

The Evolution of Motivation and Incentive Systems Research: A Literature Review

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Abstract

Theories on incentive systems and motivation have changed dramatically since the turn of the twentieth century. They started out by viewing the worker as inherently lazy and opposing work which gave birth to piece-rate and cash-bonus systems. Around mid-century, scholars adopt a different view, in which the worker is seen as having different and more complex needs than just money. They find that workers want interesting projects, recognition by co-workers and superiors, and to grow, both in the job and as a person. Cash bonus systems are found to be harmful if improperly organized. Intrinsic motivators are shown to be superior to extrinsic ones and more valued and managers are encouraged to adopt incentive systems that take such motivators into account. Incentive systems can have a big impact on the successful adoption of strategy and a link has been found between the two. The future of this type of research lies within exploring non-monetary rewards in various contexts, designing alternative incentive systems and researching their applicability in business as well as linking application of incentive systems to the evolving research agenda in business research.

1.0 Introduction

The study of incentive systems and motivation is the fascinating study of what drives us as persons; what makes us *tick*. As much of our lives are spent working in organizations where motivation plays a part in performance, this becomes an important research aspect to explore. How can organisations motivate their members to achieve the goals of the organization and structure those motivational techniques by means of incentive systems? In an attempt to answer these questions a great deal of research has gone into this field, resulting in greater understanding of human motivation and a greater capability to motivate through organisational incentive systems. However, due to its vast nature, it can be difficult to get an overview of this research, what stages it has gone through and what results have been documented. This article chronicles this evolution of research done on incentive systems and motivation, what stages research has gone through, and offers some thoughts on where we should be looking for new research ideas on the matter.

Even though great deal of research has gone into finding appropriate material, this article is not meant to be an all-inclusive, emptying coverage on the matter, rather it's meant to highlight important theories and research.

The two main terms used in this article are those of *motivation* and *incentive systems*. Motivation is the mental force that drives the actions of cognitive beings. In a human context, motivation can be either internal or external, i.e. it can stem from an internally generated drive like the desire to do well or work on interesting projects, or an external one in the form of cash bonuses, cash equivalents or non-monetary rewards or the fear of punishment. The latter has been nicknamed *the carrot and stick*. Incentive systems are based on the different theories on motivation which try to cast some light on what it is that drives human behaviour. With changes in motivation theories, derived from the latest research at each time, so to have incentive systems changed, e.g. by using different motivators (Beardwell, Holden, & Claydon, 2004; Pritchard & Ashwood, 2008). Incentive systems, in the context of this article, are essentially the tools that can be used in organizations to get people to behave in a certain manner. Incentive systems can be formal or informal, simple or elaborate, individual or group based with a variety of formats. Incentive systems can be money-based, none-money-based or a mixture of the two with recipients getting either cash or cash equivalents or some form of non-monetary reward. While cash rewards are self-explanatory, an example of a cash equivalent reward is company shares. Examples of non-monetary rewards include praises and promotions (Beardwell, Holden, & Claydon, 2004; Hoque, 2003).

Although this article tends to focus on incentive systems, the concept is heavily entwined with that of motivation. Ideas on incentive systems stem from theories on motivation with the latter providing the former with motivators to employ. This gives that the subject of incentive system cannot be fully addressed without the inclusion of motivation and so the two will be covered together.

The article shows that incentive systems historically have been based on monetary rewards. Research shows though that non-monetary rewards often play a larger role creating and steering motivation. Although some industries have started to use intrinsic and non-monetary motivation to a greater extent, money is still a widely used incentive. This indicates that organisations could benefit from exploring non-monetary incentive systems in more detail. Some thoughts are offered on this matter along with some ideas for further research in the fields of non-monetary rewards, computer games and sports.

The organisation of the article is as follows: In section 2 the evolution of incentive system and motivation research is chronicled from the beginning of the twentieth century until 2010. In section 3 some thoughts are offered on emerging paradigms for research and finally section 4 is conclusions.

2.0 The Evolution of Incentive Systems Research

One could argue that that some forms of incentives have been in use for centuries. Whether it's in the form of a stick or a carrot, the idea of either punishing or rewarding people in order to get them to behave in a certain manner did not just appear out of thin air in the beginning of the twentieth century. It is, however, around that time that scientists and scholars started taking a scientific approach to the matter. They started asking workers what it was that really motivated them, they asked managers what they thought motivated their workers and research was conducted to test different motivators under different circumstances. This work, originally done by psychologists and engineers, created a new form of management, one that took a scientific approach to managing and motivating people. Here the evolution of these theories on motivation and incentive systems will be

elaborated in chronological order, starting with the period reaching from the turn of the last century to the end of the nineteen sixties and from then on in a decade by decade basis.

