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Abstract

There is a popular impression that governments are resistant to change and innovation, and that this is due to a combination of overly bureaucratic processes and a culture of risk aversion. It is debatable that this is well-founded, theoretically or empirically: government bodies differ from private sectors in their structures and objectives, formalised decision-making processes may aid innovation rather than inhibiting it, and the assumption that governments are excessively risk-averse assumes that private sector decisions on risk are correct - an assumption which is hard to sustain given recent economic history.

This paper brings together ideas from public administration, behavioural psychology and economics to ask whether the anti-innovation government has any theoretical or empirical basis. It argues there is some truth in the claim that governments are less likely to innovate; but the paper also argues that a missing piece of the puzzle is provided by incentive structures in government which encourage the status quo irrespective of risk preferences. However, the evidence for these negative incentives is largely anecdotal and derives from those who could be seen to have an interest in this perspective, and so there is a need for more empirical research to explore this idea.

Key words

Public sector administration, incentives, risk , innovation, resistance, change

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Introduction

Sir Humphrey Appleby: With respect, Prime Minister, I think that the Education Department will react with some caution to your rather novel proposal.
Prime Minister James Hacker: You mean they'll block it.
Sir Humphrey: I mean they will give it the most serious and urgent consideration, and insist on a thorough and rigorous examination of all the proposals, allied to a detailed feasibility study and budget analysis before producing a consultative document for consideration by all interested bodies and seeking comments and recommendations to be included in a brief for a series of working parties who will produce individual studies which will provide the background for a more wide-ranging document considering whether or not the proposal should be taken forward to the next stage.
James Hacker: You mean they'll block it.
Sir Humphrey: Yes.
"Yes, Prime Minister: The National Education Service" (BBC, 1988; Series 2 episode 7)

The popular stereotype of public administrators as inefficient service providers committed to maintaining their way of life is not reflected in the scientific literature. Nevertheless, in the popular mind there is an implicit assumption that governments are resistant to change and innovation, and that this is due to a combination of overly bureaucratic processes and a culture of risk aversion. In recent years, particularly in the Anglo-Saxon democracies, this has been used to support the neo-liberal model of 'market-driven governance' (Somers, 2008; Adams, 2013).

It is not clear that this is well-founded. While is true that government departments tend to be bureaucratic (in Weber's sense of hierarchy and formalised processes), it does not necessarily follow that this is inefficient, nor that this structure is 'too' resistant to change. For example, central government departments are much larger than private sector firms, on average. If inertia is a function of size, then government departments are being castigated simply for being large.

A second defence is that government departments have fundamentally different functions. These functions are typically associated with social goals, with all of the output measurement problems those entail; see Dixit (2002) for a review. Even where government and the private sector provide similar services (health, education, outsourced services such as street cleaning), it is not clear that public and private objectives or performance measure coincide (Andrews, Boyne and Walker, 2011).

Third, while there is evidence to support the idea that public administrators are more likely to be risk averse and interested in social objectives, compared to the general population, it does not follow that this generates resistance to change. One could argue that the socially motivated are more likely to try new solutions to social problems; and that the formalised nature of government decision-making encourages the risk averse to propose innovations, as they do not bear the full cost of their proposals. Moreover, some results from the behavioural psychology literature suggest that the risk-averse become risk-takers when faced with a choice of negative outcomes.

Finally, the assumption that governments are 'too' risk averse implies that the private sector is the benchmark for the socially optimal level of risk. However, economic history provides numerous

examples of risk-taking in the private sector which is excessive when viewed from society's perspective. It could be argued that complex approval processes in government are an appropriate response to complex decisions which may have implications for large parts of the population.

This paper brings together a number of strands from public administration, behavioural psychology and economics to ask whether the theoretical basis for innovation-unfriendly government is unambiguous. It also considers the empirical evidence for assumptions about the people and structures of government. The conclusion that governments are per se resistant to change does not seem as clear cut.

However, we then consider a development which has exercised public administrators more than academics: the perception that a blame culture exists in public service, which places a higher value on avoiding losses compared to providing benefits. We consider what might give rise to this culture, and why it might be more prevalent in government. This leads to the conclusion that formalisation and risk-aversion are not sufficient to explain inertia in government decision-making; poor incentive structures may be the missing piece of the jigsaw.

The next two sections consider the scientific perspective on government: the first reviews ideas of bureaucracy, and asks whether government bureaucracy is unique in some way; the second looks at the function of risk from the economic and psychology literature. The paper then considers incentive structures in government, an area which is of great in interest in practice and in the popular press, but which has received relatively little scientific attention. The penultimate section brings the different strands together to argue that all the elements are necessary to explain why governments are likely to be more risk averse than the socially optimal outcome demands.

