 J Economics, 6(1): 18-29 (2015)

Shaping an Expanded Principal-Agent Model for Designing and Deploying Incentives as an Instrument for Improving Performance in Public Policy Management

Vikinduku Mnculwane[1] and Henry F. Wissink[2]

School of Management, IT and Government of the University of KwaZulu-Natal, Private Bag X54001, Durban, 4001, South Africa
Telephone: +27312607576
E-mail: [1]<vikinduku.mnculwane@kznpremier.gov.za>, [2]<wissinkh@ukzn.ac.za>

KEYWORDS Improving Performance. Incentives. Principal-Agent Model. Public Policy Management

ABSTRACT The use of incentives as a management instrument has become evident in various contexts. It is a factor that needs to be explored in greater detail to improve its effectiveness. The paper focuses on demonstrating the evolution of the concept, and the debates regarding the employment of such incentives as an effective approach in organisational and policy environments. This paper also explores organisational theories and the role of incentives, the psychology of incentives, andthe various critiques of incentives. In its recommendation, it proposes the use of an expanded principal agent model for the shaping and application of incentives in the policy management organisational context. The notion of employing incentives needs to be explored in more detail and it is further proposed that it can contribute towards more effective achievement of public policy and organisational outcomes in societies, if they are shaped for their appropriate contexts and specific relational requirements.

INTRODUCTION

In recent years, the concept of incentives has been considered through a variety of lenses which include, among others, economics, organisation theory, psychology, and the policy sciences. The research and studies by prominent early scholars such as Maslow (1943), Barnard (1953), Hertzberg (1959), McGregor (1960), McClelland (1962), and more recent scholars such as Kohn (1993), Klinger (1977), Laffont and Martimort (2001), and Robbins (2002) have kept the theme prominent in the scholarly literature supporting the use of incentives. Although incentives have been construed within the purview of numerous other fields, the major focus of this paper is to consider them as management instruments designed to improve the implementation of policy and/or the achievement of organisational goals. However, the use of incentives has solicited criticism ranging from fairly moderate critics to radical appraisals by different scholars. Incentives are generally used in organisational life to motivate and guide the actions and behaviour of individuals and groups towards the desires and goals of the incentive giver. Kay (2012: 1) observes that specific incentive mechanisms have been included by governments in the set of instruments available to promote aspects of public policy in science, technology and innovation. While conceding that there are differences between an incentive and deterrence, Stone (1997: 271) regards the two as flip sides of the same motivational coin; and as one type of strategy, sharing a common logic. The observation is that incentives have the tendency to make it easier and rewarding for the targeted persons to do what is desired for them to do. The evolution of the concept of incentives and its application in a variety of fields corroborates the above statement. It is necessary that efforts be expended addressing the question how incentives can be shaped and deployed in various contexts as instruments assisting the process of achieving organisational goals and objectives,which is the focus of this paper.

Objectives

The objectives of this paper can be summarised as follows:

- To provide anoverview of the literature and current thinking on the use of incentives.
- To assess the value of incentives as well as the criticisms of incentives.
- To provide a perspective of how the thinking regarding incentives has changed since the concept was developed in the early part of the twentieth century towards the early twenty-first century.

- To provide a framework or model from the literature analysis to consider the use and implementation of incentives in the field of policy management.

THE PSYCHOLOGY OF INCENTIVES

The psychologist Klinger approaches the notion of incentives from the perspective of scientific psychology and advances an argument that people are organised around incentives. Klinger (1977: 4) observes that such an organisation occurs on two levels. Individuals often plan their actions in such a way that they situate themselves on a trajectory that will enable them to obtain incentives. The pursuance and enjoyment of incentives by individuals has the possibility to determine the nature and quality of their inner experience, and the way in which people relate to their incentives is a key aspect in this context. Lee (2009: 1) concurs: "An incentive is any factor that motivates a particular course of action. All people respond to economic incentives. In other words, people make a decision in accordance with their incentives. Therefore, to understand the behaviour of people or the phenomenon shown in the real world, we first need to consider the incentives behind those. Once the incentives are found and understood well, weare able to obtain much insight to understand and predict the behaviour of people and further design those toward the direction we want to head to."

The realisation as explained above, that incentives enable the prediction of behaviour within a particular social context, and further shapes such behaviour towards a particular direction, validates the concept as a useful instrument in public policy making and implementation. The role of incentives in economic thought was where incentives were first considered.

INCENTIVES IN ECONOMIC THOUGHT

Laffont and Martimort (2001: 11) provide a useful contribution to the theory of incentives in economic thought. Theseauthors provide an overview of the general themes in terms of which the theory of incentives has been developed and applied in economics at the nascent stages of the development of the idea. Laffont and Martimort (2001: 11) suggest that it could be that part of the reason why the incentives theory has not received much attention from the discipline, is the fact that economics has largely focused on seeking to understand value in large economies. This has meant that there is no sizeable effort dedicated by classical economics to the interrogation of individual behaviour largely associated with the deployment of incentives in the market. This situation meant that the firm remained a black box when classical economic theory failed to account on how firms aligned-personnel objectives with profit maximisation. When economists eventually decided to look carefully at the firm, it was clear that despite the characteristic neglect of the concept in economic theory, incentives were central to the sustenance of such enterprises. As a result, economists began to realise that incentives pervaded a number of areas of economic thought such as agricultural contracts; managerial economics, taxation, voting, regulation of natural monopolies, and insurance.