2.1 From 1900 to 1969: The Fundamental Theories

In the beginning of the twentieth century manufacturing companies and heavy industry were still the predominant employers with workers jobs often resembling those presently performed by robots. It was this scene that saw the rise of *Scientific Management* where manufacturing processes were looked into with the goals of optimization and efficiency. Although this breakthrough in management mainly concerned itself with the manufacturing aspect of workers jobs it had one fundamental impact on the subject of this article. Under *Scientific Management* the worker was thought to oppose work, only doing it to get paid and therefore he would do as little of it as he could get away with while still keeping his job. However, by breaking the work up into small, easily measurable processes the worker could be paid according to what he produced. This would increase productivity and performance as the workers themselves would see the benefits in working hard and producing as much as they could (Taylor, 1964). This pay-for-performance approach became widely used in the decades to come, resulting e.g. in bonus systems being introduced in organizations.

Around mid-century, psychologists and other scholars were looking into the concept of motivation and trying to figure out what drove people in their actions. Two main theories were put forward on the matter, the content theory and the expectancy theory. The content theory tries to answer why human needs change over time and what it is that motivates people. Under this main theory fall such theories as the hierarchy of needs, the two factor theory and theory X and Y, credited to Maslow, Herzberg and McGregor respectively. The Expectancy theory claims that human actions are dependent on the desirability of the outcome and that the action with the most desirable outcome will be taken. Rather than just answering what will motivate, expectancy theory tries to answer how much it will motivate. This theory is largely based on the work of Vroom (1964) with later additions by Lawler and Porter.

The hierarchy of needs suggests that humans have certain needs that they must fulfil and that these needs can be stacked like a pyramid with everyone starting at the bottom, fulfilling the most basic needs, before reaching higher and fulfilling more complex needs. On the bottom there are such needs as food, water and air, followed by security and shelter and then love and intimacy. On the upper half there are the needs for self-esteem and the respect of others with morality and creativity topping the pyramid. The theory claimed that once a set of needs was fulfilled, a person would strive to achieve the next set in order to experience happiness and fulfilment in life (Maslow, 1954). Although Maslow's theory has later been criticised (Hofstede, 1984; Wahba & Bridgwell, 1976), it would become an inspiration for some of the research that followed in the field of motivation and is still today widely used and accepted. When translated into the field of management and incentive systems this theory suggests that money is only a useful motivator when the person being motivated does not have enough of it. Once that person has *enough* money, more of it won't work as a motivator since the person has moved on and is seeking to fulfil more complex needs. Focusing on the fundamental differences between motivators, the two factor theory claimed that motivators could be separated into two groups, intrinsic and extrinsic, with intrinsic motivators being those that stem from the inside, such as feelings of accomplishment and recognition, and extrinsic motivators being those that stem from the outside, such as money and supervision. In this theory, intrinsic motivators are the superior motivators, those capable of permanently altering behaviour, getting

people to perform better and cause satisfaction, while extrinsic motivators can only alter behaviour temporarily and prevent dissatisfaction. (Herzberg, 1959). As with Maslow's theory, Herzberg's has received some criticism (King, 1970) but it still remains widely used and accepted. Translated into the field of management this theory suggests that money can temporarily alter the behaviour of workers but once the money is removed the behaviour goes back to its old form. Also, money can only keep workers from being dissatisfied, not make them satisfied, meaning that money is only a motivator up to a certain point, at which other, intrinsic motivators are needed. Based on this theory, managers should try to create work and a work environment in which workers can find intrinsic motivation. Interestingly, Herzberg's theory seems to validate Sloan's (1963) approach to incentive systems, who in his time at GM created a system that was partly based on non-monetary incentives such as recognition from superiors (Sloan, 1963). McGregor (1960) put his theories in a strictly work-related context by coming up with Theory X and Theory Y representing a different set of workers. X represented the *classic* view of a worker as lazy and inherently opposed to work, in need of being controlled and not wanting to take on responsibility while Y represented McGregor's *new* view of the worker as wanting and needing work and that organizations needed to develop the individual's commitment to its objectives and then to liberate his or her abilities on behalf of those objectives. McGregor claimed that Y was the more common of the two and that those were the workers that organizations should seek, also that organizations would benefit more from Y workers so incentive systems should be aimed at them (McGregor, 1960).