The conclusion notes that assertions about incentive structures in government, while appealing, are not well-founded empirically. Anecdotal evidence for dis-incentivisation can be put forward by those who, it could be argued, stand to gain from the adoption of this perspective. The paper suggests that this might be a fruitful ground for further research, particularly as the argument that incentives drive inertia implies that the current fashion for 'empowering' public administrators may be counter-productive.

There are many different models of government, including local administration and publicly-run corporations as well as central government. For clarity's sake, in this paper we take 'government' as meaning a country's centralised administrative machinery.

Models of public administration and bureaucracy

Bureaucracy in academic thought

Public administration has been the subject of academic study since the end of the nineteenth century. The subject took off after the Second World War, with Weber's (1925, translated 1947) model of bureaucracy dominating the sociological/management perspective, and the development of public choice theory by economists.

Weber used 'bureaucracy' as a value-free term to describe the characteristics of large organisations staffed by salaried professionals, structured hierarchically, and acting rationally to achieve

outcomes. He strove to differentiate the modern objective bureaucracy as preferable to historically observed systems of organisation based upon patronage (rent-seeking) and nepotism.

His description is an idealised type, rather than an attempt to describe how bureaucracies work in practice, but this did not stop his approach being attacked as unrealistic and it fell out of favour. Post-Weberians took as the starting point the recognition that rent-seeking was endemic throughout human history; there seemed no reason why the bureaucrats of the late twentieth century should suddenly become preternaturally logical and altruistic. Hence, attention was turned to the potential for bureaucratic systems to fall below their idealised standards of efficiency.

Nevertheless, Weber's model has a powerful hold over modern understanding of bureaucracy. As Mouzelis (1967) discusses, Weber's model had two components: describing the characteristics of bureaucracy (hierarchy, salaried employees) but also ascribing attributes to those elements (efficient organisation, alignment of organisational and personal goals). It is those normative attributes which have come under attack. Even when those attributes are not challenged, it has been argued that these do not provide the outcome Weber hoped for: for example, assuming that a bureaucracy is 'rational' (dealing with all cases without preference or prejudice) does not necessarily mean that it is efficient or produces egalitarian outcomes. However, Weber's identification of the characteristics of the 'bureaucratic organisation' remains the recognisable definition of a bureaucracy.

Jenkins and Page (2004, ppxiv-xv) categorise three modern approaches to the study of bureaucracy:

- Political-sociological, focusing on the role of bureaucracy in addressing (or confounding) the will of the population
- Organisational-sociological, focusing on the operational characteristics of the workforce, often taking an instrumentalist approach
- Behavioural, drawing on economic models and psychological studies of how humans form objectives and interact in groups

In this paper we focus on the behavioural, within which Jenkins and Page place both public choice theory and the psychologists' perspective.

Public choice theory: the economist's perspective

Public choice theory is a branch of rational choice theory applied to public administration. As such, it reflects the 'neoclassical' economic paradigm which dominates current economic thinking, particularly in the Anglo-Saxon countries. The neoclassical paradigm posits 'homo oeconomicus', a rational individual maximising his or her utility by making full use of information available and minimising unnecessary expenditure. Decision-making is carried out within a framework of known, fixed and consistent preferences, and the individual is only concerned with his or her own utility (the welfare of others might be included in the utility function; see Machina (1987) for a review and critique, and Winter (1986) for a defence.

One conclusion which derives directly from these assumptions is that the bureaucrat is unlikely to act in the public interest. This is a standard principal-agent problem: the principal (taxpayer, or politician) wants an agent (bureaucrat) to expend effort meeting some objective, but both the objective and the effort of the agent may be difficult to measure, and the agent is also assumed to have more information than the principal. Under these circumstances, an appropriate reward

mechanism is difficult to define; the principal ends up defining a reward mechanism which tries to encourage compliance in the agent's behaviour. The amount of rent the agent is able to capture is related to the difference in information between the two and the availability of proxies to measure the output of the agent; see Dixit(2002) for a brief overview of principal-agent theory.

Early models argued that the real goal of any bureaucrat must be to increase the size of the budget he commands, as all other goals (salary, prestige, power) are linked to that. Later models substituted alternative goals, but the common feature retained in alternative models is that there is no direct incentive for the bureaucrat to act in society's interests: as he is paid a fixed salary, subject to a basic level of performance, there is no reason for personal and organisational objectives to be aligned. Note that this does not mean inefficiency; for example, Niskanen's body of work (eg Niskanen, 1971) argued that the self-interested public official could produce services very efficiently; the problem is that too many public services are provided.

