	Less than 5 years	42
	5 to 10 years	50
	11 to 16 years	45
	17-22 years	46
	23-28 years	41
	29 or more years	56
Age		
	Under 25 years	7
	25 to 34 years	46
	35 to 44 years	84
	45 to 54 years	81
	55 to 64 years	55
	65 or more years	7
Gender		
	Male	223
	Female	57
Education		
	High School	41
	Some College	92
	College Degree	112
	Some Graduate School	17
	Graduate Degree	18

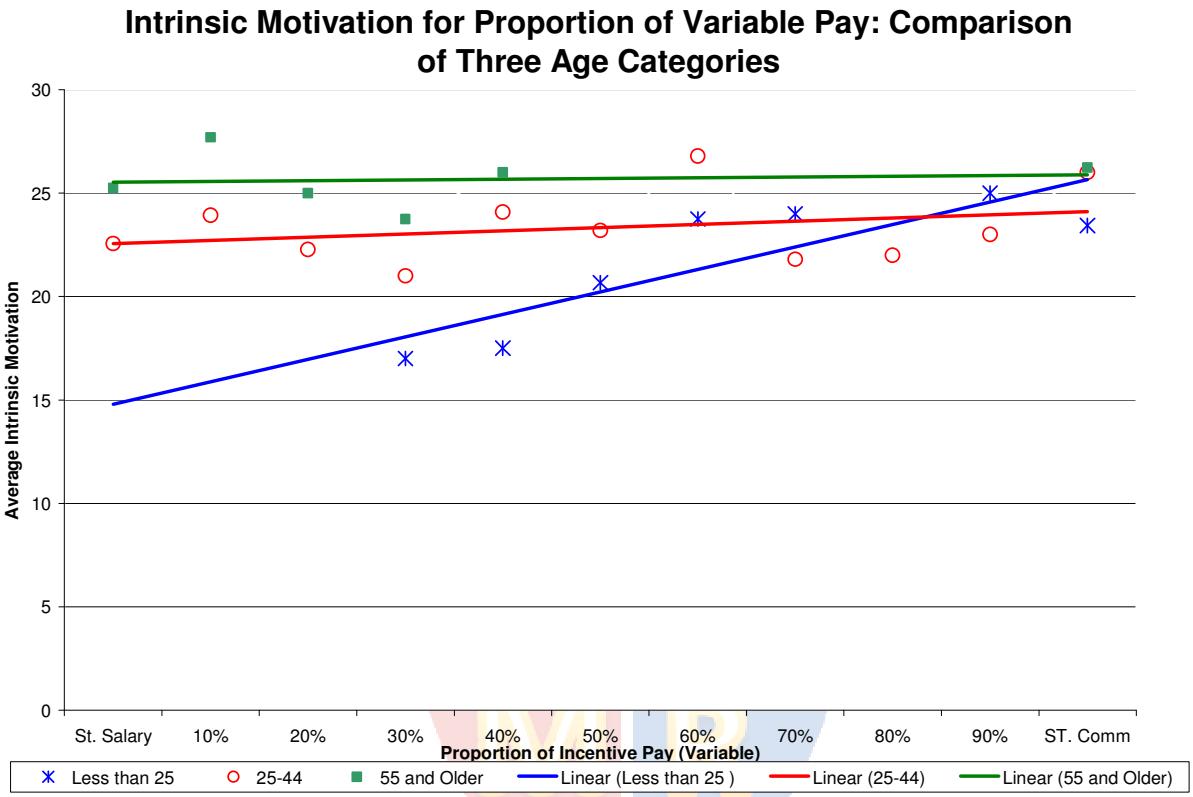
Table #4
Intrinsic Motivation as a function of Age and Compensation
Compensation (proportion of income from bonus or commission)

	Main Effect Compensation		**Main Effects (Compensation and Age)**		**Full Model Main Effects & Interaction**	
	β	**Std. Error**	**β**	**Std. Error**	**β**	**Std. Error**
Constant	22.68	.46	16.99	1.08	15.28	1.35
Compensation	.25	.08	.26	.08	.82	.28
Age			1.62	.28	2.09	.36
Compensatn*Age					-.15	.07
	r^2	.03	r^2	.14	r^2	.16
	F-stat	8.38	F-stat	22.39	F-stat	16.54
	prob of F	.0041		<.0001		<.0001
	df	1,278	df	2,276	df	3,273

Testing for significant interaction effect:

	Δ_1 Compares Main Effect (Reduced) to Main Effects (exp)	Δ_2 Compares Main Effects (with moderator) to Main & Interaction (Full Model)	Δ_3 Compares Main Effect (Reduced) to Main & Interaction (Full Model)
F-STAT for diff Δ	**37.5299**	**4.2685**	**41.2747**
prob of F	<.0001	.0397	<.0001
F df 1	1	1	1
F df2	278	274	278

Figure #1


Intrinsic Motivation for Proportion of Variable Pay: Comparison of Three Age Categories
Average Intrinsic Motivation
30
25
20
15
10
5
0
St. Salary
10%
20%
30%
40%
50%
60%
70%
80%
90%
ST. Comm
Proportion of Incentive Pay (Variable)
Less than 25
25-44
55 and Older
Linear (Less than 25)
Linear (25-44)
Linear (55 and Older)

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