According to Laffont and Martimort (2001: 17), the original context within which the notion of incentives owes its origin is the division of labour exchange, suggesting the possibility of tracing the origins of incentive thought with the family setting where each member of the family is assigned specific roles and objective functions. Unlike Schumpeter (1954), Laffont and Martimort (2001: 17) identify the notion of incentives already operating in Adam Smith's analysis of agricultural contracts, explaining the relationship which existed between landlords and their workmen. This is evident in Smith's explanation of the intricacies involved in the determination of wages, where the bargaining power between master and servant is not evenly distributed. That is, the interests of the two parties entering into a contractual relationship of this nature are not the same. While the master on the one hand, seeks to attain the biggest benefit from the economic relationship, and on the other hand wants to give out as little as possible to the workman whose interests are then put at risk.

Laffont and Martimort (2001: 18) describe this master-servant relationship as the equivalent of the modern day principal-agent paradigm in economic thought. The two scholars also identify in Smith's economics the beginnings of a reflection on the basic constraints characteristic of the relationship. That is the fact that in such a relationship, the maxim would be that each person must earn a living from his or her work, and that the wages earned must be adequate to maintain him or her. This maxim suggests that there are limits to what the master can ask and expect from the workman. As a result, many criticisms of incentives, and often concerns were raised during the evolution of theories on the value of incentives.

THE CRITIQUE OF INCENTIVES

According to the Incentive Research Foundation (IRF 2002: 1), the fact that research on incentives has been conducted from perspectives of diverse disciplines as accounting, education, economics, communications, human factors, psychology and sociology has given rise to conflicting claims and controversies regarding their usefulness. The criticism levelled against incentives ranges from moderate critics to radical detractors. The Incentive Research Foundation provides some criticism of incentives theory. The methodology followed by this institution for this particular research followed a combination of strategies. The meta-analysis statistical method was used to assess trends and information yielded by more than 45 studies conducted on the subject. Telephonic interviews and web-based questionnaires were also used to solicit relevant information from a sample of 145 companies in the United States of America which use incentive schemes (IRF 2002: i), and supporting its central thesis, the report concludes that when people are paid for exceeding their targets, they value their respective tasks. Incentive schemes build self-confidence and esteem, create persistency and enable employees to set themselves for higher levels of accomplishment which result in overall interest generated for the work they do (IRF 2002: 8). The report concedes that certain incentive schemes do not produce better results, and posits an argument locating causes of failure on poor assessment and study of problems for which tangible incentives are designed; and errors committed during the implementation of the tangible incentives interventions. To bolster its position, the report provides statistics regarding the evidence yielded by the meta-analysis and surveys conducted during research. A 15 percent performance increase was indicated where people were asked to perform activities they had never carried out before. This, report indicates that incentives are least helpful under such circumstances given that, where people were asked to and encouraged to persist in the performance of tasks more familiar to them, a 27 percent increase in their performance was registered; and also in instances where people were encouraged to apply their concerted mental effort to specified tasks, a 26 percent performance increase resulted. Other critics of the theory raised their concerns. For example, Ishmael (2013: 1) describes studies on the recent growing trend to use incentives to increase research at South African public universities. Macleod (2010: 1) raises concerns regarding the validity of such claims on the basis of quality outputs. Fryer et al. (2012: 1-3) raised similar concerns with alternative creative forms of incentives referred to as "loss aversion" in the educational environment. One of the strongest opponents of incentives came from the Neo-Marxist theorists.

A Neo-Marxist Critique of Incentives

Gneezy et al. (2011: 191) have noted that extrinsic incentives have the potential to conflict with the use of other motivations. Abolghasemi et al. (2010: 11) argue that a number of economic and psychological studies have indicated that incentives tend to discourage specific pro-social behaviours such as blood donation. Much of the criticism levelled againstincentives emanating from this front is occasioned by a liberal justification of the phenomenon John Rawls in particular, according to Seeger (2011: 50) criticises the assumption that the more money the better; and seeks to uncover the intuitive claim of this dictum undergirding the incentives argument. He examines the commitments to the argument and concludes that without any additional backing, it will be difficult to uphold the position. How does he arrive at such a conclusion? Seeger (2011: 41) seeks to criticise the incentives theory from the empirical perspective. For Seeger, Rawls argument is articulated within the purview of the theory of distributive justice; and further identifies two distinctive, yet interrelated premises comprising Rawl's theory. For Seeger (2011: 41), Rawl's theory has a normative premise (NP) which justifies inequalities that provide the greatest benefit to the worst off; yet there exists for Seeger an empirical premise (EP) in Rawl's argument which suggests that in well-ordered societies substantial inequalities which benefit the worst off can exist.

Cohen (1991: 271) challenges the argument stating that when productive people are made to take home a modest pay, they will produce less than what they would otherwise do; and if they do, poor and badly off individuals in that society are worse than they would be when talented people were well incentivised.