This is a philosophy, based on quantitative analysis, which encourages an element of instrumentalism (that is, a model is judged on how well it predicts outcomes, not whether it is based on realistic assumptions or representations of the world). However, as this approach often led to clear recommendations for improving practice, it has been relatively well grounded in empirical analyses and policy experiments; see Boyne (1998) for an extensive review of empirical studies. For example, developments since the 1980s such as the introduction of performance-related pay in the public sector, competitive tendering or outsourcing of services, and the increasing use of market-based governance models are all natural consequences of this perspective. This focus on measurable targets and delivery mechanism was sometimes described as 'new public management' (Hartley, 2005).

However, the assumptions were challenged and empirical evidence provided little support for this thesis. For example, Boyne (1998) strongly argues that many empirical studies are statistically flawed, both in the interpretation of data and in the underlying methodology; while Bel and Fageda (2007) find that studies of the motivation for privatisation are also of limited statistical value. Dixit (2002) notes that positive findings for the efficiency of contracting out are restricted to studies on the delivery of products with a clear private sector equivalent. Andrews et al. (2011) carry out an extensive meta-analysis, and conclude that studies focus at best on one or two easily-measured characteristics (such as unit cost), but rarely identify on wider impacts such as service quality, for example. The models reviewed also suffer from identification problems; that is, the same statistical correlation can be associated with several different theoretical models. Newman (2001) notes that the discourse of 'efficiency' is both uncertain and dynamic; her narrative analysis suggests objectives may change to fits decisions rather than driving decisions. Finally, Jensen and Stonecash (2005) point out that public-private sector comparisons rarely consider dynamic effects, studies of which suggest that apparent efficiency gains are largely temporary. In summary, although public choice theory has had significant political sway since the 1980s, the evidence for this view of the world remains, at best, limited and subject to interpretation.

Psychological responses and the Nudge Generation

Public choice theory proved a fertile ground for statistical analyses identifying characteristics of public administration associated with inefficiency; but ascribing causation to those associations came under increasing attack from the 1970s onward. Herbert Simon's work on behavioural

economics in the 1960s had little impact at the time, as the singularity of his analysis made it difficult to reproduce and hence develop inductive laws. However, the work of behavioural psychologists, particularly the use of controlled experiments starting from the 1970s, led to a fundamental review of how humans make decisions.

In particular, the rationality of decision-making came under serious challenge. Tversky and Kahneman (1974) demonstrated convincingly that reference points were crucial for decision-making; more importantly, people used a range of ad hoc methods to make decision-making more convenient, not necessarily better. Factors influencing choices included self-confidence, freshness of memories, stereotyping; these could be much more important than rational assessment of information. March and Olsen (1975) brought together a number of perspectives arguing that institutional and psychological factors meant that decision-making was, to all intents and purposes, irrational.

Whilst the psychological arguments were appealing, the difficulty these created was that they left policy advocates with few clear guidelines, as the contradistinction of this model was that all situations were unique: case studies did not fit into the quantitative ethos of mainstream economics. However, it was exactly this characteristic that pushed behavioural approaches in the policymakers' field of vision. A number of mass-market economics books making extensive use of case studies, most importantly *Nudge* (Thaler and Sundstein, 2008) and *Thinking, Fast and Slow* (Kahnemann, 2012), promoted the new behavioural economics to the political classes[1].

Are government bureaucracies different from private sector ones?

As noted, early theory considered public and private sector organisations together. Bureaucracy is a characteristic of large organisations, which is also a characteristic of government. Table 1 below details the size of UK central government departments in late 2013.

Table 1 UK Central government employees 2013

Size of department (employees)	Number of departments
Under 40	0
40-99	2
100-499	8
500-999	1
1,000-9,999	15
Over 10,000	7
Average size of department: 13,000 (approx.)	
Median size of department: 1,920	

Headcount, Great Britain, not seasonally adjusted
Source: Office for National Statistics *Public Sector Employment* Q4 2013

All but two of the 33 departments have headcounts of over 100; mean department size is 13,000 and the median is 1,920. In contrast, roughly 95% of firms in the UK have under 50 employees, accounting for 50% of employment; mean firm size is under ten employees (calculated from ONS,2013), and the median is one employee. On this basis one could argue that perceived failure in

[1] The UK's Behavioural Insights Team, part of the Cabinet Office, was informally known as the 'nudge unit'.

government is a result of the size structure of government, not any inherent flaws in governance or operation.