Rather than just pointing out what motivates people, Vroom (1964) tries to measure the motivational force of motivators. He suggests that people will take whichever action resulting in the most desirable outcome according to their own set of values. There are three key elements to this theory: The belief that one's effort will result in attainment of desired performance goals (Expectancy), the belief that one will receive a reward if the performance expectation is met (Instrumentality) and the value one places on the rewards (Valence) (Vroom, 1964). Perhaps the most important element here is valence; if the worker prefers a reward to not having it, that reward will guide his actions in the direction that will give him the reward.

Galbraith (1967) points out the shortcomings of different motivators. In his view money can be a good motivator if what's being rewarded can be easily and objectively measured. This, however, is not always the case, such as in service industries. Promotions can be difficult if the position being promoted into requires education, not just experience. Benefits are hard to turn into rewards, e.g. health insurance is often mandatory rather than something that employers can choose to give. Galbraith does, however, point towards two motivators that are easily applicable to a wide variety of situations. One is support and recognition by supervisors which Galbraith places two conditions on. Firstly there must be a connection between the recognition and good performance and secondly there is a link between the supervisor's status within the company and the effect that his recognition has on workers. The second motivator is allowing the worker to be involved in decisions regarding his work, since doing so will make him more interested and motivated (Galbraith, 1967).

2.2 From 1970 to 1979: Some Criticism Emerges

In the beginning of the decade Levinson (1973) emphasised the importance of psychological approach to motivation. He builds heavily on the theories put forward in the preceding two decades when saying that: "It is only by understanding the deep psychological feelings, attitudes, needs and expectations of individuals in the workplace (and outside of work), and of the managers as well, that

appropriate measures can be developed to effect improved performance and increased feelings of job satisfaction.” He also said that: “Effective organizations and effective interpersonal relations in the world of work require knowledge and understanding of individual as psychological beings whose need for self-esteem is powerful and who perform most effectively when they are involved in all aspects of their work, including the planning process and the setting of procedures and rules. They must also feel that what they do has a purpose, and that this purpose is compatible with the purpose and goals of the organization” (Levinson, 1973).

Also building on the motivation theories of past decades is Deci (1976) who draws on Herzberg’s two-factor motivation theory. In his research Deci found that when combining intrinsic and extrinsic motivators on the job, one tends to drown out the other, i.e. satisfying one detracts from the value workers attach to satisfying the other. He also found that even though intrinsic motivators are superior to extrinsic ones, when combined the extrinsic ones will suffocate the intrinsic ones in most situations, leaving workers with inferior motivation (Deci, 1976).

Criticising cash bonuses and other extrinsic aspects of incentive systems, Meyer (1975) shows that a majority of workers at organizations with cash-bonus incentive systems were unhappy with the money they received as well as being unhappy with the systems themselves. The systems were proving counterproductive with some workers actually being de-motivated instead of motivated. Meyer offers a few explanations. Firstly bonuses are supposed to reward those who do good work but most workers, when asked to evaluate themselves, rated their contribution as “above average” and therefore they either received smaller-than-expected bonuses or expected a bonus that never came. One would expect workers to see this as a sign that they needed to improve their performance but that was not the case. Instead some workers came up with excuses, such as that their performance was not being fairly evaluated or that their superiors, the ones assigning the bonuses, were not qualified. Others started convincing themselves that that they didn’t get a bonus because the job they were in wasn’t that important which then led to the thoughts such as: “Since I’m not getting a bonus anyway I might as well do as little as I can get away with.” Secondly, when there are considerable cash-bonuses at stake, a worker’s focus shifts from his work to the bonus which leads to a decrease in performance. Thirdly, where workers have to compete with their co-workers for bonuses that can create an unhealthy work environment where said co-workers are seen as enemies. In that situation a workers view of his performance is distorted in his favour while the view of his co-workers performance is unfavourably distorted. As an alternative to cash-bonuses and extrinsic rewards, Meyer suggest a system where gradual pay-raises are awarded to good performers along with promotions, increased responsibility and the ability to grow within the company (Meyer, 1975).

Although some criticism had been put forward on group incentive systems, saying that they were unfair in their rewards and tended to create free-riders, London and Oldham (1977) found that when organized correctly, group incentive systems could produce the same results as individual incentive systems (London & Oldham, 1977). Group incentives have the advantage of uniting workers instead of dividing them like some individual incentive systems can and therefore they can eliminate the possible workplace hostility that Meyer addressed.