INCENTIVES AND ORGANISATION THEORY

Ude and Coker (2012: 32) argue that there exists a strong relationship between incentive schemes and employee motivation and productivity in Nigerian private and public sector organisations. A study conducted among 370 manufacturing and services firms in Brazil has revealed that promotion tended to be more useful in encouraging innovation than treasure based incentives (Barros and Lazzarini 2012: 8). Laffont and Martimort (2001: 11-18) suggests that the first attempt made at defining a fully developed theory of incentives in management economics should be granted to Chester Irvin Barnard (1886-1961), arguably the executive *par excellence* of the early twentieth century. Barnard (1953: 139) is an organisational theorist and understands the organisation as a cooperative system which relies on the willingness of individuals to contribute their individual effort for its effectiveness. The individual's motives of self-preservation and self-satisfaction are focuses which dominate his/her actions and behaviour and for this reason, it is the extent to which the organisation is consistent with the satisfaction of the contributing individual's motives that it will continue to exist as a going concern of sorts. It is the efforts solicited by incentives from individuals which constitute the energies of organisations (Barnard 1953: 139). The role of incentives is to induce the individual to contribute meaningfully to a cooperative system. The inadequacy of incentives deployed would among other things, mean failure of cooperation in the system; and it is for this reason that, in all organisations the provision of incentives is an important and well emphasized task (Barnard 1953: 139).

According to Barnard (1953: 141), in order for an organisation to be able to obtain the effort from contributing individuals which will enable it to exist, it can either use objective inducements (that is the method of incentives), or work on changing the minds of such individuals (that is the method of persuasion), so that the objective incentives provided are regarded as adequate. For him it is also considered, "improbable that any organization can exist as a practical matter which does not employ both methods in combination", yet it can also be expected that while other organisations tend to emphasize the method of incentives (that is industrial organisations), others are favourably disposed towards the use of the method of persuasion (for example, patriotic organisations). But what exactly is meant by both the methods of incentives and persuasion within the context of "Barnardian" managerial economics?

Theories of Incentives and Organisational Types in the Twentieth Century

According to Barnard (1953: 142), there are two types of incentives used to elicit cooperation in a given organisation. He identifies what he calls specific incentives which can be specifically offered. This class of incentives or inducements includes *inter alia* such material incentives as money, physical conditions which are provided to persons to solicit their acceptance of employment etc. The second type of specific incentives consists of personal non-materialistic inducements which are often used to secure cooperative efforts from individuals beyond subsistence (Barnard 1953: 145). These include such incentives as opportunities for distinction, prestige and personal power. Thirdly, there are incentives relating to the creation of physical working conditions which are used to induce cooperation. The fourth type of incentives is what Barnard (1953: 146) names ideal benefactors, which refers to the capacity of an organisation to respond to and to satisfy personal ideals of contributing individuals. This thinking was informed and enforced by Maslow's classical theory of motivation in 1942, related to the requirements of ego and self-fulfilment. Such incentives include inducements such as pride of workmanship, sense of adequacy, loyalty and achievement, and are associated with theearly contemporary theories of motivation, such as those of Hertzberg (1959), McGregor (1960), McClelland (1962), and other authors who proposed that higher order or intrinsic needs should be considered when incentive schemes are devised.

Barnard (1953: 154-155) completed his exposition of incentives by providing an outline of the theory of the phenomenon. To achieve this objective, Barnard (1953: 154), outlines the theory with special reference to three distinct types of organisations namely, an industrial organisation, a political organisation, and a religious organisation. It can be inferred that the theory of incentives developed by Barnard in respect of the above types of organisations isinformed by the nature of the output expected as a result of cooperation in the system. The industrial organisation's *raison d'etre* is the production of goods or the provision of services. According to Barnard "high" incentives are possible in an industrial organisation under very favourable environmental conditions coupled with relative ineffectiveness and relative inefficiency. By the same token, where the industry is operating under unfavourable conditions, effectiveness and efficiency, it will be necessary to pay 'low' inducements. To this effect he notes, "in most cases the limitations of conditions, of effectiveness and of efficiency permit only limited material inducements" (Barnard 1953: 155).

Contrary to what was stated above Barnard argues that in an industrial setting no amount of or level of material incentives will be able to elicit individual energies from participants and ensure effectiveness and efficiency in the organisation. It is for this reasonthat non-material inducements should be considered. In this context according to Barnard (1953: 156), non-material inducements have the tendency to conflict with each other; and for that reason are not compatible. To illustrate this point, Barnard cites the example where the opportunity for personal prestige is used as an incentive to elicit cooperation from an individual. To this extent henotes that "the opportunity for personal prestige as an incentive for one person necessarily involves a relative depression of others; so that if this incentive is emphasized as to one person, it must be in conjunction with other persons to whom personal prestige is relatively an important inducement" (Barnard 1953: 156).

The challenge involved in striking the right balance in the use of incentives will often create a need for recourse to persuasion. To further illustrate the point, Barnard cites the example where coercion is to be used as persuasion and argues that the cost of maintaining force in this regard may prove to outweigh the benefit. The same escalation of overheads will occur if the method used to persuade is rationalisation using propaganda or a specific argument.

The fact that political organisations do not generally produce material goods as an output presages that both ideal benefactions and community satisfactions become useful instruments to induce participants to collaborate in such organisations. Barnard (1953: 157) observes that inferior incentives such as opportunity for personal prestige and material rewards would still be required for the sustenance of extensive political organisations. The same is valid in the case of religious organisations where ideal benefactions and communion of kindred spirits are dominant incentives to elicit cooperation among participants, while a number of inferior incentives have a role to play as well.

