Solving Agency Problems:

Intrinsic Motivation, Incentives, and Productivity[1]

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1. Introduction

Agency problems are pervasive in modern economies due to the extensive division of labour and specialization. Therefore, how to solve them within organizations, or between individuals or organizations, is a key determinant of productivity of organizations as well as countries. There is indeed considerable evidence of tremendous difference in productivity of firms in the same industry, after accounting for measured inputs such as capital intensity. For example, within US manufacturing industries, plants in the 90th percentile produce as much as four times per worker compared to firms in the bottom 10th percentile (see Syverson, 2004). At the country level, differences in productivity levels accounts for substantial fraction of differences in average per capita income (see Jones and Romer, 2009). Bloom and Van Reenen (2011) argue that some of these productivity differences can be explained by differences in management practices which includes how to deal with agency problems, such as the use of performance monitoring and use of incentives.

Incentive issues apply to both public and private organizations. Recent work in economics has moved beyond stylized models of motivation based on a narrow view of *homo economicus* who cares about only money and leisure, and have embraced a wider perspective on motivation. Broadly speaking, this has been focused on different approaches to non-pecuniary motivation ranging from models of intrinsic motivation, doing something for its own sake rather than reward, to models where preferences are influenced by pro-social objectives, social norms, or the need to conform to a chosen identity or concern.

[1] Background paper for the 2014 World Development Report.

In this paper, we will review these approaches and show how they can enrich standard economic models of agency. We also draw out implications for thinking about the improvement in the functioning of organizations in a way that could be relevant to thinking about development.

One feature that distinguishes the economic approach that we take from behavioural sciences like psychology, which has also extensively studied some of these issues, is to begin from an explicit specification of preferences or motivation and then to derive implications for behaviour from some underlying model of choice – typically optimization under constraints. The primitives of the problem are then the preferences and constraints rather than the behaviour itself. This is the approach that we take here and is a feature of not just mainstream economics that assumes standard rational behaviour but almost all analyses in the field of behavioural economics. We should point out that our departure from the standard models of agency will be in exploring non-pecuniary motivations of agents, but after taking these motivations as part of the landscape, they will be assumed to make choices subject to constraints exactly as in standard economic models. Therefore, unlike behavioural economics, the standard features of rational choice theory will apply – for example, more choices will not make an agent worse off. The intersection of behavioural economics and incentive theory is a fascinating area of research, but needs to be distinguished from the set of issues we focus on here.

The roadmap for the paper is as follows. The next section introduces the scope of the agency problems that we consider. We then discuss some concrete examples of agency problems in economics, in particular some that have a bearing on developing countries. Following that, we discuss the standard economic approach that assumes agents only care about money. We then discuss alternative approaches to agent motivation, their foundations, and how these affect our thinking about how to solve agency problems in practice.

2. Agency Problems in Economics

Delegating tasks to those with appropriate expertise is essential to unlocking the gains from the division of labour which was long ago recognized by Adam Smith to be a key factor in realizing higher levels of productivity and income. This remains a staple issue in many aspects of economic life. By specializing tasks, individuals can also be encouraged to invest productivity-enhancing skills. Modern economies are replete with situations where a person or group is asked to perform a task on behalf of others. In the private sector, specializations within and between firms in areas such as accountancy, design and production are central examples. In the public sector, when children are sent to school, whether or not they are properly taught depends on whether teachers are motivated to do a good job.

The division of labour is the foundation of "agency problems". For the division of labour to bear fruit, it is necessary to ensure that the tasks that are delegated to others are performed satisfactorily. The foundation of agency problems rests on two assumptions: (i) actions that are privately optimal to the agent may not be optimal for the principal, and (ii) these actions may not be easy to monitor. Writing a performance contract which specifies the nature of each task and the standard to which it should be performed is often infeasible. [2] Agency problems also reflect a process of selection reflecting the need to appoint the most competent and motivated individuals to perform appropriate tasks. Initial screening of workers may play a role in finding out about this. But employment histories and information from past performance may be used to establish the type of the worker.

Agency problems have been studied extensively in economic models. The vast majority of applications are to private for-profit firms (see Prendergast, 1999, 2013), but there is a growing interest in applications to organizations charged with the delivery of publically provided goods and services (see, for example, Burgess and Ratto, 2003).

Agency problems have to confront a range of measurement problems. For example, it is usually possible to check, i.e. measure, whether a worker shows up to work. However, whether or not he then performs the required tasks at the right standard or whether he is using the most appropriate method or technology is much more difficult to measure. This tends to limit the use of input based management of agency problems. It is more common to focus on a range of output measures as the basis for rewards, i.e. to remunerate the agent according to the quantity of the output

[2] Agency problems can be exacerbated by what is called the problem of alienation, which is usually attributed to Marx, but was anticipated by Smith. He was worried that men whose whole life would be spent in performing a few simple operations and the dexterity acquired in some narrow tasks might be at the expense of certain intellectual and social qualities (Smith, 1776, 302-303).

produced and whether this is of adequate quality. Incentive schemes can then be introduced to reward individuals for perform a task in a satisfactory way. Such schemes typically take the form of bonus pay, but there are variants, such as peer group comparisons (e.g., rank-order tournaments), and team-based incentive pay. The use of incentive pay or performance based pay is considered to be one of the key methods to deal with agency problems, and it is used all across the world. For example, 14% of US workers received performance pay (bonus, commission or piece rate) in 1998 and 40-50% of them had jobs that at some point involved some performance pay (see Lemieux et al, 2009). Bloom et al (2012) provide evidence of use of performance incentives from around 6000 firms from seventeen countries, ranging from high to low income, and report considerable heterogeneity between and within these countries.

Paying bonuses to encourage good performance focuses on paying on the upside. But it might also be possible to get individuals to post bonds against poor performance. A frequently used example is when an asset is pledged as collateral against the repayment of a loan. However, it is widely appreciated that such practices are inherently limited in their usefulness. For one thing, it would require employing individuals in firms with identifiable sources of pledgeable wealth. Moreover, even if they have the wealth legal constraints may be a problem. For example the absence of secure titles to land limits the use of assets as collateral, and this "dead capital" may lead to lost productivity gains, a point forcefully made by Hernando de Soto (see, for example, de Soto, 2000). One could also be concerned with the behaviour of unscrupulous employers who would falsely claim poor performance as a means of expropriating a worker's assets.

Another solution to solving agency problems is to reduce reliance on the division of labour. Thus, the employer might also consider selling the firm to the workers to improve their incentives. In other words, making the agent the "residual claimant" will alleviate agency problems. If the agent is wealthy enough, then this indeed may be the most efficient arrangement. However, it is often the case that the agent is not wealthy and in that case, the price that he will be willing to pay may not be the one that the principal might find worthwhile to "sell" his asset. One might think that the agent can borrow from a lender to buy the asset, but that is really not a solution as there will be agency problems associated with the repayment of loans. In effect the bank would replace the employer in the agency problem. Such issues explain the persistence of agricultural tenancy even when the landlord does not contribute in any way to the production process (see Banerjee, Gertler, and Ghatak, 2002) – we discuss this in greater detail in the next section.

The design of incentive schemes constitutes the standard economic approach to incentives has informed many areas of economics and been applied to a wide range of situations, many of which we outline below. However, given the ubiquity of division of labour and specialization in the modern economy, and the potential for agency problems in all dimensions of our economic lives, the use of explicit incentive systems is relatively limited. To understand this, we need to also pay attention to some of the costs of incentive schemes that could be used in delegated task-management.

First, contracts are costly to write, verify and enforce. Therefore, in many contexts, because of these transactions costs, it is simply not efficient to write explicit contracts.