For example, in recent interviews by the author of two employees of very small firms taken over by much larger ones (under 20 employees absorbed into groups with over 10,000 and over 200 employees), both complained of the new parent's requirement that the smaller firm adhere to its operational procedures. These were seen as overly controlling, needlessly administrative, and liable to stifle innovation in the absorbed units. Interestingly, both interviewees recognised the value of the administrative processes to the larger companies, but did not accept that it should be applied to their specific situation. This echoes Peters' (2010) theory that clients are unable to reconcile the general with the particular.

A second consideration is in the nature of government work. Governments generally carry out different activities to private sector companies: for example, defence, social protection, justice. With no private sector comparators, it is not easy to show whether public administrators are efficient or not, as Dixit (2002) and Andrews et al. (2011) demonstrate. Traditionally measurement problems have meant that public sector activity is measured in terms of inputs (how many employees, how many battleships, how much investment); as outputs equal input, productivity of public services is static by definition[2]. Smith (1988) notes

> *"[The dominant characteristic of political decision-making] is that there are no unambiguous criteria with which to judge the contribution that different administrative activities make to some final goal or set of values. Hence the difficulty in establishing what 'the public' really wants and consequently the impossibility of knowing how far in excess of that the overall level of public-service activity really is." Smith (1988, p175)*

Where public and private provision co-exists (for examples, schools, health and home care), the evidence for the relative inefficiency of the public sector is not compelling (for example, see Jensen and Stonecash, 2005, for a review). It could be argued (eg Dixit, 2002; Andrews et al., 2011) that this is because public and private sectors do not serve the same clientele in these markets – or even share the same objectives – and so different outcomes are being unfairly compared, but this does not validate the method.

In summary, it is difficult to find unambiguous quantitative data that supports the argument that public administration is either uniquely ineffective (compared to private sector firms of similar characteristics) or merely suffers from size bias.

Bureaucracy as a synonym for (public) organisation (failure)

Hartwig (1990) argues that loose definitions can comfortably accommodate directly opposing views. Jenkins and Page (2004) argue that one reason it is difficult to pin down exactly what counts as a bureaucracy in modern society is that the key features of bureaucracy (formalised processes, well – defined job roles, salaried staff) are ubiquitous. Weber's definition of bureaucracy applied to all organisations meeting those characteristics, including private profit-making companies. However, in

[2] In recent years many governments have begun developing output-based measures eg the Atkinson Review in the UK (Atkinson, 2005). These have shown productivity changes but have also suffered criticism for refocusing activity on measureable outcomes such as school examination targets.

modern literature, bureaucracy has come to be largely synonymous with public administration; for example, whilst Mouzelis (1967) and Peter and Hull (1969) discuss both private and public sector, for Lane (1987), Smith (1988) du Gay (2000), and Jenkins and Page (2004), bureaucracy studies are largely concerned with understanding public services (although Jenkins and Page explicitly state their decision to restrict analysis to the public sector).

Perhaps of more concern, bureaucracy has come to have significant negative connotations, particularly in the public sphere. It is often used interchangeably with 'red tape', implying excessive and unproductive administrative processes. However, as du Gay (2000) discusses, this reflects two opposing ideas. One concept is of the bureaucrat as indolent, unresponsive, doing as little as possible; the other is of the bureaucrat as power-crazed monomaniac, endless thinking of ways to expand his personal empire at the expense of the honest public. While the scientific literature on public administration generally takes a more balanced view, authors have still felt the need to title volumes *The Case for Bureaucracy* (Goodsell, 2004) and *In Praise of Bureaucracy* (du Gay, 2000), for example.

For economists, government is commonly seen as a crude mechanism for resolving difficulties. It has a role to play in tackling issues which cannot be resolved in a market environment (social goals, external effects, uncompetitive markets) but this is generally a second-best solution. The argument is that 'government', however, well-intentioned is unlikely to be better informed about the wants and needs of resources than the individual is. Despite much evidence suggesting that people are often very poor at identifying their own best interests, the default assumption is that market based systems, ceteris paribus, always outperform bureaucratic solutions.

Outside the academic literature, government processes are almost always painted as failures due to bureaucratic processes. The most obvious examples from literature are Kafka's nightmares of a world dominated by administration for administration's sake, but negative portrayals are easy to find in all media. For example, two long-running sitcoms in the UK, *The Men from the Ministry* and *Yes, Minister/Yes, Prime Minister* were entirely based on the premise that Civil Servants' only interest was maintaining the status quo. Miller (1978) discusses popular representations of bureaucracy in more detail. Adams (2013) and Mazzucato (2014) extensively consider the demonization of the public sector, particularly in the context of providing a case for market capture of government services.