Organisational Types and Incentives towards the Twenty-First Century

More recently studies have confirmed some of these concepts, but became more descriptive and analytical regarding the use of incentives within various organisational contexts.

A study by Burgess and Metcalfe (1999: 2) report on incentivising employees in the public sector over the last twenty years, and came to the following conclusion:

- Employees often respond in ways that may or may not be to the benefit of the organisation as a whole. The design of the incentive scheme is important.
- Where workers have multiple tasks to perform or where the specific output is difficult to assess, an objective performance related pay is less frequent and subjectively assessed bonus.
- Rewards are more frequently made.
- Public servants are motivated by more than just their own income, but the same cannot be claimed for workers inthe private sector.
- The differences in incentive schemesbetween the public and private sectors are not easy to analyse, but it is evident that there are fewer in thepublic sector.
- Specific promotion systemsand hierarchical reward structures also provide incentivesalthough there is less evidence on this in the public sector.

According to Adams and Hicks (2000: 1-120), incentives in the health system need to be viewed in a broader context in order to fully understand constraints and success factors that affect their potential for success."Financial incentives are usually considered as an option to aid recruitment and retention in underserviced areas. Non-financial incentives also have a role in mitigating adverse conditions in areas that have difficulty maintaining sufficient numbers of personnel and the right mix of skills in the health workforce."

Gneezy et al. (2001: 191-210) suggest thatincentivesdepend on how they are designed, and in the form that they are made available, especially monetary and non-monetary, and how they relate to the intrinsic and social motivations. It is also necessary to consider the effects after they are withdrawn. They believe that "incentives do matter, but in various and sometimes unexpected ways."

Festré (2008: 3) reports on the relationship between motivation, incentives and performance in the context of the public sector, and the role of performance reward programmes (PRP). It appears that PRP's increase performance, but generally reduces motivation. The PRP success also appears to be context specific, and is less efficient in health care than in education. It also is affected by the positional power of employees, and it would appear that higher level employees are intrinsically more motivated. At the lower level it would seem that public servants switch to opportunistic behaviour, such as information manipulation and misreporting.

Ederor and Manso in Litan (2011) support the positive effects that incentives can play in supporting innovation in organisations, whilst Re´em (2011: 48-50) completely refutes the general belief that due to rigid civil service laws, public managers do not have the instruments (incentives) necessary to improve performance. In the study, there is a comprehensive suggestion of 14 motivational factors, translated to 46 concrete and practical tactics that can help motivate public employees.

Recently, Qayum et al. (2014: 567-570) raised the issues of using incentives to retain health workers in developing countries. In this study it is shown that incentives play key roles in motivating and retaining migrating health workers; however it is proposed that a "comprehensive integrated incentive system approach should be established to develop a sustainable health workforce with required skill."

THE PRINCIPAL–AGENT PARADIGM

Hill and Jones (1992: 13), introduce their explanation of the agency theory by briefly mapping the contours which have marked the application of the principal-agent model for three decades. The two scholars observe that during the 1970's, literature dealing with the agency theory concerned itself with the relationship between managers as agents, and stockowners as principals. In the 1980's, the two academics distinguish yet another development in the application of the model to specific economic relationships. The work of such scholars as Rosset al.is cited by Hill and Jones (1992: 131) as characteristic of the phase.

According to Hill and Jones (1992: 131) scholars such as Eisehard and Kossink began exploring possibilities of extending the application of the model to such disciplines as organisational behaviour, organisational theory as well as strategic management, and together ushered in a new paradigm in the application of the model by introducing other stakeholders such as employees, customers, suppliers, creditors, communities and the general public. Hill and Jones (1992: 133) define stakeholders as groups with a legitimate claim on the firm concerned. But how do the two scholars describe the application of the model in the aforesaid disciplines? Taking their cue from Ross (1973: 134) and Jensen and Meckling (1976: 5); Hill and Jones (1992: 132) describe an agency relationship as" the one in which one or more persons (the principal(s)) engage another (the agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent."

What forms the cornerstone of the model is the assumption that there is a sense in which the interests of both the principal and the agent will always diverge. In accordance with the essence of the agency theory, it is incumbent upon the principal to limit the divergence of the agent's interests in the contractual relationship. The instruments available to the principal for this purpose are incentives used to shape the agent's behaviour and orientate it towards a specific direction which will maximise payoff for the principal. The second instrument accessible to the principal to align the agent's interests with his/her goals is to incur monitoring costs which are intended to restrict the agent from engaging in opportunistic action when implementing their part of the contract.

The principal-agent paradigm has been used by scholars to interrogate the subject of cooperation among member states. Stephen Ross describes the Principal-Agent Model as one of the oldest and common codified modes of interaction in human societies. According to this scholar, an agency relationship exists where two or more parties referred to as principal and agent respectively, conclude a contract. The agent in the contractual relationship makes decisions on behalf of the other person designated as the principal (Ross 1973: 134).

The Contractual Relationship and Delegation of Power Principle

Kassim and Menon (2003: 121) describe the principal-agent model within the context of finding solutions to, and studying the institutional complexes of the European Union; and by implication within the background of the economics of the organisation. In the case of the latter, the scholars conclude that the model in question has provided a useful framework for investigating difficulties arising from contractual relationships. The paper describes agency relationships as something "created when one party, the principal, enters into a contractual agreement with a second party, the agent, and delegates to the latter responsibility for carrying out a function or set of tasks on the principal's behalf" (Kassim and Menon 2003: 122).