When researching the time-lag effect on rewards and motivation, Mayes (1978) found that a small reward given shortly after a preferred behaviour was more likely to encourage the continuation of that behaviour than a large reward given after some time had passed (Mayes, 1978). These results

suggest that along with large, year-end bonuses, companies should also incorporate smaller rewards into their incentive systems to be given out shortly after a worker displays good performance.

2.3 From 1980 to 1989: A Focus Shift towards Management Motivation and Strategy

Up until this point, incentives had largely been tied to performance in a singular area, i.e. workers' bonuses were tied to output or managements' bonuses tied to net profit. Sarin and Winkler (1980), however, suggested that rewards could be tied to a pool of measurements where each measurement is weighted according to its importance. They also suggest rewards based on goal-setting and the achievements of those goals. That way, people could work towards a long term goal without too much influence from factors out of their control (Sarin & Winkler, 1980). What Sarin and Winkler might be underestimating is the human part of goal-setting. Such is the focus of Healy (1984) where he finds out that managers that are rewarded based on profit are more likely to change accounting procedures in order to maximize profit displayed (Healy, 1984). Similarly, Larker (1987) finds that rewards based on short term measures cause a drop in executive spending (Larcker, 1987).

In the beginning of the nineteen eighties the focus seems to shift from common worker incentives to management incentives in order to tackle the agency problem and to link rewards to strategy. Stonich (1980) suggested that organizations should implement incentive systems that reward long term success and the achievement of strategic goals. He suggests three different approaches: One is using different measurements depending on different strategies; another is rewarding long term success by granting stocks or stock options to managers, which would later become common practice; and the third is keeping capital expenditure towards strategic growth out of performance measurements so that managers won't hesitate to make investments that are good for the organization in the long run because of short term goals (Stonich, 1981). Rich and Larson (1984) pick up on this idea of measuring long term results and find that the measurements used are important. They find that organizations tend to use poor measurements and have poorly designed systems to measure long term results, leading them to a performance that is no better than those that do not have such systems. They go on to recommend using some sort of economic-value-added (EVA) measurements when it comes to the long term (Rich & Larson, 1984). Balkin (1988) finds that rapidly growing organizations are more likely to use short term measurements when assigning rewards but recommends that they use long term measurements when trying to keep key employees, rewarding them with stocks or stock options (Balkin, 1988). Later, Kim (1990) would show that organizations that use long term incentives for their managers show an increase in earnings-per-share and market return beyond their competitors (Kim, 1990).

Around mid-decade there is an increased interest in the link between strategy and/or culture and incentive systems. Von Glinow (1985) finds a link between organizational culture and incentive systems, indicating that the two must complement each other in order to work. If an organization wants to change its culture it must also change its incentive system or else it will find itself wanting one thing while rewarding another (Von Glinow, 1985). Kerr and Slocum (1987) divide incentive systems into two groups, hierarchy-based and performance-based. The former rewards workers based on the subjective evaluation of their superiors while the latter rewards workers based on an objective evaluation of their performance compared to preset goals. They show how organizations operating in mature markets, following a steady-state strategy are more likely to have hierarchy-based incentive systems while organizations in growing markets, following an evolutionary strategy

are more likely to have performance-based incentive systems (Kerr & Slocum, 1987). These results are echoed by Gomez-Mejia and Welbourne (1988) although they divide the incentive systems into mechanistic and organic, resembling the hierarchy-based and performance-based categories respectively (Gomez-Mejia & Welbourne, 1988). Kerr (1988) goes on to show a strong connection between the way organizations measure their performance and the way rewards are assigned. Organizations using quantitative –measures of their own performance (performance-based) are likely to use similar measures when assigning rewards. The same goes for organizations using qualitative-measures (hierarchy-based) (Kerr, 1988). Muczyk (1988) claims that, in the turbulent economy of the eighties, hierarchy-based organizations did worse than performance-based organizations. He suggests that the internal controls, including incentive systems, of performance-based organizations were better equipped to deal with changing markets and growing competition (Muczyk, 1988).

Returning to the issue of motivation, Kanungo and Mendonca (1988) claim that since managers have increasingly moved from extrinsic to intrinsic motivators they have lost sight over whether or not they are getting their money's worth. They criticize the use of content theory when creating incentive system saying that it's not enough to know if something motivates workers, one has to know how much it motivates him. In this sense, the use of content theory is keeping managers from measuring what they are getting in return for cash-bonuses. Since they can't measure what they get they can't optimize the incentive systems, causing cash-bonuses to be an unnecessarily large expense. Instead, Kanungo and Mendonca suggest using expectancy theory. Although it will lead to more analytical work, expectancy theory can provide some information on the motivational power of cash-bonuses, giving the possibility of finding the optimal amount (Kanungo & Mendonca, 1988).