Hartwig (1990) argues that this popular demonization can be reconciled with scientific perspectives by recognising that the word 'bureaucracy' has two different meanings: the academic meaning of organisational rationalisation, and popular meaning of impersonal, rigid procedures. In contrast, Peters (2010) suggests that this antipathy towards rigidity in systems is primarily a failure to recognise the value of impersonality in systems.

Risk, risk aversion and loss aversion

The psychology of loss and risk aversion

A standard tenet in economics is that people are risk averse. This arises as a consequence of the assumption of 'diminishing marginal utility of income': that is, having an extra $100 generates additional utility if you already have $100, but it generates less utility if you have $10,000, and very

little if you already have $100m. This is well-justified theoretically and experimentally, and has been understood for three centuries, for example, as one of the solutions to the St Petersburg Paradox. This 'expected utility theory' (EUT) provided the basis for much economic analysis and is still popular as a tool for exploring attitudes to risk (eg Gollier Hammitt and Treich, 2013; Mirman and Santuguini, 2014).

However, one of the revelations to come out of behavioural psychology in the 1970s was the realisation that this result was asymmetric and dependent upon the reference point and framing. Experimental work led to the development of 'prospect theory' (Kahneman and Tversky, 1979) which showed that, while risk-aversion is the typical condition when considering between gains, the same individual will often display risk-loving behaviour when faced with a choice between losses. The result arises because people tend to regret losses more than they value gains (Kahneman, Knetsch and Thaler, 1991).

For example, an individual faced with two options to gain, both of identical expected value but one of which is certain, would normally be expected to choose the certain outcome, demonstrating risk aversion. But the same individual, faced with two losses of the same expected value, is likely to choose an uncertain option over a certain one, demonstrating risk-loving behaviour. Proponents of EUT responded by exploring more inventive utility functions, but this ignored the increasing evidence from behavioural studies that rational utility maximisation has little empirical support (Kahneman, 2012).

The psychology of risk

Irrespective of how gains and losses are perceived, behavioural psychologists and economists have demonstrated that uncertainty is likely to lead to 'irrational' decisions; that is, decisions are based on factors which have no relevance and do not make logical use of all the information available[3].

Kahneman (2012), in his extensive survey of the psychology of decision-making, notes that humans are particularly poor at evaluating probabilities rationally. Perceptions are influenced by the way options are presented, by the difficulty of any calculations, and by irrelevant information which is presented at the same time. People also make use of 'heuristics' (rules-of-thumb) to 'home in' on an answer; the presence of uncertainty increases the weight of these in the individual's calculations. Viscusi, Phillips and Kroll (2011) and Linde and Sonnemans (2012) demonstrate how group effects have an influence on decisions, even when the actions of the group have no direct impact on the individual. Cabantous et al (2012) show that the different types of uncertainty are perceived differently; there is an expectation that some bad calls are more acceptable than others. Most importantly, the reference point appears to be crucial to the path of decision-making (Kahneman et al, 1991; Nevin, 2005).

The economics of risk and government

As noted above, in the economics literature government is generally seen as, at best, a crude mechanism for addressing non-market problems. However, in the case of uncertainty, government has a clear advantage over market-based mechanisms. Governments have

[3] Medical studies also show that there is a physiological component to decision–making, involving emotional centres of the brain; see DeMartino et al (2006) for an example and references.

- a diversified portfolio of interests
- a widely-distributed resource base with statutory revenue-collection capability
- for most practical purposes, unlimited resources and access to capital markets at preferential rates
- responsibility for social outcomes as well as private outcomes
- expected long-term persistence of the organisation

In addition, the collective rationality of the government makes them risk-neutral, as no individual bears the direct costs/benefits of any action. Overall, applying standard economic theory suggests that government manages risk much better than private individuals, producing efficient socially optimal outcomes.

Despite this, as Ritchie (2014) notes, there is a widespread perception that governments are in fact risk-averse. The theoretical risk-neutrality of governments has been challenged on two counts; first, that the 'rationality' imposed by bureaucracy does not lead to risk-neutrality as decisions are still made by individuals; second, that government officials are more risk-averse than the general population. We take each of these in turn.

Does bureaucracy encourage risk-aversion?

Weber's idealised bureaucracy is risk-neutral, by construction, as is the bureaucracy of the public choice theorists; both are based on the assumption of rational decision-making. A more popular assumption is that bureaucracy encourages risk aversion: the hierarchical structure and rigid processes reduce the scope for taking risks. Innovation (and by extension risk-taking) can be "seen to clash with the traditional values of accountability and neutrality" (Office of the Auditor-General of Canada [OAGC], 1998, s.III).