Second, there is an issue of how far output can be measured for the purposes of reward. In private firms, it is most common to use accounting measures of profit as the basis for reward. But, even then, there is a question of whether there can be a conflict between turning a short-term profit or a long-term return is the objective and how far the latter can be measured. Even if financial flows do give the complete picture, many outputs are multi-dimensional. Also, some of these dimensions can be easier or harder to measure than others. For example, it is much easier to measure quantity than quality. Moreover, quality may become clear only after a period of use. There is the possibility of a trade-off between quantity and quality – asking for higher output just leads to the production of shoddier goods. This diminishes the attractiveness of piece rate incentive schemes where a worker is rewarded for how many units he/she produces over a particular period of time. There are variants of this argument. For example, in the context of team production, where workers need to both focus on their own tasks and cooperate with each other, having explicit incentive schemes on individual performance may not be efficient. We will discuss this further in section 3.

Third, another limit on creating incentives arises when output has an uncertain component so that risks and rewards based on bonus pay are risky. If the worker is risk-averse then paying bonuses exposes him to risk, which is costly for him. The employer may then have to raise any fixed component of his remuneration as compensation for risk. This makes riskier incentives schemes less attractive and suggests that we would expect bonuses to be used more where employees are not particularly risk-averse.

In the light of some of these problems of the use of explicit contracts, in some contexts the use of long-term relationships may be effective. Thus, a firm can offer the prospect of re-appointment, promotion or dismissal of its workers. [3] A consumer can choose not to employ a firm again if it does a poor job. This may have more or less relevance depending on the context. The legal framework for separation or continuation of agreements could play an important role in determining how such arrangements work. For example, some tenants are given legal protection against the threat of eviction by landlords. And workers can quite to work for another firm if they get a better offer limiting their attachment to a particular firm and hence their incentive to perform. How far the "rules" governing dynamic incentives are written down in a contract varies. They are often implicit and enforced by the reputation of firms/workers. Thus they are referred to as "implicit incentives" and the enforcement is referred to as "relational contract" to reflect the fact that it is part of an on-going relationship. Such considerations should make any researcher cautious in describing only the formal rules for performance related pay and dismissal. It can be important to see them in the context of the more informal norms by incentives are governed.

3. Examples

(i) Rural Organization

One area where agency models have been explored at length in development economics has been in the context of rural organization. Given the population density, fragmentation of land due to demographic pressure, and the inequality of

[3] See Baker, Gibbons, and Murphy (1994).

landholdings, tenancy is extensively used. Landlords who wish to make best use of their land face a choice between renting the land to the tenant based on a fixed rent and employing someone as a farm labourer on a fixed wage contract. The latter offers no direct incentive for performance. Hence the performance of workers has to be ensured by other means. In some contexts where the tasks are quite specific and quantifiable, a piece-rate scheme could be introduced. For example, this might be true for something like fruit-picking or harvesting. However, for other more complex tasks such schemes do not make a lot of sense.

An alternative to employing the worker as a labourer is to make him a tenant. A fixed-rent tenancy should theoretically provide strong incentives since the tenant is able to appropriate all the fruits of his/her effort. However, it exposes the tenant to the greatest level of risk. The owner of the land may also be exposed to default risk in the event that the harvest is poor.

An intermediate solution is a share-cropping arrangement. This mitigates risk while providing an incentive to work via fractional rewards, i.e. giving the tenant a share of the output. More recent theories of tenancy argue that if the tenant has insufficient liquidity then, even if he is not risk-averse, the landlord may not want to have a fixed rent tenancy, since the "fixed" amount of the rent would not be very high given the limited ability of the tenant to make a fixed unconditional or up-front payment (Banerjee, Gertler, and Ghatak, 2002). Using aggregate district-level data, they estimate the potential productivity gains from giving tenants a higher share and security of tenure to 50-60%, which is similar to what is obtained by Laffont and Matoussi (1995) and Shaban (1987), and somewhat higher than the estimate of 40% obtained by Bardhan and Mookherjee (2011) who study the same tenancy reform programme but use farm-level data. .

(ii) Credit Markets

Agency problems help us understand the organization of capital markets. A canonical version of this is where an entrepreneur has an innovative idea without also having the capital to develop it. He thus has to secure capital from an outside investor. This could be a bank, by issuing stock or appealing to members of a social network including family and friends. The main risk is repayment of this capital. This could be because it requires the entrepreneur to pay sufficient care to financial factors or the idea itself could be inherently risky. Either way the entrepreneur may know more about the actions that he takes and the chances of success than do investors.

There are two main contractual forms for dealing with agency problems in capital markets. The first are loan contracts typically specify a fixed repayment of interest at certain dates. The lender bears the risk of default while the borrower is exposed to the risky returns from the project. The effort put in by the borrower will be lower, other things being equal, the more indebted he is. A higher rate of interest will have a similar effect. This is because a greater share of the return goes to the borrower. The default risk can be diminished by insisting that the borrower pledges collateral.

The second stylized type of contract is an equity arrangement where the provider of capital takes a stake in the project. This reduces the risk faced by the borrower. However, the borrower's incentive to perform may diminish as a consequence due to the return being shared. However, if he has no collateral, it may be easier to raise more capital with an equity arrangement.

Before either type of contract is agreed to, there is a need to assess the viability of the project. Which set of projects are funded will depend on how far the entrepreneur and owner the capital can specify an effective means of dealing with incentives. Better screening will also diminish risks in capital markets.

While we have used the stylized model of borrowing by an entrepreneur who lacks capital, the basic structure and issues described here affect most forms of capital markets. Dealing with them effectively is important for making sure that capital is deployed in its most productive uses. There is also a lot more complexity behind real world contracts than is suggested here. In some cases, providers of capital may also provide inputs such as expertise and financial management. Some arrangements combine equity and debt like features, and there are varying degrees of monitoring involved.

(iii) Management

As mentioned earlier, recent empirical work by Bloom and Van Reenen (2007, 2011) has established a robust correlation between effective human resource management and firm productivity. This is leading to greater interest in the constituent parts of good management and how to secure it. Management is an important example of agency problems. Ultimate owners of firms often employ managers since they lack the expertise to perform such tasks. Private sector firms that wish to grow in scale have to make increased use of hired managers who typically have a quite a bit of discretion which needs to be used to wisely for the firm to be productive. And a role for managers in turn is to solve agency problems with their workforce to give the best possible performance.

There is long-standing interesting in the performance-related components of managerial pay. The classic question is how far managers should be rewarded in line with the financial performance of the firms that manage. One particular issue is how some measure of long-term performance is incorporated into this to prevent short-termism. The use of stock-options that are vested in future is one frequently-used way of doing this.

Managers typically perform a complex array of tasks. There is a debate about how many of these show up in simple financial information concerning the performance of the organization. This arises in particular when owners of firms have broader social goals such as supporting community development or environmental sustainability. And there are also questions about whether managers are sufficiently well-informed about the latest technologies or management practices. When managers can capture rents, there may be resistance to technological or organizational change as a means of protecting these rents.

(iv) Public Service Delivery

Recent research has emphasised how the quality of public services hinges on getting good performance among workers. The discussion has moved beyond crude quantitative measures such as how much money is spent by the government on some particular public good or service to a careful examination of how it is spent and what is the outcome. This has necessitated a close look at the internal functioning of various public organizations and agencies. Agency problems arise to the extent that delivery of services requires that flows of funds are honestly managed and having an array of front-line professionals, such as teachers, nurses and tax-inspectors, perform their roles effectively. The recent empirical literature on school effectiveness has used matched pupil-teacher data bases to underline the important role that quality teaching plays in performance (see, for example, Hanushek and Woessman, 2012). In the developing world, teachers or health professionals who do not show up is one dimension of the issue (see Chaudhury et al, 2006). And, if workers they do show up as required, there are many difficult-to-monitor decisions to be made which are crucial to effective performance.