In 1946, when the first survey on job motivation was performed, workers wanted their work to be appreciated, job security and good wages. In 1981, workers wanted interesting projects while job security and wages came somewhat behind. However, when managers were asked to evaluate what motivated their employees the list remained almost the same over the forty year period. Managers thought that employees mostly valued good wages, job security and then promotions. This survey shows that managers are out of touch with the importance of intrinsic motivators as well as their employees' wants. Kovach (1987) offers some explanations. He suggests that managers might be rewarding workers in the same way as they themselves want to be rewarded, they might be avoiding responsibility by choosing rewards that require the least amount of contact with workers etc. Research shows that those who see money as a motivator are low-paid, low-ranking and young. The majority, however, saw other (intrinsic) motivators as being more important, highlighting the importance of non-monetary rewards (Kovach, 1987).

2.4 From 1990 to 1999: Strategy and Globalization

When organizations became more globalized the issue of implementing incentive systems across borders and cultures received some attention. Gomez-Mejia and Welbourne (1991) make use of Hofstede's research and find that global organizations have to take culture into account when implementing incentive systems. Using Hofstede's different measurements of culture, Gomez-Mejia and Welbourne give suggestion regarding what incentive systems organizations should use. In countries that score highly on Hofstede's *Power Distance* scale the incentives should underscore an individual's power and rank while in countries on the opposite end of that scale, gain-sharing and group bonuses should be used. In countries that score highly on the *Individualism* scale, organizations should use individualized, extrinsic incentives that emphasize individual efforts while

incentives in low scoring countries should be intrinsic, emphasizing group efforts. In countries scoring highly on the *Uncertainty Avoidance scale*, incentives should not be left to management's discretion, but rather bound in contracts while in low scoring countries, the assignment of rewards should be based on management's discretion with a large proportion of workers' compensation being in the form of bonuses. In countries scoring highly on the *Masculinity/Femininity* scale, workers should be rewarded for displaying masculinity with different sets of incentives for males and females. In those low scoring countries, incentives should refrain from rewarding behaviour linked to either of the genders, focusing instead on gender-neutral behaviour (Gomez-Mejia & Welbourne, 1991).

In the nineties, some focus was still on the role of incentives when it came to strategy; whether strategy dominated the choice of incentive system or if the systems could support the implementation and maintenance of strategy. Rajagopalan's and Finkelstein's (1992) long term research on 50 large electric utility companies shows a clear connection between the incentive systems in use and their strategy. Companies following a defender-strategy were more like to use long term incentives for their managers, basing their measurements on operation efficiency. Companies following more discretionary strategies were, however, more likely to use short term incentives with outcome-based measurements, tie a larger portion of managers' compensation to their performance, and use larger cash-bonuses (Rajagopalan & Finkelstein, 1992). Fisher and Govindarajan propose that through analysis of the uncertainties facing strategic business units (SBU) an optimal fit can be found between incentive systems and strategy, or at least some approximation thereof. They argue that the types of uncertainty pertaining to SBU mission and competitive strategy differ. Specifically, SBU mission uncertainty focuses more on external uncertainty while SBU competitive strategy uncertainty differences deal more with internal or process uncertainty. Therefore, it may be possible to have high uncertainty on one dimension while having a relatively low measure of uncertainty on another dimension. This leads to a possible misfit between the incentive compensation and one type of uncertainty facing an SBU. This misfit may never be completely resolved; however, they attempt to provide theoretical resolution for incentive compensation design for those SBUs with conflicting mission/competitive strategy combinations. They go on to say that researchers may need to recognize that mission and competitive strategies may be important contingencies in incentive compensation design (Fisher & Govindarajan, 1993). Rajagopalan (1997), basing his findings on the same research as before, later showed that companies following a defender-strategy could benefit from offering managers small, relatively riskless cash bonuses based on accounting related measurements. Companies following a prospector-strategy, on the other hand, could benefit from offering managers risky, marked based incentives. Interestingly he finds that the long term impact of these differences in incentives is very little and that the incentive systems mainly serve the purpose of aligning managers' behaviour with a company's strategy (Rajagopalan, 1997). Sim & Killough (1998) found that customer and quality performance was higher in Total Quality Management and Just in Time situations where there were customer and quality related performance goals and incentives compared to where fixed pay was used (Sim & Killough, 1998). Ittner, Larcker and Rajan (1997) find that organizations following an innovation-oriented and/or a quality-oriented strategy are more likely to use non-financial measurements when measuring managers' performance and assigning rewards. (Ittner, Larcker, & Rajan, 1997). Similarly, Banker, Potter and Srinivasan (1998) find a strong connection between the use of non-financial measurements for assigning rewards and the improvement of non-financial performance at a large hotel chain (Banker, Potter, & Srinivasan, 1998). In an experimental study, Drake, Haka, &