The Green Book (HM Treasury, 2011), the UK government's official statement of methods for cost benefit analysis which is expected to be followed by all central government departments, requires that analysts choose conservative estimates when evaluating uncertain alternatives. This would seem to provide an example of institutional risk-aversion, but this rule is there to correct for 'optimism bias' – the observed tendency of analysts to over-estimate benefits and underestimate costs of preferred solution, consciously or subconsciously. In other words, neutrality does require risk aversion to be institutionalised – but this is because free agents are assumed to be excessively risk-taking.

Feeney and DeHart-Davis (2009) separated 'bureaucracy' into three effects (centralisation, 'red tape', and formalisation of processes), and analysed how each of these components related to risk-aversion. While they found centralisation and red tape was associated with more risk aversion, in line with popular perceptions, they also found that more formalised processes appeared to reduce risk aversion. They suggest that the knowledge that decisions were being formally and repeatedly scrutinised encouraged bureaucrats to suggest more innovative proposals. Whilst acknowledging the limitations of their study, Feeney and DeHart-Davis (2009) nevertheless conclude that the argument that bureaucracies per se generate risk aversion is not an adequate assumption.

Are government bureaucrats risk-averse?

Goodsell (2004) argued that government employees are drawn from the same stock as the private sector, and hence are not innately more saintly or despotic than the average employee. However, a number of writers have queried whether the characteristics of those who end up in government are different.

For example, an analysis of the European Social Survey (ESS) waves 1-5 (see Appendix) suggests that

- workers in the private sector are more likely to think it important to: be rich, live in safe surroundings, have a good time, be loyal to friends, and make their own decisions
- public sectors workers are more likely to think it important to follow rules, be humble, help others, care for the environment, and follow traditions and customs

These findings indicate that private sector workers seem to approximate better to *homo oeconomicus* whereas public servants place more value on process and social outcomes. If innovation is a proxy for risk-taking, then they provide some support for the idea that public administrators are more risk averse then the general population, on average. However ESS also asks workers how much (on a scale of 1-10) the following affected the decision to take their current job:

- Opportunity to show initiative
- Job security
- Income
- Work-life balance

There were no differences between the public and private sector responses when other variables were included in the analysis, which would seem to contradict the conclusions above.

Buurman, Delfgaauw, Dur and van den Bosche (2012) provide a short literature review highlighting that, in general, public sector workers do seem to show more sense of 'social' obligation as well as higher levels of risk awareness. Their study supports the idea that there is a clear difference between the two issues: social obligation appears much more state dependent, whereas risk aversion seems to be an innate characteristic. Pfeiffer (2008) also finds risk aversion to be predominant in the public sector but reports that this is associated with job risk - not a general preference for risk. Carlsson, Daruvala and Jaldell (2012) found few differences in risk preference between administrators and the general public.

Carlsson et al's (2012) results came from survey with strongly hypothetical choices at the centre. In contrast, Pfeiffer (2008) and Buurman et al (20012) use very specific measures and realistic choices. One way to reconcile findings may be that administrators are risk averse when it comes to their own situation, but in more abstract cases apply the same logic as the population in general. This may also explain the similarity between public and private sectors on job choice, in the ESS results described above: the job questions are more hypothetical than those relating to personal characteristics, and so the results merely reflect a general inability to respond to hypothetical questions.

Overall, the empirical evidence to data would seem to suggest that the public sectors workers do seem to have a different perspective to the general population; and they do seem to be more risk averse when faced with specific cases, if not when dealing with abstract issues.

Incentive structures in government

Public choice theory argued that diffuse costs and specific benefits (taxpayers pay; administrators get what they want) meant that public administrators would tend to target their own goals rather than the public interest. When specifically applied to politicians at the top of the process, this leads directly to patronage ('pork barrel') models. However, most modern analysis from academics in public administration and from governments themselves tends to take the opposite perspective: that it is specific costs and diffuse benefits (administrator's career is on the line; a public good is created) that lead to failure of administration.

Consider introducing an innovation. Given the characteristics and raison d'etre of government activity, it is likely that the benefits of an innovation are

- spread over a large number of recipients
- difficult to measure
- uncertain

In contrast, the costs of the innovation are almost certainly measurable, specific and traceable to the decisions of individuals. As noted above, losses tend to be given more weight than gains, irrespective of the predilection for risk of any specific administrator. Hence, costs are likely to be over-estimated relative to gains.

Now consider the incentives of the innovator. By design, the administrator's rewards are largely unaffected by performance; successful innovations may bring enhanced career prospects or some performance related pay, but in general the return to the innovator is expected to be independent of the success of the innovation. This is what ensures the rationality of the decision-making process: a symmetric approach to gains and losses.