How better to solve agency problems in public services is a subject of intense debate. Although financial management can be poor, especially in the face of corruption, it is rarely sufficient for good performance. Since markets are not used to value outputs, many of the key outputs are not directly priced and hence profit-based bonuses will not work. One response it use proximate performance measures such as test scores for children can be used to create bonus and promotion schemes for teachers. There are now numerous studies of education and health care where incentives are now being explored. However, these are subject to the some of the problem discussed earlier about the use of incentive schemes, namely, it could distort the allocation of effort. Also, other than the usual difficulties of making the agent a residual claimant (risk aversion, limited wealth), there is another reason that applies to public goods and services: some of the benefits and costs are non-rival and even if an agent can be made a residual claimant of the financial flows, it will be difficult to make him the residual claimant of the total social benefits and costs. For example, the government may contract out health services to a private provider, but that provider may not put as much weight on some health problems or some beneficiaries that would societal priorities.

One possibility is put decision making in the hands of those who are most motivated to behave honestly and help beneficiaries of those services. For example, one view of bureaucracies is that they are staffed by those with a strong ethos of public service. Were this the case, then agency problems should be diminished to the extent these bureaucrats have a certain degree of autonomy. A recent study by Rasul and Rogger (2013) looks at project level data the use and outcome of 10% of all federal social sector expenditure in Nigeria in 2006 and 2007, and finds that when management practices are more geared towards autonomy, project completion and quality improves. In particular, a one standard deviation increase in autonomy is associated with a 14% increase in project completion, while a one standard deviation increase in performance-based management is associated with a 12% lower rate of project completion.

In addition to incentive problems, the issue of selection also arises strongly in the context of public services. A recent study by Dal Bó et al (2013) study a recruitment effort in Mexico for public sector positions, where salary announcements and job offers were randomized across recruitment sites. They find that higher wages attract not just more able workers but also those who report having greater public service motivation.

4. The Standard Economic Model

Our main interest in here lies in understanding how motivating workers can help to solve agency problems. As a point of departure and to focus on some of the more novel aspects of the work cited below, we begin by discussing the standard economic approach to agency problems. The past forty years have seen the development of a range of models of incentives in economics which have become a staple part of the curriculum. Until recently, the most progress has been on the theoretical front. However, there is now an emerging empirical literature which is discussed further below.

The standard assumption made in economic studies is that individuals have a particular form of extrinsic motivation, specifically a pecuniary motivation since their primary aim is to increase their consumption of market-produced private goods. In standard models of labour supply individuals are supposed to value consumption and leisure, and “work” or “effort” is costly and is supplied more if the wage rate is higher, assuming the income effect of higher wages is not strong enough to outweigh the effect of a higher opportunity cost of leisure. In agency problems, the key point of departure is effort or work is not perfectly measurable and has to be induced by designing monetary rewards in exchange for defined performance criteria. The problem of incentive design then boils down to finding a way of indexing monetary rewards to measurable performance to motivate agents. As we mentioned earlier, the standard solution is the use of various kinds of rewards and punishments to enhance accountability of managers and workers, which include monitoring and firing threats on one hand, and incentive pay including bonuses, stock options, and equity ownership on the other. One of the key questions is how high powered these incentives have to be, i.e. how much higher should the bonus be for any given increase in performance. The answer, of course, is context specific and depends on how sensitive is the performance measure to the rewards. For example, if the performance measure is very noisy, then incentives will not be very high powered (see Baker (1994)). It also depends on how risk averse is the agent and the cost of effort. But the idea is that with appropriate design of incentive schemes, productivity can be increased in different settings.

Some recent field and lab experiments have shown that, in line with the standard economic model, there is indeed an effort response to incentives. Moreover, a ballpark assessment suggests that the elasticity of effort with respect to rewards is around 0.2. For example, the well-known study by Lazear (2000) of workers in a large auto glass company that switched from a fixed wage to a piece rate system, effort went up by 44%. He found half of that is explained by the selection effect of increasing the fraction of able workers in the workforce, leaving 24% to the effect of incentives. This is similar to the estimate obtained by Shearer (2004) who studied the productivity effects of moving from a fixed wage to a piece rate system for tree planters and found a 20% increase. Prendergast (2013) argues that worker responses to pay for performance can be related to the literature that studies the response of labour supply to marginal taxes, once again estimating an elasticity of 0.25, which is comparable to the above estimates.

As mentioned earlier, having only a single dimension of effort is quite restrictive since much delegated decision making involves many decisions which affect different aspects of performance. One of the key issues is then to balance priorities; the problem of multi-tasking (see Holmstrom and Milgrom (1991)). This creates some interest issues when different tasks have heterogeneous measurable outcomes. Offering stronger incentives to perform better measured tasks then distorts effort away from other tasks. There is considerable evidence in support of this.[4] For example, Drago and Garvey (1997) show that when workers are placed on individual pay-for-performance schemes they are less likely to help co-workers. In a well-known study Jacob and Levitt (2003) find evidence of teachers in Chicago public school cheating to help their students perform well on standardized tests, when their pay is sensitive to performance in these tests.

This is a particular issue when the hard-to-measure tasks are important to successful performance. In these cases, there is a tendency to reduce the extent of incentives. The multi-tasking model begins to introduce elements of intrinsic motivation to explain why tasks that are not measured at all might still be delivered at some minimal but positive level. This is an issue that we will discuss further below.

As we also noted above, career structures with promotion possibilities can provide a potentially powerful means of improving performance. However, such incentive schemes are often quite open-ended with limited specificity in the contractual rules which tend to be procedural rather specifying specific payment rewards. The possibility of moving job to a new firm also serves as an implicit incentive scheme. Moreover, many employers respond to the possibility of losing their good employees to other firms and respond by offering improved terms and conditions. Thus the labour market becomes part of a system of incentives whereby good performance is rewarded even when there are no explicit performance contracts. The extent to which this is true will depend on how much performance on one task is publicly observable outside.

The standard economic approach can also be applied to situations where individuals work together in groups to produce outputs. In many such situations, it is difficult to attribute the contributions of different team members to producing an output. Therefore, the team as a whole needs to be rewarded according to performance rather than specific individuals. It is then necessary to consider interdependence in efforts by different members of the group and how these are determined since this is no longer a problem where individuals can be studied in isolation. The standard economic approach worries in such situations about free-rider problems within a team where each team member relies on others in the team to perform. The result is poor performance. In practice, teams can evolve processes for overcoming such

[4] See Prendergast (1999) for a review.

problems with informal punishments among team members where one member is not evidently pulling their weight. To study these issues fully requires us to think harder about the social context in which incentives are being designed. This can lead to novel solutions to agency problems as was used by micro-credit organizations that tried to exploit the fact that individuals who belong to groups know one another and can use sanctions that not available to standard lenders.

5. **Intrinsic Motivation**

The standard approach discussed in the previous section focuses exclusively on extrinsic reward as the basis for solving agency problem. But one obvious way to increase productivity in agency relationships is to use agents who are autonomously motivated to do the tasks that the principal wants them to do. This simple idea seems naïve and many economists have traditionally been suspicious of it. However, we believe it needs to be taken seriously. In this section we will discuss intrinsic motivation treating the agent as isolated from any social influences, turning to the role of social determinants of intrinsic motivation in the next section.