Ravenscroft (1999) found that in team structures the interaction between Activity Based Costing and rewards based on group incentives was associated with cooperative innovations, lower costs and higher profits (Drake, Haka, & Ravenscroft, 1999).

Gupta and Singhal (1993) find that creative organizations, basing their operation on the innovation of their employees, use non-monetary rewards to a much greater extent than monetary-rewards. They give their employees the time and space to grow and evolve in the job. Employees are encouraged to use parts of their time on the job to work on personal projects. Employees are given grants to fund research and the creation of prototypes of their ideas. Finally, employees are given autonomy and the freedom to choose their co-workers on projects. Although cash-bonuses are used, they mainly consist of small, symbolic amounts since employee focus should be on the creative side, not the money side. These companies promote from within and some use a dual ladder system to deal with those creative, excelling employees who wish to remain in their current jobs and do not want to take on the role of management. Instead of formal promotions, these employees are given greater autonomy, higher research grants and more time to spend on personal projects (Gupta & Singhal, 1993). On a similar note, Nelson (1995) points out how non-monetary rewards make economic sense, given that some don't cost much for the organizations but they can have the same influence as monetary-rewards. He explains that these rewards must follow similar rules as monetary-rewards; they should be framed in some sort of incentive system, tied to the organizations strategy and assigned based on some strategic measurements so as to not seem random. He claims that with salaries becoming more and more fixed, organizations need to come up with other ways than money to reward their employees (Nelson, 1995).

On the issue of motivation, Frey (1997) takes an economic view to the matter and puts forward his theory of the new economic man. Frey claims that since people use more than money to value their existence they are motivated by more than just money. Like Deci (1976), Frey finds that extrinsic motivators can overpower the intrinsic ones in what he calls the crowding out effect which leads to a decrease in motivation and efficiency (Frey, 1997). Bento and White (1998) find that when designing incentive systems it is important to take account of peoples' different values. If an incentive system encourages behaviour that goes against employees' values then either they will revolt against the system or the system will turn out to be very expensive. However, if an incentive system encourages behaviour that does not go against employee values then it can be highly successful (Bento & White, 1998).

2.5 From 2000 to 2010: Strategy and the Continuation of Herzberg's theory

Continuing research on the link between incentive systems and strategy, Boyd and Salamin (2001) study organizations outside of the United States and find a strong connection between the two. Similar to earlier research they find that organizations following a growth-strategy make greater use of incentive systems, and that those following a prospector-strategy used higher cash bonuses than others. They added the element of hierarchy, finding that organizations following a growth-strategy used the highest cash bonuses when it came to their highest ranking managers (Boyd & Salamin, 2001). Since this research is conducted outside of the United States, the fact that it delivers similar results gives reason to believe that the link between incentive systems and strategy is global. On a similar note, Chenhall and Langfield-Smith (2003) showed how a gain-sharing incentive system helped a manufacturing company bring about strategic change by increasing trust between the company and its employees. They also show how the incentive system became inhibiting when the

company sought to change its strategy again and gain-sharing was no longer the best incentive (Chenhall & Langfield-Smith, 2003). Fullerton and McWatters found that incentive systems of employee empowerment and compensation rewards for quality production are related to the degree of just-in-time practices implemented at 253 US firms (Fullerton & McWatters, 2002). Maiga and Jacops (2005) found that quality goals, quality feedback and quality incentives were antecedents to quality performance.

Working on the concept of transferability of management practices, Chiang and Birtch (2007) find that introducing incentive systems in different countries is much more complicated than had been thought. They find that cultural reactions to incentive systems are in no way as predictable as Gomez-Mejia and Welbourne (1988) had suggested and that people living in vastly different cultural areas can have a similar reaction to a set of incentives. They conclude that culture is not a predominant factor when it comes to incentives and that organizations need to conduct thorough research before introducing incentive systems in different countries (Chiang & Birtch, 2007).