In practice, however, there is a widely held view in government and academia that the process is not symmetrical. For example, Moore (2010) noted

> *"Most managers we met in executive programmes at the Kennedy School thought they had very narrow tolerances in which to innovate. After all, most imagined innovations in government involved risks of failure, as well as a chance for success. And substantive failures in government seemed to be punished quite harshly, particularly if the substantive failure were combined with a process failure to acquire the appropriate degree of authorization to make an innovation. " Moore (2010), pp43-44*

Similarly, OACG (1998) commented that an increasing focus on accountability in government appeared to mean 'accountability for failure'. Mazzucato (2014) noted that the public discourse on innovation and risk taking focused almost exclusively on failures of government. Lofstedt (2004) suggested that one of the reasons for the popularity of the 'precautionary principle' in regulation over expected value assessments was that the former limited the downside risk. A UK parliamentary report summarised

> *"We are however concerned that public sector reward and assessment systems may emphasise the impact of failure rather than the gains from success". House of Lords (2006), p4*

One reason why this might be the case is the non-market nature of most government services. If a company makes a particularly good or bad product, sales respond. If a government service fails, the public may have no option other than to voice its disapproval – choosing an alternative supplier is not feasible. On the other hand, if a service works, it is unlikely that positive feedback will be generated – users of government services are unlikely to increase demands for income tax processing services or dental check-ups because the administrative processes worked well, and informal positive feedback is less likely to be recorded than formal complaints. Hence, the nature of government services means that customer feedback is likely to be dominated by negative responses; Yang and Holzer (2011) refer to this as 'grievance asymmetry'. Under these circumstances, it is not necessarily surprising that incentive mechanisms emphasise avoiding negative feedback rather than gaining positive outcomes.

For example, Ritchie and Welpton (2012) note that increasing research access to confidential data is a hard sell to national statistical institutes (NSIs). They see the risks to their reputations (and possible legal consequences) if data is leaked or misused, but any gains from research access are extremely diffuse. Hence, NSIs tend to be excessively cautious from a societal perspective, if acting rationally in their own interests. Ritchie and Welpton (2012) suggest that one way to increase access is to allow the NSI to share risk and internalise the gains from data release by formally co-operating with key research users in government; in other words, to find a customer who is willing to give positive feedback.

For government, an additional disincentive is the assumption that 'government' is a single unifying body. Bhatta (2003), speaking as a experienced senior administrator, notes

> *"Reputational risks for public organizations can fall either on a particular organization or on the public sector as a whole – although public perception is generally such that the two are considered closely linked and the public by and large indeed does not make any fine distinctions." (Bhatta, 2003, p3-4)*

This has some basis in fact: for example, the UK Civil Service operates across all central government departments listed in Table 1, with a common entrance procedure and operating ethos; and all these departments now have a common web portal. See also Yang and Holzer (2011) on how 'government' is perceived as an indistinguishable mass.

Nevertheless, it is clear that a defence ministry does not operate like a health trust or a vehicle licensing agency. To take a specific example, each has massive data resources but a completely different approach to data use (defence: confidential and non-sharable; health: confidential but sharable with restrictions; licensing agency: sharable private and public data). A loss of data from one of these organisations (or alternatively a refusal to share data) has quite different consequences. However, when the UK tax department lost CDs containing several million detailed records, all UK government departments were required to produce data management plans, irrespective of the actual state and content of their data businesses.

In summary, incentives to innovate seem likely to be damaged by both underestimation of relative gains and higher penalties for failure compared to rewards for success. In addition, the perceived unity of 'the government' may mean that administrators feel they take responsibility not just for their own business but for the reputation for government as a whole.

Resistance to change in government: myth, bad people, bad processes, bad rewards?

The simple story, that governments are resistant to change because of inertia caused by rigid processes and risk-averse practitioners, and that this is a bad thing, does not stand up.

First, it is not clear that governments are necessarily prone to inertia. They are a different type of organisation from private sector bodies, with different incentives, and it is not clear that they are unnecessarily resisting change. Moreover, comparisons with the private sector invite the question: who is correct? The statement that 'governments are too risk-averse' implies the private sector provides the socially optimal level of risk, but a study of financial markets since the late 1980s casts doubt on the private sector's omniscience[4]. Mazzucato (2014) demonstrates that the venture capital industry, a standard-bearer for private-sector risk management, is much less comfortable than government in the face of genuine (Knightian) uncertainty.