Psychologists such as Deci and Ryan (2000, page 56) define intrinsic motivation as "the doing of an activity for its inherent satisfactions rather than for some separable consequence. When intrinsically motivated a person is moved to act for the fun or challenge entailed rather than because of external prods, pressures, or rewards. " They argue that there is considerable evidence that such motivation exists.

The possibility that intrinsic motivation can be harnessed in solving agency problems is appealing since it could economise on the need for the standard carrots and sticks. However, it make use of this idea concretely, it is necessarily to understand when intrinsic motivation is likely to be a powerful force. More interesting still is the possibility that such motivation can be cultivated and expanded. This is particularly interesting in social situations where norms may support some forms of intrinsic motivation.

From an economic point of view what makes intrinsic motivation interesting is in opening a window on the importance of non-pecuniary motivation in settings where monitoring or finding a good performance measure is difficult. Not all kinds of non-pecuniary motivations are best captured under the heading of intrinsic motivation.

For example, whether all forms of altruism or pro-social motivation belong under this label is not clear. However, in most formal setting where we write down preferences to underpin models of behaviour, there is often a common structure to models where we are seeking to understand an “additional term” which is directly attached to an effort, task or wider goal to which the agent can contribute. In other words, whether it is the inherent enjoyment of performing the task that motivates the agent (thereby reducing the disutility of effort), or the pleasure he or she has from its outcome, from an economist’s point of view, both will raise productivity by lowering input costs or raising output, respectively. So, practically speaking, intrinsic motivation can serve as useful “catch-all” label for the study of a range of non-pecuniary motivations, even though this is not strictly faithful to the narrower sense in which was proposed by psychologists.

While psychologists have long studied these issues, it is only recently that economists have begun to study models of intrinsic motivation and their implications. The approaches that we discuss here all fit into the categories along a continuum between extrinsic and intrinsic motivation suggested in Ryan and Deci (2000) which, in turn, builds on Deci and Ryan’s (1985) self-determination theory. A range of psychological experiments have looked at these different forms of motivation. Following on from this work economists have now more squarely confronted the idea of intrinsic motivation and its consequences (see, for example, Frey (1997)). There is an emerging literature that starts with the premise that viewing economic actors as having broader motivation than simply “money” and “disutility of labour or effort”, the staple elements of the textbook economic model of labour supply and the cornerstone of the standard economic model described above.

As we have already noted, the essence of intrinsic motivation is pursuing a task due the *direct* enjoyment received from it rather than any form of goal orientation. This is well captured in the oft-used quotation from Mark Twain where Tom Sawyer managed to get a fence whitewashed by others for free by pretending it was fun, when material inducements had failed earlier:

“Tom said to himself that it was not such a hollow world, after all. He had discovered a great law of human action, without knowing it—namely, that in order to make a man or a boy covet a thing, it is only necessary to make the thing difficult to attain. If he had been a great and wise philosopher, like the writer of this book, he would now have comprehended that Work consists of whatever a body is obliged to do, and that Play consists of whatever a body is not obliged to do." Mark Twain, *The Adventures of Tom Sawyer* (1876, Chapter 2).

In general two things have been emphasised in the psychological literature as contributing to enhanced intrinsic motivation: competence and autonomy. The former refers to individuals being more motivated by performing tasks they good at and the latter to have freedom of choice over aspects of how the task is performed. However, intrinsic motivation can come from many other sources – the desire for social approval, internalized moral codes, and cultural influence. We will look into these in greater detail below.

Using the typology of Ryan and Deci (2000), extrinsic motivation comes in four different varieties that can be mapped into the approach taken here. At one extreme (*external regulation*) is pure externally motivated rewards as in the standard economic model discussed above. Next to that is behaviour that is motivated either by self-image or impressing others (*introjection)*. In neither of these cases is an activity valued for its own sake. In models of *identification*, an agent comes to value an action and endorses the goals associated with the task. Finally they propose *integration* where the agent's preferences are congruent with the task in hand. Then intrinsic motivation is a residual category, with inherent enjoyment and satisfaction from the task or its outcome.

From an economic point of view, the first-order effect of having intrinsic motivation is to reduce the need for explicit incentive pay. If individuals are given the autonomy to perform tasks where they have competence, then they will be more productive according to the experimental findings. The idea is that individuals will donate their effort "for free" rather than because they are paid to do so. So, in principle, such donations diminish the classic effort-based agency problem, enhancing the scope of the division of labour and increasing productivity in organizations. Starting with this observation, Besley and Ghatak (2005) show that there is a selection argument that follows from it - to the extent that intrinsic motivation varies by worker, organizations that employ more intrinsically motivated work force are likely to have higher levels of productivity. In other words, it is possible that due to this selection effect, use of incentive pay and productivity could be negatively correlated. Viewed from this angle, the use of incentive pay would be considered a symptom of a situation where the agent does not have enough intrinsic motivation.

Even if one accepts the importance of having a motivated work force to make certain organizations work effectively, we need to understand the mechanisms of attracting such a work force, or inculcating such motivation in a given workforce better, and in what contexts it is likely to work better. However, sometimes a casual correlation is made between certain occupations and the presence of intrinsic motivation. A good example of this is the standard view of public servants where having a public sector ethos is viewed as a form of intrinsic motivation. A corollary of this view is that there is no need to use incentive schemes in order to have workers carry out their assigned tasks effectively. The classical view of the medical profession is similar, the idea being that doctors will treat patients in the best possible way without the need for monitoring or incentives. The idea that doctors perform according to the edicts of a Hippocratic oath is a vivid illustration of the idea that non-pecuniary motivation is important.

Arguably these ideas apply more forcefully to contexts where there are professionals whose occupations bring specific ethics and obligations to act in a responsible way. Part of the professional training may be to instil these values. Such ideas have been influential in the organizational sociology literature following on the analysis of bureaucracy in Weber (1922). Where work is routine and repetitive such intrinsic motivation is likely to be in short supply.

An important issue is how intrinsic motivation interacts with incentive pay. Does get crowded out, or crowded in? In a well-known experiment (see Deci (1975)), college students were either paid or not paid to solve an interesting puzzle, and it was found that those who were not paid spent more time on it and also reported greater interest in the task. One of the earliest economic models of intrinsic motivation which is affected by incentives is Benabou and Tirole (2003) which posits that agents who perform tasks are inclined to infer the value of the task or their suitability to carry it out from the rewards that are offered to undertake it. Thus an agent may infer what the principal knows about the task or their ability to do it from the rewards that he offers to undertake it. A worker may respond negatively to a task for which he is offered a higher reward since he may infer from this that the task is less likely to be one that he values or he is good at. Another argument that is often used in this context is that rewards discourage creativity and risk-taking (Kohn, 1993).

6. Social Foundations of Motivation

Now we turn to the question into how intrinsic motivation is created and sustained by going beyond viewing the agent as an isolated individual and intrinsic motivation like a stock of a natural resource that can be mined to increase productivity. Social relationships shape individuals, whether it is in the context of the workplace, marketplace, peer group, family or community. As a result, individuals may have a concern for their self-image or identity or their social reputation. They may also have other-regarding preferences. This is a catch-all term to capture any form of preferences that puts some weight on the consumption, income, or well-being of others, whether stemming from altruism, fairness or concern for their relative standing. This opens up alternative channels of how incentives may affect productivity, beyond what was considered in the previous section.

In this section, we therefore treat motivation as endogenous rather than fixed, and discuss alternative theories of endogenous motivation. We focus on situations where individuals interact with others and in a way that affects their willingness to behave in particular ways, which in turn affects how organizations work.

a. Reputation and Self-Image

Although it is not built into every application, there is little dispute in economics that individuals care about their reputation in many social situations. This could, for course, simply be an extension of pecuniary motivation – having high social standing means that you are more likely to secure a good job. Reputation may also matter for access to non-market goods such as being invited to important social events or success in the marriage market, or gaining access to political power. In many such cases, having more money does not per se guarantee this so in a reduced for sense, there is a payoff from reputation which is not the same as money and can therefore be harnessed as a source of motivation.