The definition highlights the centrality of contracts in the principal-agent model of social, if economic relationships; whereas from another perspective it refers to the delegation of responsibility to the agent for carrying out duties of the principal. To this extent, one can conclude that according to the two scholars, their particular nuancing of the definition of the model does not only lend itself amenable to the cliché advocating the delegation of responsibility while retaining accountability on the part of the principal. This is demonstrated by the extent to which they reiterate the reasons why the delegation of responsibility characteristic of the principal-agent model is considered beneficial for principals in the relationship in so far as it allows them not only to delegate duties or functions, but also for the authority that accompanies such a delegation more particularly in the political arena. According to Kassim and Menon (2003: 123) delegation affords the principal with the opportunity to:

- Circumvent challenges germane to collective action by ensuring that the costs of the transaction offset the cost of monitoring compliance in the execution of the transaction; while simultaneously ensuring that other parties to the contract respect the terms of the relationship.
- Deal with challenges arising from incomplete contracts
- Enhance the quality of policy, specifically in areas which require special knowledge. The latter is therefore provided by an agent who possesses it.
- Deal with regulatory competition and market failure in instances where states put down the type of incentives favourably disposed to their respective firms.
- Displace taking decisions which may be considered very unpopular.
- Circumvent the challenge of policy-making instability by delegating the responsibility for policy agenda setting to the agent; and thus avoid the disruption that might be characteristic of majoritarian systems of decision making in the policy cycle.

If the observation made above to the effect that the principal-agent model lends credence to the sometimes overused phrase in management theory that delegation of responsibility does not necessarily mean the handing over of accountability to the agent, is anything to go by, how is it reflected in the aforesaid benefits? In the first instance, the principal is ultimately accountable for the cost incurred when the monitoring the compliance of actors during the execution of a given policy. It is for this reason therefore that the principal in a contractual relationship seeks to mitigate such costs so that they do not escalate far beyond the benefits which accrue to the execution of the agreement; thus nullifying the necessity of such a contract in the first place. Secondly, the principal in the relationship is also ultimately accountable for any policy failure. For this reason, if policy agenda setting is delegated to the agent, the inefficiencies which may be occasioned by inevitable changes in the majority oriented decision making systems, which can negatively impact on the relevant policy cycles, will mitigate the attribution of failure to the agent because chances for such are minimized.

While the two scholars concede to the prevalence of the model in relationships between shareholders and company executives, who on a day to day basis manage businesses for shareholders; they equally affirm that such relationships are not peculiar to the said 'environment only since, "the principal can be any individual or organization that delegates responsibility to another in order to economize on transaction costs, pursue goals that would otherwise be too costly, or secure expertise"(Kassim and Menon 2003: 122).

The Impact of the Public Sector Discourse and the Introduction of Public Private Partnerships

Citing the objective of the model as economizing on transactions and the pursuance of specific goals which could otherwise be too costly for government to attain; links the benefits of the model with the new public management paradigm; whose concern is, among others, a reduced size of government and a 'guarantee' for an effective and capable state; which is a concern undergirding the evolution of the civil service reforms in both developed and developing countries. At the beginning civil service reforms were focused on reducing the size and cost of the state, but more recent thinking started moving in the direction of producing more capable states, and the appearance of the Public-Private Partnership approach for delivery of services has brought in a new dimension via the New Public Management paradigm, but also the hazards of controlling the agent in the relationship. According to the ECA (2010: 25) public private partnerships "emphasize the synergy between the public and private sectors in the provision of social welfare, public goods and services. Such partnerships or cooperation are meant to present governments with the opportunities to improve citizen access to services. In ad-dition, the competition in such service provision arrangements is expected to encourage quality institutions".

In the eighties the strategy to manage this and to reduce the size and responsibility of government was to introduce privatisation as the solution, but soon partnerships became the retreat from the hard-line advocacy of privatisation. According to Rosenau (2000: 25-32), a variety of partnership approaches or principles were introduced. The following strategic approaches based on premises or principles regarding the problems of the state and how to solve them, were applied. Firstly, partnerships as management reform; secondly, partnerships as a problem conversion; thirdly, partnerships as moral regeneration; fourthly, partnerships as risk shifting;fifthly, partnerships as restructuring the public service, and finally partnerships as power sharing. The public-private policy partnering idea brought a whole new dimension to the framing of incentives in order to regulate the principal-agent relationship to achieve the strategic outcomes of these partnerships.

The Moral Hazard of the Principal-Agent Relationship

Dixit (2000: 3) defines incentives as economic relationships where one person or party regarded as the principal in the relationship seeks to affect the actions of the agent by using incentives. He classifies such relationships into three categories. The first group is what he calls the moral hazard (MH) and refers to an economic relationship where the action of the agent affects the good results of the principal; yet such actions are not observable directly. It is only some of the outcome; that is some of the result of the non-observable action that is noticeable. However, the challenge is that while some outcome of the action is observable, it does not allow observers to infer the action from the outcome, since the result itself is dependent on both the action in question and some other variable. The challenge which arises from this type of economic relationship is based on the fact that the action is not verifiable and this creates challenges for designing the commensurate schedule of payment.