Researching motivation, Bassett-Jones and Lloyd (2005) look into Herzberg's theory to find that intrinsic motivators are still superior to extrinsic motivators. When researching what got people to submit their ideas at work, they found that intrinsic motivators were usually the main drivers. They did, however, find one difference from Herzberg's theory in that recognition by superiors was no longer an intrinsic motivator. The lack of recognition could result in workers becoming dissatisfied but recognition in itself did not make them satisfied, giving it the characteristics of an extrinsic motivator (Bassett-Jones & Lloyd, 2005). Drawing on Thomas's and Velthouse's (1990) research on empowerment, Drake, Wong and Salter research the connection between empowerment, motivation and performance. They use Thomas's and Velthouse's definition of the term empowerment as an increase in intrinsic motivation which can be divided into meaningfulness (how the worker values the project), competence (his ability to solve the project), choice (that the worker can choose his projects and how he works), and impact (that the worker feels like his work helps with achieving goals) (Thomas & Velthouse, 1990). For practical reasons they swap choice for Spreitzer's definition of self-determination which is almost synonymous. They find that feedback from superiors, containing financial data, has a positive effect on perceived impact but has no effect on self-determination or perceived competence. Rewards based on performance have no effect on perceived impact, a positive effect on motivation, but a negative effect on self-determination and perceived competence. Perceived impact had a positive effect on motivation but only if it was high, self-determination and perceived competence had no effect on motivation. Finally, motivation had a positive effect on performance (Drake, Wong, & Salter, 2007). This research shows that the connection between empowerment and performance is not as strong as had been suspected. Ariely, Gneezy, Loewenstein and Mazar (2009) show how large cash bonuses can lead to inferior results in tasks concerning cognitive thinking. They point to the Yerkes-Dodson theory in psychology which claims that there is such a thing as optimum stimulation, resulting in the best performance. Stimulation above or below that point will cause performance to drop, either because of there isn't enough stimulation or there is so much stimulation that the person chokes under pressure. Several trials were performed, both in India and the United States, where participants were asked to perform a certain task with the promise of a reward. Results showed that in those tasks that required mechanistic work, participants performed better when they were offered higher bonuses. However, when the tasks required cognitive thinking all participants performed worse when offered higher bonuses (Ariely, Gneezy, Lowenstein, & Mazar, 2009). These results suggest that workers might

actually perform worse when offered high cash bonuses on projects that aren't strictly mechanical. Galanou, Georgakopoulos, Sotiropoulos and Dimitris (2010) find that extrinsic motivators are valued more by higher ranking managers within organizations, but intrinsic motivators are still superior on every hierarchical level (Galanou, Georgakopoulos, Sotiropoulos, & Dimitris, 2010). Finally, Vilhjálmsdóttir (2010) conducts a research similar to that of Kovach and finds that intrinsic motivators are more important to people in their jobs than extrinsic motivators. In this research the highest ranking extrinsic motivator is recognition of one's work which comes in third place while working on interesting projects comes first. Interestingly, getting good wages comes in eleventh place and the chance to earn more by working more comes in twenty seventh (Vilhjálmsdóttir, 2010).

3.0 Emerging paradigms for research

As can be read from the previous section, psychologists have known for fifty years that intrinsic motivation is superior to extrinsic motivation. They have also known that with monetary-rewards comes a list of problems that have to be cleverly designed out of incentive systems. However, cash bonuses remain a popular form of incentive within most layers of organizations. One explanation can be found in the research of Kovach and other. In it, we find that managers tend to think that workers place a greater value on money than they actually do, and so they reward them with money. One thing is for sure, using money is easy. Rewarding with money can be seen as an easy solution, requiring very little extra work by managers and more often than not they get some positive results. However, this approach becomes interesting when we think about where it comes from. This idea of paying for performance, at least Taylor's idea, is over a hundred years old and was originally used on workers performing strictly mechanical work. Today's worker is involved in all sorts of activities where many, if not most, require some sort of cognitive thinking. Shouldn't we then be looking at different ways to motivate than with money? In the article Large Stakes and Big Mistakes, several researchers show that when tasks require cognitive thinking, higher cash bonuses are directly linked to inferior results (Ariely, Gneezy, Lowenstein, & Mazar, 2009). With that in mind, one starts questioning if decisions that are made in big companies today are as good as they could be. In his book Drive, Daniel Pink makes an example of high-tech companies like Google and Apple. In these companies intrinsic motivators are used to a greater extent than extrinsic ones, with employees getting to work on personal projects, having control over their work and whom they work with etc. (Pink, 2009). Of course these are very specific examples and it may very well be that intrinsic motivators are not always suitable given the different nature of industries. For instance, it's true that creating intrinsic motivation requires time and work but research has shown that it makes for happier employees and better performance. In the words of Kohn (1993): *"Pay people well and fairly, then do everything possible to help them forget about money."* (Kohn, 1993, p.49)