We will suppose that reason to act in particular ways is due to concerns about their image or reputation and that this is socially determined. In many situations, your reputation is primarily determined by what others who observe your actions infer about you and the returns to reputation are earned in interactions with others. However, a more novel take on reputation in recent work due to Benabou and Tirole (2006, 2011) is that self-image is also important as a motivator. Individuals need not only prove things to others but also to themselves. Individuals may have a sense of the kind of person that they want to be and prove to themselves, via their choices, that this is who they are. There is enough evidence from various experiments that individuals do not act in selfish or opportunistic ways even in anonymous, one-shot interactions. Of course such demand for a particular self-image is likely to have a socially constructed component but it may not be necessary in every instance for punishment and reward for behaviour to come from others – it can be a mechanism of internal control. Whether this can be thought of as intrinsic motivation can be debated. However, what is attractive about this approach is exploring a clearly specified form of non-pecuniary motivation to get to issues of how conventional incentives and motivation relate.

The basic argument that Benabou and Tirole develop is as follows. Suppose that an agent has to undertake an action where part of the payoff is the extrinsic monetary reward and part is through the way that undertaking that action adds or detracts from his/her social reputation or self-image. Then whether an individual works hard in the task will depend on how it affects reputation or self-image. This could either add or detract from motivation depending upon the specific context. Thus, performing a task that is not valuable in the eyes of one's peers would be demotivating. The exact underpinnings of this need not be made specific. One could imagine instrumental benefits in the form of the future social or economic interactions based on having a particular reputation. However, it could simply be the warm glow from feeling respected according to a particular society's values.

Whether this brings forth more or less productive behaviour in an agency setting is not immediately obvious. It could be that the types of reputational gains being pursued are not what the principal wants. For example, working less hard may be means of convincing yourself or others that you are naturally talented rather than a grafter.

Two important things follow from this approach to studying motivation.

First, the effect of such non-pecuniary rewards is likely to be highly context specific. For example, values that are deemed praise worthy among some groups such as not behaving dishonestly could not be value in another context. Thus studying what drives non-pecuniary motivation requires a deeper knowledge of the context in which actions are being performed than would a pure economic approach. If the reason, for example, that individuals do not work harder when incentives are introduced is because they will lose face with their fellow workers, then this would seem important in contexts where the introduction of incentives schemes is important.

Second, information is important. To what extent tasks are seen by the relevant individuals (or oneself) is likely to vary and could well be a feature of the organization in which the task is being assigned. For example, schools can choose to report an individual's grade privately or to publicize the performance of all the pupils. Whether workers are acknowledged publicly in an organization for their contribution may affect the extent to which they can enjoy a reputation. So, for example, awarding someone the title "employee of the week" could make a difference to their effort level.

This approach has the attractive feature that it can provide a way of exploring the question of whether conventional monetary incentives crowd in or crowd out non-pecuniary motivation. Whether rewards and punishments dilute motivation depends on whether rewarding the task affects the reputational or self-signalling utility. One of the well-known examples of this is collecting blood for medical purposes. An early and influential argument by Titmuss (1970) was that the quality of blood samples (in terms of infectious diseases, such as Hepatitis B) collected in the UK (which had voluntary donations) was of better quality than that in the US, where people could sell blood for money. [5] Subsequent work has not found strong evidence for crowding out in the context of blood donation, such as the field experiment carried out by Mellström and Johannesson (2008) who found that offering a payment reduces the supply of blood donors from 43% to 33% but that the effect is not statistically significant.

The reputational approach has similarities with the identity-approach of Akerlof and Kranton (2010). They approach the issue of motivation through the sociological

[55] The recent book by Sandel (2012) provides many other interesting examples of a similar nature.

notion of identity. The key idea is that people are moved to act because they associate a particular way of behaving with adopting a particular identity. Such identities are objects of choice and particular “ideal types” are created to which people may aspire. Individuals get utility both from the act itself and any rewards that it brings and how the act conforms or contradicts the identity that the person aspires to. Moreover, this can change over time and may vary according to location and culture. For example, whether a father is present at the birth of a child was not considered in the history of some societies as associated with positive image of responsible fatherhood. However, the opposite is true elsewhere. The way that the identity associated with being a good father is portrayed may affect behaviour. This may be a more powerful driver of behaviour in some contexts that standard economic costs and benefits.

Notions of identity may have an effect in the workplace where ideas of being responsible worker or boss are shaped by the “ideal type” and the way that it is conveyed and portrayed. Individuals who are promoted can choose what kind of boss they want to be and may change their behaviour to conform to this type. In public sector settings where corruption is an issue, the kinds of identities pursued by workers and managers may have a first order effect on organizational effectiveness quite apart from standard concerns about costs and benefits.

The identity-based approach allows can explain the possibility that there are many dimensions of identity which operate in different spheres of life. For example, an identity espoused in the work place could require different behaviour to one espoused in the home or when socializing among friends. What makes the Akerlof and Kranton (2010) approach interesting to economists is the fact that identities can be chosen. And that there may acknowledged costs and benefits of doing so ex ante. However, having chosen the identity, there can be real effects on behaviour.

As we have already noted, an approach to understanding motivation based on identity or reputation/self-image is inherently contextual and subject to the possibility of peer influence or social norms. A good deal of behaviour that is associated with reinforcing identities could equally well be described in the language of reputation. In applying these ideas to understanding productivity, the key focus is on understanding first whether creating and reinforcing particular identities is likely to increase effort. Rituals adopted in the military which tries to establish a sense of identity as a soldier and inculcating loyalty to one's colleagues in battle are arguably aimed at increasing motivation. Private firms also focus instilling company loyalty and taking pride in the work, so that workers identify with their firm and internalize its objectives. There are various ways of achieving this, for example, by providing some implicit insurance to workers (not cut their wages or firing them during a recession), or motivating them by appealing to the respect that its brand name elicits due to its quality or commitment to some social goal.

This approach suggests a focus in improving the effectiveness in organizations on factors that build a stronger sense of identity in organizations rather than focusing on incentives. The approach does not generally predict that there will be a motivational crowding effect from monetary rewards. However, Akerlof and Kranton (2005) suggest that conventional economic approaches which focus on pay-for-performance are likely to lead to wasted effort in situations where a weak sense of identity with the tasks assigned is the cause of organizational failure.

The work of both Benabou and Tirole and Akerlof and Kranton gives a potential role for norms in shaping how organizations perform. Both emphasise the social construction of reputation and identity in shaping how people are motivated in specific tasks. To the extent that individuals care about their peer group, then there is a tendency for a key component of motivation to reflect the self-reinforcing dynamics of group norms.

To model this, one has to posit how exactly the behaviour of the group affects motivation. This depends what is observable to group members and the strategies that they have for punishing deviants from the norm.

Evidence from public service delivery suggests that peer effects can be strong and can reinforce the effect of individual incentives. For example, encouraging girls to pursue education in developing countries via scholarships often have surprisingly large effects, which can be understood by the role that shifting social norms may play in this. To unleash these forces, explicit incentives may act as a catalyst. Suppose there is heterogeneity in the population in terms of how much people value money versus the intrinsic value of the underlying activity, and there are peer effects, i.e. people like to conform to some average social standards. Then using financial incentives may cause those who would more value on money to change their behaviour and this may tip the social equilibrium via a social multiplier effect on the rest of the population by affecting the average. As a result of this interaction between explicit incentives and social norms, the overall impact of financial incentives may far exceed the costs.