As Dixit (2000: 3-4) points out, the relationship and the concomitant moral hazard arising from it can be structured as follows. When the agent takes action (a), it is not verifiable yet it results in a fairly random outcome (x). The principal in the economic relationship faces a difficult challenge when wanting to devise a relevant if commensurate payment schedule for the verifiable action y(x); and to this extent s/he will find it extremely difficult to maximise the expected utility from this relationship and the goods or services the agent provides. The challenge is occasioned by the fact that since the action of the agent cannot be verified, the agent is then faced with a moral dilemma in terms of choosing the first best non-verifiable action commensurate with the first best payment (y) offered as an incentive in the transaction.

The nature of this type of economic relationship giving rise to certain moral hazards faced by the agent requires a specific kind of incentive scheme. One such example of a solution that can come in handy in order to provide incentives in such a scenario are what Dixit (2000: 4) refers to as linear solutions to the problem. The incentive scheme is designed to provide a basic salary (k) to the agent. Secondly, it adds a kind of marginal bonus (m) to each unit of verifiable random outcome produced (x). To this extent the incentive equation would be: -

Incentive payment schedule = basic salary + marginal reward for each unit of outcome produced.This can be alternatively configured as: $y(x) = k + mx$.

The Information Asymmetry Problem of the Principal-Agent Model

The second category of economic relationships is where incentives for information are to be provided by the principal to the agent. This is occasioned by the fact that a situation of information asymmetry exists in the sense that prior to the conclusion of the economic relationship; the agent already possesses certain information to which the principal is not privileged. The theory underpinning the design of incentives or payment mechanisms is the revelation principle which requires the agent to reveal the information s/he possesses, which then results in the design of the payment schedule that is understood to be congruent with the information revealed (Dixit 2000: 6). However, the 'revelation' itself is contingent on the realisation by the agent that a truthful unveiling of information is optimal for him or her to maximise his/her expected utility in the contract. The assumption in this scheme of things is that all feasible deployments of a payment mechanism allocated in a situation where there is a lack of asymmetry in the information held by the parties to the relationship, are such that they are the same as those "of a direct and incentive-compatible mechanism" used to make the agent adhere to the revelation principle to divulge the privileged information s/he possesses prior to the conclusion of the economic relationship (Dixit 2000: 6). He observes that in such a situation, the design of payment schemes is among other things, approached by constructing a suitable range of menu of contracts, which are designed in such a way that each choice of a contract made by the agent will inevitably reveal the type of information the agent possesses.

Kassim and Menon (2003: 122) highlight the *'sitzimleben'*(that is the situation in life) which accounts for the ultimate origins of the principal-agent model. The latter is a model undergirded by the "asymmetric distribution of information"between the parties to the contract by providing opportunities for advice selection and moral hazard which allows shirking for example (engaging in opportunistic behaviour), that is costly to the principal and difficult to infer or detect. According to these scholars it is for this reason that economists have turned to the use of incentive structures in order to place a damper on and discourage opportunistic behaviour by the agent under such circumstances.

The Costs of the Principal-agent Relationship

The third category of economic relationships described by Dixit (2000: 3-8) is what he labels the costly verification scheme of incentive payments. In this instance, the agent in an economic relationship observes an outcome better than the principal is able to. To this extent the principal is required to craft or derive a particular payment scheme (an incentive), as well as a costly verification scheme (Dixit 2000: 3). The latter is occasioned by the fact that in the process of the presentation of the outcome to the principal by the agent, the latter deliberately misrepresents the outcome in order to maximise his/her benefit and/or expected utility. On receipt of the 'exaggerated' report, the principal is faced with two options. S/he may simply 'accept it at face value, or s/he may choose to subject it to a costly verification exercise before paying. More often than not, if the agent provides a report which represents a worse scenario for him/her, s/he is not audited; however if his or her report suggests the contrary, a costly audit is conducted.

It is the outcome of the costly audit which will determine whether incentives are paid – in cases where the report is truthful – or the agent is fined if the facts have been misrepresented. Dixit (2000: 8) notes that there are similarities between the payment for information and costly verification categories in the sense that both rely on an element of revelation principle.The difference is that in the case of the incentives for effort paradigm, the information is held long before the economic relationship ensues between the parties concerned; whereas in the case of the costly verification category, the agent acquires or becomes aware of the privileged information post-contract.

Hill and Jones (1992) introduce a nuance in their explanation of the model. That is, it is often expected in the economic relationship that apart from the monitoring costs incurred by the principal, the agent on their part expends resources in what is known as bonding costs, which will ensure that the agent avoids taking actions with an intrinsic propensity to harm or impact negatively on the interests of the principal (Hill and Jones 1992: 132). Having put in place such checks and balances to mitigate the effects of the moral hazard in the principal-agent model, the two scholars still concede that the divergence is not eliminated completely in the relationship.

Having outlined the different categories of economic relationships owing to their ultimate origins and nature to the different configurations of information asymmetries and flows between parties, it is also necessary to note that Dixit (2000: 3) is of the view that they can arise simultaneously in given situations. One can argue that if such a scenario emerges, it has the propensity to further complicate the task of designing suitable incentive schemes that are in consonance with the labour provided. As to how the possible combination of the above can come in handy in instances where the economic relationships occur simultaneously requires further research.