Picking up on Pink's (2009) point, it would be interesting to see further research done on companies using non-monetary incentives and their reasons for doing so. This is especially interesting since some industries, e.g. high-tech, seem to be competing for employees on non-monetary bases, such as work environment. The growing need for skilled employees coupled with the fact that money is a limited resource creates situations where companies have to find new ways to attract future employees. Furthermore, sectors such as local and state governments cannot compete with private organisations in terms of monetary rewards for work. These organisations have the same need for skilled workers as private organisations do. On that note it would be interesting to devote further research to non-monetary incentives and the design of such incentive systems. Such research would

seek e.g. to document the various non-monetary incentives available, their effectiveness in various circumstances, correlation with performance variables and comparative advantages to monetary reward systems.

Another interesting field for further research is the applicability of game dynamics in the context of human resource management and incentive systems. In game design, there is a prevailing concept called *the gamification of life* (Schell, 2010). Game dynamics are reaching more and more into our everyday lives and altering our behaviour. People are logging into social networking sites in order to play online mini games, i.e. caring for virtual plants or animals. Automobile companies are putting little virtual pets in the dashboards of eco-friendly cars which grow whenever the driver practices eco-friendly driving habits, and its changing the way people drive. Many companies use the game dynamic of turning up on time at a certain place in order to get a reward; take happy-hour for instance (Priebatsch, 2010). These games include reward systems and subtle psychological tricks that keep us playing. Why is it, for instance, that people spend hours on end playing online games such as World of Warcraft? What is it that makes people return regularly to their computers in order to water imaginary plants within a game on Facebook? It would be interesting to see if such *gamification* could be used within organizations to motivate workers. One can imagine several ways to use game dynamics in this context. One possible application would be to give *experience points* instead of small rewards for good performance which could add up and qualify the employee for larger physical rewards, promotions etc. Research on this matter would seek to test the applicability of game dynamics in the context of human resource management, what design parameters would influence such systems and how they can be linked to different performance variables of organisations.

Finally, professional athletes are an interesting field for research on motivation. Like many top level executives, professional athletes are being extremely well paid (Badenhausen, 2009; O'Connor, 2005; Williamson, 2010). With that, their managers must find different, non-monetary ways to motivate them since more money would be like a drop in the ocean. How do they do that? What is it that makes a well-paid athlete go that extra mile for his team and can knowledge thereof be of value when organizations create incentive system for their highest paid employees; managers and executives? Research on the matter would seek to answer these questions by documenting how managers motivate their professional athletes and then go on to test the applicability of those manners in an organisational context.

4.0 Conclusions

The study of incentive systems and motivation has come a long way. Today incentive systems are no longer just a way to get workers to produce more; they are used to aid in the implementation of strategy, to ensure goal congruence and minimize agency problems. What started out as a study of carrots and sticks has gone on to include the far corners of human motivation, emphasising the need to grow and prosper emotionally, not just to get paid more. With these important uses and complex features, incentive systems have transcended the old piece-rate, pay-for-performance systems to become major factors in today's management of workers from the lowest ranking to the highest.

A significant research finding in our opinion is the apparent superiority of intrinsic motivation to external. Given centuries old religious and philosophical debates this might not come as any surprise,

but in the context of job motivation this has significant implications. First of all organisations need to devote more attention to developing incentive systems that take this into account. Secondly researchers and managers need to work together in harnessing this knowledge in designing new types of incentive systems. Looking at the research being conducted for the past decade it is apparent that it has focused on describing and comparing existing incentive systems in various contexts as well as explaining what drives or deters motivation. In our opinion research needs to focus more on the design and test of incentive systems, thus providing input for practitioners. The methodological approaches for studying this could for example be experimental research or action research. Research has much to offer practitioners designing incentive systems but there seem to be few initiatives that link these two.

Motivation and incentive systems research is entering a new era where new incentive systems will emerge and new practices develop. Researchers have an important role to play here both in understanding these new practices and in helping developing them.

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