However, the interaction of explicit incentives and norms may not always layout in this straightforward and beneficial manner. Consider a team production setting. Once again, assume that there is some conformism-bias via peer effects or the fear of "standing out". Suppose production involves a measurable dimension, e.g. attendance but it also involves less measurable dimensions such as quality of work, which eventually affects profitability. Workers are assumed to observe each other's behaviour in both these dimensions and cooperate in choosing their effort levels in both. Now introducing incentive pay to workers depending on the outcome of the more measurable dimension may not only substitute effort away from the less measurable dimension as in the standard multitasking model, it may also affect the social norm or work culture within the firm. In particular, worker attendance may increase but eventual productivity of the firm may suffer because workers may decide to enjoy leisure in each other's company at the expense of the firm. In this instance, not only incentive pay can backfire, but a social multiplier effect may amplify the negative effect.

b. Other-regarding preferences

Part of intrinsic motivation may be to care about the impact of decisions on the well-being of others. Economists have long argued that human beings often display generosity and altruism in certain domains of their life, such as their family and community. But the starting point of *homo economicus* has typically been to assume selfish preferences. This is reinforced in the discipline of economics by the approach to markets and the achievement of the invisible hand where the assumption is typically one of rather narrowly self-interested actors, whether they are acting as consumers or producers.

But Adam Smith who is often associated with this perspective, and is considered the father of the doctrine of free markets and socially beneficial effects of privately selfish actions:

"How selfish soever man may be supposed, there are evidently some principles in his nature, which interest him in the fortunes of others, and render their happiness necessary to him, though he derives nothing from it, except the pleasure of seeing it. Of this kind is pity or compassion, the emotion we feel for the misery of others, when we either see it, or are made to conceive it in a very lively manner. That we often derive sorrow from the sorrows of others, is a matter of fact too obvious to require any instances to prove it; for this sentiment, like all the other original passions of human nature, is by no means confined to the virtuous or the humane, though they perhaps may feel it with the most exquisite sensibility. The greatest ruffian, the most hardened violator of the laws of society, is not altogether without it. *(The Theory of Moral Sentiments, Adam Smith, 1759)"*

The assumption of self-interest should be viewed as a convenient simplifying assumption to study certain types of economic problems rather than as an indispensable doctrine of economics. This was recognized long ago by Mill who put it as follows:

> "[Political economy] does not treat of the whole of man's nature . . . it is concerned with him solely as a being who desires to possess wealth, . . . it predicts only such . . . phenomena . . . as take place in consequence of the pursuit of wealth. It makes entire abstraction of every other human passion or motive." (John Stuart Mill, 1848)

The real question is why it matters in particular situations to depart from the assumption of self-interest and what analytically interesting possibilities are created.

There is, not surprisingly, ample evidence that individuals act in ways that is not consistent with a narrow view of maximizing their own economic interests, and there is compelling evidence in favour of "other-regarding" preferences, or social interdependence even in standard economic settings (see Fehr and Schmidt, 2006). This idea was exploited originally in the work of Akerlof and Yellen (1990), who used it to motivate why firms might may efficiency wages in order to motivate their workers who perceived such wages as "fair" for the effort that they put in and hence would be inclined to work harder.

There is also a large literature on philanthropy in economics (see Andreoni, 2006 and List, 2011 for recent reviews), which provides compelling evidence that, while people respond to incentives even in this context, the very presence and scale of this sector, as well as a rich body of experimental evidence suggests that people do act in ways that are not consistent with narrow notions of self-interest.

Behaviour in variety of bargaining experiments also suggests that narrow self-interest is a poor predictor of behaviour. One interesting question is how far this is culturally specific. One well-known study is Henrich et al (2001). Comparing behaviour in ultimatum games in 15 societies, they find that none of them conform to a standard economic model with selfish preferences. However, there is still marked heterogeneity in outcomes across contexts.

The experimental and charitable giving literature proposes various models of other-regarding or social preferences, all of which have in common the feature that the utility of an individual depends not only on his own payoff, but the allocation of resources to other individuals. Individuals are typically assumed to be rational, having preferences that satisfy the standard completeness and consistency axioms.

Just how individuals care about the resources allocated to others varies a lot depending in the approach. To illustrate, consider the following simple example, suppose a given amount of money X is divided between two individuals 1 and 2, and these amounts are denoted by x_1 and x_2. Under the standard assumption of selfish preferences, individual i (*i=1,2*) cares only about x_i . With pro-social preferences they care about what is happening to the other person. We now consider some alternative models to capture this phenomenon. [6]

The simplest formulation simply supposes that there is an altruistic weight on the well-being of the other individual. This will make the individual care indirectly about the resources that they receive. This is the standard altruistic preference model.

A second possibility is that the allocation of resources enters an individual's preferences. For example, an individual's rank in the income distribution might matter to them, perhaps due some kind of underlying preference for status. Besley and Ghatak (2008) show how this may make non-pecuniary awards for performance, such as ranks or titles, effective in environments where the scope for using financial incentives are limited, e.g., due to problems of measuring performance. This is a

[6] See Fehr and Schmidt, 2006 and Andreoni, 2006 for reviews.

specific formulation of a wider class of situations in which an individual cares about her own consumption x_i, but also her consumption relative to that of another individual (or group), x_j. [7]

A third possibility is a preference for fairness or aversion to inequality. This is often formalized as a situation in which individuals are viewed as caring both about their relative income compared to another individual, but also having some altruism towards the other player if her income falls below below a certain threshold. In terms of formalizing this, usually an individual's utility function is assumed to depend on their own absolute consumption (x_1), and the gap (or ratio) between their own consumption and that of another individual. However, the gap matters differently depending on whose consumption is higher: if her own consumption is higher, then she feels some disutility from the other person having a lower consumption due to the fairness or inequity aversion factor, but if her own consumption is lower, she experiences some disutility due to the relative income or status consideration. This suggests a downside of using pay differentials or incentive schemes: the loss of motivation of "losers" have to be weighed against the extra motivation of the "gainers".

There is some evidence on how standard incentive schemes interact with other-regarding preferences. Bandiera et al (2005) report the results of a field experiment they carried out with a large fruit producing firm in the UK where the main task of the bottom-tier workers is to pick fruit. In one experiment they study the effect of moving from relative compensation (where the remuneration per kilogram of fruit picked depends negatively on average productivity that day) to piece rates. They found productivity was 50% higher as a result, and a large part of it is driven by worker's internalizing the negative effect of their effort on others, a weight they estimate to be about two-thirds.

In all the alternative versions of other-regarding preferences, there is an interesting question about the domain in which the pro-social preferences applies. Is the concern for *any* member of a society, your community, co-ethnic family or co-worker? This is ultimately an empirical matter when trying to map preferences from

[7] Bolton (1991) formalized this as an individual's utility depending positively on x_i and x_i / x_j and in particular, the latter partial derivative being positive for $x_i < x_j$ and 0 otherwise.

behaviour. But when it comes from considering any individuals support for generating a benefit in the form of consumption for others, this can make a difference as we shall discuss further below. There is also an issue of how far people choose their reference group when developing other regarding preferences. Individuals may choose the community in which they live and that will shape their social interactions which in turn changes the notion of fairness. Little is known about how such pro-social preferences evolve through social interaction.

These forms of pro-social preferences matter in agency relationships when individuals may pursue tasks on behalf of principles in part based on the way that these tasks relate to their non-selfish goals. Motivating an individual may be easy when there is a clear link between the wider goal and the organizational objective. Thus, socially responsible employers or those who have a fair wage structure may have more motivated workers and enjoy higher levels of productivity as a consequence.