THE EXPANDED PRINCIPAL-AGENT MODEL FOR DESIGNING AND DEPLOYING INCENTIVES FOR IMPROVED PERFORMANCE

Regardless of the nature of the structure and formal positioning of the agent *vis-a-vis* the principal, the following model is proposed as an appropriate framework to determine the nature and effectiveness of incentives as management and policy instruments. The shaping of incentives needs to be done with consideration of two major intervening variables, firstly, environmental determinants, and secondly relational determinants.The adapted principal-agent model is prescribed for the careful consideration and shaping of incentives, and the environmental determinants, such as the following ones that will have to be analysed and used to shape the nature of incentives used, such as:

- The nature of the prevailing political, economic and social ideology that frames and informs the kind of society that is idealised within a particular state. The critique of incentives used within a capitalist environment, as opposed to a social democracy or even in communist states are carefully shaped and framed.
- The role of incentive theories, and the level at which incentives are applied for the required behavioural or organisational outcome.
- The prevailing approach in partnering with the agent. For instance the growing current trend to employ public-private partnerships (PPP's). This approach is obviously dependent on what the needs of the government or private sector are at any point in time.

Relational Determinants are Variables that are More Specific in the Actual Relationship Between Principal and Agent

- The nature of the power relationship through the process of delegation and the details of the contractual conditions and relationship that is set up between the two parties. Often these contractual relations clearly determine and control the incentives that could be applied or offered for performance.
- The moral hazards and the risks of structuring a specific relationship in which the agent often gains a lot of power and controls resources, without the direct control of the principal. The art and craft of ensuring that these resources are not misused, and that "value for money" outcomes are secured, and not misused to create false impressions of performance.
- Apart from the contractual and project costs, there are also costs of securing the relationship and minimising risks, as well as optimising the agreed on outcomes.

The suggestion is that this proposed expanded theoretical principal-agent model would serve as a basis for continuing the debate on how incentives should be devised, and in particular how they are shaped for the challenges experienced in the public sector; keeping in mind that both the environmental as well as relational determinants will or should guide and shape such decisions between principal (policy-maker/director) and agent (policy implementer/manager).

CONCLUSION

The deployment of incentives and disincentives has become an integral part of organisational life, regardless of it being public or private. Consequently, incentives have been used by organisations to achieve their goals in a wide range of policy fields. The principal-agent paradigm in particular which forms the essence of contractual relationships in diverse areas has been interrogated in this paper and eventually spurred the authors to propose a more comprehensive framework resulting from the description of the relational and environmental determinantsintended to deal with the intricacies of designing and deploying incentives for effective achievement of organisational goals and objectives. The authors believe that his model can be utilised and should be tested in the context of the public sector.

RECOMMENDATIONS

There is an existing and established theoretical basis for the design and deployment of incentives demonstrated by the foregoing analysis in this paper. The challenge with theories is that there arises a need to distil them into a manageable model which will be useful to both practitioners in the field and the analyst. To this extent the authors of this paper recommend that the new model of proposed expanded principal-agent model for incentives be used as an instrument when consideringand deploying incentives as policy instruments to assist implementation. The idea of shaping and applying incentives for the achievement of policy and organisational outcomes has increased in complexity in recent times. In this regard, this paper also proposes that the expanded principal-agent model servesas an appropriate model to consider the relationship between policy makers, principals or directors and policy-implementers, agents or managers, and that through the use of case studies, researchers and practitioners should employ the model as a framework for analysis. This model needs to be tested, and possibly expanded for the purposes of policy management in the public sector.

REFERENCES

Abolghasemi H, Hosseini-Divkalayi NS, Seighali F 2010. Blood donor incentives: A step forward and backward. *Asian Journal of Transfusion Science,* 4(1): 9-13.

Adams O, Hicks V 2000. Pay and Non-pay Incentives, Performance and Motivation. Prepared for WHO's December 2000 Global Health Workforce Strategy Group, Geneva. From <http: //www.who.int/hrh/en/HRDJ_4_3_02.pdf> (Retrieved on 26 April 2015).

BarnardI 1953. *The Functions of the Executive.* Cambridge, MA: Harvard University Press

Barros HM, Lazzarini SG 2012. Do organizational incentives spur innovation? *Brazilian Administration Review,* 9: 1-13.

Bowles S, Reyes SP 2009. *Economic Incentives and Social Preferences: A Preference-based Lucas Critique of Public Policy*. Department of Economics. Amherst: University of Massachusetts.

Burgess S, Metcalfe P 1999. Incentives in Organisations: A SelectiveOverview of theLiterature with Applicationto the Public Sector. CMPO Working Paper Series No. 00/16. From <http: //www. bristol. ac.uk/media-library/sites/cmpo/migrated/documents/wp16.pdf> (Retrieved on 26 April 2015).

Cohen GA 1991. *Incentives, Inequality and Community: The Tanner Lectures on Human Values.* Stanford, CA: Stanford University.

Cohen WM, Nelson RR, Walsh JP2002. Links and impacts: The influence of public research on industrial research and development. *Management Science,* 48: 1-23.

Dixit A 2000. Incentives and Organizations in the Public Sector: An Interpretative Review. *Revised Version of Paper Presented at the National Academy of Sciences on Devising Incentives to Promote Human Capital in 1999*. Irvine, CA: National Science Foundation.

ECA see Economic Commission for Africa.