In these three different formulations, what matters is the allocation but not how it is achieved. A widely used class of models posit warm glow preferences where an individual derives utility not from resources allocated to another individual but from the role that she plays in bringing the allocation about. So preferences may depend in part from a concern for the poorer sections of society but also whether you have done something about it directly yourself. These preferences were introduced to explain the widespread existence of charitable giving in the presence of extensive government involvement in making transfers and free-rider problems.

More broadly, we can view social preferences as each individual having a selfish utility function, but also acting to some degree as a mini social planner, namely caring about others. As in welfare economics, there may many ways this can be formalized (see Sen, 1977) whether these concerns are over the utilities of others, whether it is over what we do for them, or whether they are toward some rule or abstract principle ("no child should go hungry"). Also, in each case, there are many ways in which various considerations are traded off, from the Rawlisian extreme to the more standard utilitarian case.

While there is now considerable evidence both in the laboratory experiments, field experiments, and using observational data that individual do have other-regarding preferences, there seems to be considerable heterogeneity in this respect (see Fehr and Schmidt, 2006). In a recent experiment (Besley and Ghatak, 2013) we offered participants to keep their earnings or donate them after playing a game which requires some effort and ability. We found that 8% of the population always choose to donate their earnings, even when their donations had lower monetary value than what they could keep as earnings, about 18% choose to donate when the monetary value of donations exceed what they can keep as earnings, but not otherwise. The remaining 74% of the population appear to behave more like *homo economicus*, namely, they always kept their money as earnings. Fehrler and Kosfeld (2012) report evidence from another recent experiment in favour of the importance of heterogeneous agents in these contexts. They did a laboratory experiment and tested whether subjects provide higher effort if they can choose the mission of the job (choosing a donation for a non-profit of their choice). Overall they did not find any significant effect, but in a second experiment they allowed subjects to choose whether they want to do a task which has their preferred mission, and found that about a third of subjects are willing to do it even if this involves a pay cut, and they also provide substantially higher effort.

Suppose then that we accept a role for pro-social motivation as a form of intrinsic preference. This can affect how to motivate individuals to undertake tasks. We consider two particular examples.

The first interesting case is in public services where part of the role of a worker is to provide goods with social benefits. Then a concern for a wide notion of societal benefit may appear as a source of intrinsic motivation. Indeed this is a compelling way to think of a public service ethos. To the extent that a public sector work is given the autonomy to pursue their own vision of the social good raises important issues. Many public bureaucracies impose rigid missions which can de-motivate those who have a particular mission oriented view. This may explain the frequently made claim that some kinds of religious schools produce a high level of commitment by teachers who value the curriculum.

While it may increase their incentives to put in effort, it can also lead to different service priorities being developed in different places. To the extent that workers are intrinsically motivated towards the common good, there is less need to use incentives. However, where there are some workers who are pro-socially motivated, this may then lead to poor service. This suggests the possibility that selection rather incentives is the key to performance. But just how to screen on pro-sociality is not so clear. Interventions that reward people for demonstrable public service contributions and hence enhance their pro-social motivation are a possibility. This might include rewards for demonstrable good service. Such rewards may raise the status of those who act in the public interest.

The importance of pro-social motivation is not confined to public services. Many firms make decisions which have wider social implications. This could be polluting the environment or treating their workers poorly. Having forms staffed by manages with pro-social preferences might diminish the impact of this, although, of course, this may worsen financial performance. But firms may also gain in productivity from having managers and workers with pro-social preferences. In Akerlof and Yellen (1990), firms who are committed to a fair wage structure also have more strongly motivated workers. So productivity need not be lower because they have social concerns. Indeed, some recent experiments show that even when there is no direct social implication of their work or output, but workers are given performance-based incentives that would benefit some charity, effort goes up. We have already mentioned the laboratory evidence reported in Besley and Ghatak (2013) and Fehrler and Kosfeld (2012). A related paper by Tonin and Vlassopoulos (2012) carries out a lab experiment and finds that social incentives lead to a 20% rise in productivity, although whether the donation to charity was lump-sum or related to their performance did not seem to matter. The paper by Anik et al (2013) shows that field experiments yield similar results – they found that pro-social bonuses in the form of donations to charity or expenditure on leads to greater job satisfaction, and that pro-social bonuses in the form of gifts to co-workers led to better performance.

3 Motivation, Governance, and Markets

Most of the discussion so far has drawn out the implications of intrinsic motivation of different forms for the use of incentive pay and wage structures. However, these are only one set of tools as far as provision of incentives is concerned, with there being other important aspects of organization design, such as task assignment, matching of workers and firms, to what extent employees are given autonomy and decision rights, and what is the governance structure of an organization (e.g. for-profit vs non-profit). There is also the question of how the relationship between incentives and motivation are affected by the broader institutional frameworks in which individual firms and organizations are nested, such as markets or government policy. Market pressures – whether it is product or factor (e.g., labour, credit) market competition influences the relationship between motivation and incentive schemes and other aspects of organization design. We now turn to these issues.

3.1 Matching

Individuals choose their occupations in labour markets and may choose where to work based on matching their preferences over what firms do to their individual preferences and motivations. Similarly, within a firm how a worker is assigned to a task may affect intrinsic motivation. Besley and Ghatak (2005) show that if workers are motivated but have mission preferences (e.g., health care workers may have different views about the right way to treat ill patients, and teachers may prefer to teach different curriculums), then there is a potential role of organizational diversity in promoting alternative missions and competition between organizations in attracting motivated agents whose mission preferences best fit with one another. Interestingly, in this framework, higher incentive pay is a sign of misaligned preferences between workers and the firms they work for, and this can, under some conditions lead to lower effort. This framework suggests why having a decentralized private non-profit sector may be efficient in the context of providing social services.

There is some evidence in favour of this approach. We have already mentioned the study by Fehrler and Kosfeld (2012) that shows that some (but not all) workers seem mission-motivated and work more for less if they are allowed to choose the mission. In another paper Carpenter and Gong (2013) study campaign workers in the 2012 US Presidential elections, and randomly matched individuals (who have certain political views) with the two campaigns. They found that those who were matched to the campaign they support had measures of performance that was 72% higher than mismatched workers, and that performance pay, on average, increases performance by 35% compared to those who received a flat pay. Interestingly, looking at the mismatched workers, performance pay has a huge impact on mismatched workers (86%) and a very modest one on matched workers (13%) as the theory predicts.

These ideas have practical relevance in the design of public services. If individuals are unable to work in situations which match their mission preferences, this can lead to lower productivity. So a more decentralized system of service provision may work more effectively. Of course, governments may have their own view of mission which may make them less happy when there is diversity. And there is always the risk that one person's perception of pro-social motivation may be another person's perception of anti-social motivation. This might be the case when there is religious organization of service provision.

3.2 Mission integrity

When individuals care about the mission of an organization or a task, they will care about whether indeed the organization is committed to the mission. This requires that structures are in place to ensure that the management of the organization ensures mission integrity.

There are three core dimensions as to how values interact with organizations and incentives. First, organizations can be designed so that individuals with particular motivations are drawn to them (selection). Second, organizations can encourage individuals to express their values in the degree of autonomy that they are given and the way in which they are rewarded (incentives). Third, organizations can try to develop values and shape the motivations of individuals who work in them (norms).

One example of an institution that is designed to protect mission integrity is a non-profit firm. This is governed by a non-distribution constraint that ensures that no one who is in a key decision-making position is a residual claimant. As a result, it is expected, they will prioritize the social goal over any financial incentives (see Glaeser and Shleifer, 2001). Many sectors of the economy, especially health, education and the relief of poverty rely heavily on such organizations. For-profit firms too have a rigid mission – to maximize profit. External shareholders can invest in for-profit firms knowing that the firm has a legal obligation to maximize profit. Viewed from this point, any deviation from profit-maximization would seem like an agency problem, even though it may be carried out for the most worthy of social goals (see Friedman, 1970 for a statement of this position).

This separation of for-profits and non-profits might seem like an efficient division of labour between private provision of private and public goods. But the rigidity that characterizes non-profits and for-profits has a downside. From a social point of view, there may be times when profit-oriented activities make sense and others where pursuing other ends is desirable. Recognizing this, it makes sense to seek a middle ground with a more nuanced balance of profit and contributions to social ends. There has been a lot of discussion about social enterprise as hybrid organizational forms that have no restrictions on earning or distributing profits, but are committed to some social mission. Besley and Ghatak (2013) show that one key mechanism through which such an organization can satisfy mission integrity is to select managers who are motivated by the social mission. In that case, they can be given *greater* financial stakes in the firm. This will make sure that the manager "does the right things" depending on the situation, namely maximizing profits when that is appropriate but deviating from it when the social objectives are more important. However, there could also be external monitoring of such organizations by stakeholders to make sure that the performance of these organizations conform to their social objectives.

3.3 Competition and organizational objectives

Many organizations respond to market incentives which can undermine motivation.

First, increasing an outside option may interfere with the degree to which workers cooperate and boost each other's productivity inside the firm (example, academic departments) by diverting their effort towards pay rises. Also, to the extent the threat of terminating a relationship acts as a discipline device, competition raises the outside option and reduces the scope for sustaining cooperation.

Second, a greater degree of competition and monetization may crowd out intrinsic incentives. This would be akin to a multi-tasking model, except that the various outputs may be relevant only to the worker, but his different personas or selves may have alternative weights on them. For example, a "good citizen" side of an agent may cause him to contribute to public goods inside the firm but a "competitive" side of an agent may cause him to chase individual rewards and honours. To the extent the latter is more visible to him and to others, he may substitute away from the former.

Third, firms may also have to operate in an environment with product market competition and this may constrain the ability to sustain certain social norms, and the associated vector of intrinsic motivation to individual workers. Take the model of corporate social responsibility (CSR) by Besley and Ghatak (2007). Firms may bundle a public good with a private good. Say, a given country or region wants to promote certain input or output characteristics that they put some social value on ("preserving traditional agriculture"). To the extent these are private and excludable, so long as consumers are willing to pay a higher price for these or workers are willing to take a wage cut for these, there is no problem. But to the extent there is a non-rival and non-excludable component, competition may lead to a race to the bottom and only a minimal level of this public good component will be provided (which happens to be the same as the Nash voluntary contributions equilibrium level in the Besley-Ghatak 2007 model).

This relates to the broader theme of the ambiguous welfare effects of the disciplining effect of competitive markets. On the one hand competitive pressure reduces waste and promotes efficiency (which includes driving out "bad" social norms that impede with meritocracy, e.g., discriminatory behaviour, as in Becker's model of taste-discrimination). On the other hand, as mentioned above, it undermines cooperation, and may drive out "good" social norms and lead a race to the bottom. For example, external competition may push "ethical" firms out of the market, unless workers or investors willingly take a pay cut to support its activities, as if voluntarily contributing to a public good, as in the model of Besley and Ghatak (2007). From the first welfare theorem this is what we would expect - in the absence of market frictions (which includes various incentive problems) and externalities, competition is good for efficiency but otherwise the relationship is ambiguous.

4 Implications

Approaches based on studying the importance of intrinsic motivation open a wider window on what creates effective and productive organizations in both the public and private spheres. If may be possible to solve agency problems more effectively by examining ways of enhancing non-pecuniary motivation without resorting to bonus pay or other more standard economic tools such as hiring and firing decisions.

The psychology literature has discussed motivational crowding out at length and subsequent economic models have also shown why incentives can crowd out motivation. However, one of the most interesting issues in models of intrinsic motivation concerns how standard economic tools either crowd in or crowd out intrinsic motivation. The more micro-founded models suggest the possibility of some subtle relationships. It matters a great deal to know whether the introduction of incentives is likely to be an effective tool in promoting better organizational performance.

But equally important is to study how to build intrinsic motivation. The creation of norms which support reputational incentives and encourage the adoption of identities by workers that improve organizational performance is a key issue that is, as yet, poorly understood. While there may be a tendency for individuals to conform in many social setting, what is important is to understand whether they will conform to a high or low performance norm. And this remains poorly understood. But it is likely to a more subtle and contextual approach than the standard economic approach suggests. And there are many models in which poor performance is persistent. Here, there is a need to understand exactly what makes things "sticky" and to have an approach to the dynamic forces which shape motivation.

The most demanding area is to understand better the interplay between norms, incentives and selection. Here there is an important issue of whether increased bonus pay has a positive social multiplier by "crowding in" high effort norms in particular settings.

Economists are sometimes criticized for bringing "market-based" reasoning into situations where social context matters. For example, the New Public Management literature which emerged in the 1980s in New Zealand and was given a boost by service reforms in places like the UK. It sought to apply the basic model of incentives to public services. The result was a framework of targets and incentives which were intended to create explicit incentives in a branch of the economy where very few formal incentives existed. But the approach was widely criticized. First, there is a risk that by focusing on monetary rewards for specifically measurable tasks, this would lead to the neglect of other task sustained by intrinsic motivation as in the multi-tasking model. Second, it could lead to the wrong kinds of people being attracted to the public sector. In the end, the naïve adoption of the standard economic model into these settings has been roundly criticized.

There is now great deal of interest in recognition based rewards which try to enhance public service motivations. Simply publicizing good performance without a financial reward or giving those who have demonstrated good performance more autonomy of what they do, might have positive effect on performance without having to resort to standard economic sticks and carrots. For example, Reinikka and Svensson (2011) show that public access to information through a newspaper campaign in Uganda that provided schools and parents with information to monitor the handling of a large educational grant programme by local officials acted as a powerful deterrent of corruption, and had a positive effect on school enrolment and learning outcomes.

5 Concluding Comments

This paper has offered a brief overview of how models of intrinsic motivation can be used to offer an insight into how to increase the productivity and performance of organizations. Starting from its somewhat narrower use in the psychological literature, we have discussed different forms of non-pecuniary motivation that economists have been studying in recent years that travel under the heading of intrinsic motivation. The main idea that we have explored is that the pursuit of non-pecuniary goals is a key part of understanding incentives, selection and organization design. There is, as yet, no unified approach for studying these issues and our knowledge is quite fragmentary. However, examining these issues is now a part of the mainstream agenda in economics.

This has been given a particular boost by the need to find ways of improving the quality of public services in age of austerity. The global financial crisis has also questioned how far curbing anti-social behaviour in market settings can be achieved. It is even conjectured that one of the main reasons for the crisis was the deterioration in social norms in the financial sector (see Akerlof and Shiller, 2009).

The narrow notion of *homo economicus* is being displaced in studies of a variety of settings by allowing for a richer set of motivations. For example, the models of motivation that we have studied often have a social context. Individuals derive many of their desires from how they appear to others or by a desire to conform to a social type from which they derive status. This provides for an exciting and challenging agenda. This may appear to move away from the goal of discovering a universally applicable model, like the standard economic model. However, by accepting that agents are likely to have heterogeneous motivations, which could in turn depend on the social context, we may be able to develop a richer framework for understanding the observed diversity in how incentive problems are resolved, within and across organizations, in various settings.

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