Economic Commission for Africa 2010. Innovations and Best Practices in Public Sector Reforms: The Case of Civil Service in Ghana, Kenya, Nigeria and South Africa. From <http: //www.uneca.org/sites/default/files/publications/innovations_ in_the_ public_sector.pdf> (Retrieved on 14 January 2014).

Ederor F, Manso G 2011. Incentives for innovation: Bankruptcy, corporategovernance, and compensation systems. In: E Litan (Ed.): *Handbook on Law, Innovation and Growth*. Northampton: Massachusetts: Edward Elgar Publishing.

Festré A 2008. Motivation, Incentives and Performance in the Public Sector. From <http: //www.webssa.net/files/Article_ 2008_ Motivations_ incentives_Perf_PS_rev_2.pdf> (Retrieved on 26 April 2015).

Fryer RG 2011. Financial incentives and student achievement: Evidence from randomized trials. *Quarterly Journal of Economics*, 126(4): 1755-1798.

Fryer RG, Levitt SD, List J, Sadoff S 2012. Enhancing the Efficacy of Teacher Incentives through Loss Aversion: A Field Experiment. The Education Innovation Laboratory. From <http: //scholar. harvard. edu/fryer/publications/enhancing-efficacy-teacher-incentives-through-loss-aversion-field-experiment> (Retrieved on 11 November 2013).

Gneezy U, Meier M, Rey-Biel P 2011. When and why incentives don't work to modify behaviour. *Journal of Economic Perspectives*, 25: 191-210.

Herzberg F, Mausner B, Snyderman B 1959. *The Motivation to Work*. New York: McGraw-Hill.

Hill CWL, Jones TM 1992. Stakeholder-agency theory. *Journal of Management Studies*, 29(2): 131-154.

IRF see Incentive Research Foundation.

Incentive Research Foundation 2002. *Incentives, Motivation and Workplace Performance: Research and Best Practice.* New York: IRF.

Ishmael T 2013. Incentives for Researchers Drive up Publication Output. University World News. From <http: //www.universityworldnews.com/article. php? story= 20130712145949477> (Retrieved on 11 November 2013).

Jensen MC, Meckling WH 1976. The theory of the firm: Managerial behaviour, agencycosts, and ownership structure. *Journal of Financial Economics*, 3: 305-360.

Kassim H, Menon A 2003. The financial-agent approach and the study of the European Union: Promise unfulfilled? *Journal of European Public Policy*, 101: 121-139.

Kay L 2012. Opportunities and challenges in the use of innovation prizes as a government policy instruments. *A Review of Science, Learning and Policy*, 50(2): 191-196.

Klinger E 1977. *Meaning and Void: Inner Experience and the Incentives in People's Lives.* Minneapolis: University of Minnesota.

Kohn A 1993. Why incentives plans cannot work. *Harvard Business Review*, 71: 37-60.

Laffont JJ, Martimort D 2001. *The Theory of Incentives: The Principal-Agent Model.* Princeton: Princeton University Press.

Lee D 2009. *Three Essays on Economic Agents' Incentives and Decision Making*. PhD Thesis, Unpublished. Virginia: Virginia Polytechnic and State University.

Maslow AH 1943. A theory of human motivation. *Psychological Review*, 50: 370-396.

Maslow AH 1954. *Motivation and Personality.* New York: Harper and Row.

McClelland DC 1962. Business drive and national achievement. *Harvard Business Review*, 40: 99-112.

Macleod C 2010. South Africa: Incentive System Bad for Scholarship.University World News, 55. From <http: //www. universityworldnews.com/article. php? story=20100605063654105k> (Retrieved on 19 November 2013).

McGregor D 1960. *The Human Side of Enterprise*. New York: McGraw-Hill.

Minogue M 2004. Changing the state: Concepts and practice in the reform of the public sector. In: F Cloete (Ed.): *MPA Contemporary Trends in Public Policy Analysis.*Bellville: University of Stellenbosch.

Qayum M, Sawal SH, Khan HM 2014. Motivating employees through incentives: productive or a counterproductive strategy. *J Pak Med Assoc*, 64(5): 567-570.

Re'em Y 2010. Motivating Public Sector Employees: An Application-Oriented Analysis of Possibilities and Practical Tools aThesis Submitted in Partial Fulfilment of Requirements for the Degree of Executive Master Public Management. From <http: //www. hertie-school.org/fileadmin/images/Downloads/working_ papers/60.pdf> (Retrieved on April 26, 2015),

Robins SP 2002. *Organisation Theory: Concepts and Cases*. 4th Edition. London: Prentice-Hall.

Rosenau PV 2000. *Public Private Policy Partnerships.* Massachusetts: MIT Press

Ross S 1973. The economic theory of agency: The principal's problem. *American Economic Review*, 63: 134-139.

Schumpeter JA 1954. *History of Economic Analysis.* London: George Allen andUnwin.

Seeger M 2011. A critique of the incentives argument for inequalities. *Kriterion-Journal of Philosophy,* 25: 40-52.

Stone D 1997. *Policy Paradox: The Art of Political Decision Making.* New York: W.W. Norton and Company.

Ude U, Coker MA 2012. Incentive schemes, employee motivation and productivity in organizations in Nigeria: Analytical linkages. *IOSR Journal of Business and Management,*1(4): 32-39.