Consider the case of access to confidential data to research. The UK's NSI, the Office for National Statistics (ONS) began developing a remote research facility in 2003. This aims and operations of the facility was subject to repeated detailed challenge from the ONS Board who were concerned about risk management. These challenges did slow the process, but also led to the development of a detailed data access model which has since been adopted for numerous facilities in the UK and abroad. This could be seen as excessive caution, but a more considered argument could be that ONS was playing devil's advocate to ensure that the gains in its investment could be maximised – the concern was quality assurance, not an attack on innovation.

Second, there is evidence that public administrators are a different type of people, and when confronted with specific questions they show more risk-aversion than the general population. However, it does not follow that government is more risk averse. Economic theory would suggest that the risk-averse should feel more comfortable taking risky decisions in a government environment. When Windsor Castle in the UK was badly damaged by fire in 1992, the government was castigated for not having insured the building; it seems unlikely that any private sector firm would not have insurance. In fact, as noted above, this is an entirely rational: economic theory suggests that governments should not buy insurance. It was never suggested this was an oversight; in other words, the supposedly risk-averse Civil Service took risk-neutral decisions which would be rejected by the supposedly more risk-taking private sector.

Moreover, behavioural psychology has shown that the risk-averse can become risk-takers when negative outcomes are being considered. While the literature is not clear at the moment as to the symmetry of this effect (do the most risk-averse become the most risk-loving?), the broad conclusions seem to be widely accepted.

However, incentive structures in modern government do provide a compelling argument as to the potential for resistance to change. Procedures which emphasise the avoidance of negative outcomes rather than the pursuit of positive ones make change less likely. They may also explain why change

[4] See Tett (2010). Note that the behaviour of the financial sector over this period is generally entirely rational from a business perspective – it is only from society's perspective that it becomes irrational.

to avoid negative outcomes also appears less common than would be expected: if decisions which turn out to be bad are appraised negatively (even if the decision was correct given the information at the time), the rational strategy is to avoid taking any decision even if one's personal preference is for the risky outcome rather than the status quo.

This may also offer an explanation for one feature of public administration: the crisis model of response. As a public administrator working with a range of government departments, I occasionally observed the need for a crisis to generate an innovation (and on occasion used this mechanism to provoke a change). If a 'crisis' occurs – that is, an event so disruptive that it is clear the status quo is not feasible – then all reasonable courses of action are uncertain. A decision which turns out poorly can be argued to be reasonable as the alternatives are now hypothetical; the only realised alternative – the crisis which provoked the change – was agreed to be the unacceptable one.

Finally, this may reinforce the value of precedence in decision-making. Precedence does not have an explicit role in the loss-aversion literature, although it operates indirectly through the heuristic decision making processes. However, in the context of loss-avoiding incentive structures, a precedent can help to shift some of the responsibility for being correct.

For example, in one country I observed a new, potentially high risk, process being proposed. The relevant committee was unwilling to commit to an innovative new system, despite the numerous advantages. However, when it was pointed out that a similar process had already been used in another country for a similar purpose, the committee changed its mind. Note that the committee did not directly question the appropriateness of the comparison; the key point was this this country was not the first to try this system for this general purpose. The committee's decision was validated by the precedent set by the other country.

Conclusion

The argument has been put forward that government inertia (in the sense of avoiding making decisions that produce more socially efficient outcomes) exists, and that it is a result of a combination of formalisation, risk aversion in government employees and incentive structures which emphasise decision-avoidance.

Whilst the addition of incentive structures addresses some criticisms of the government-is-just-naturally-averse-to-change argument, it should be noted that this assumption that incentive structures reward inertia is not well-founded empirically – at least in comparison to results about the effect of bureaucracy and the preferences of public administrators. Much of the evidence for this is anecdotal. As those emphasising negative incentives are more often found in government, it could also be argued that the proponents of this view have a self-interest: creating an impression of misaligned incentives allows them to indulge their own preferences for risk avoidance.

This does not accord with the author's experience of public administration in the UK and other countries, which shows that the emphasis on downside risks is genuine and widespread. It could also be argued that this drives the bureaucratic process, rather than being a consequence of it: a natural way to avoid responsibility for decisions is to share the responsibility through approval processes. Both of these topics would benefit from a greater understanding of their relevance in the real world.

If this role for incentives is sustained empirically, the consequences for the reform of public administration are significant. Reducing bureaucracy and administrative processes cannot by itself reduce inertia; in fact, it might make the problem worse by increasing the responsibility felt by individuals, reducing the incentives to act further. Thus the current trend towards 'empowerment' of public administrators may be wholly misguided.

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Appendix: personal values and risk aversion in the European Social Survey

The European Social Survey (www.europeansocialsurvey.org/) is a large survey on social attitudes carried out on a consistent basis across some thirty European countries, with roughly 2,000 people interviewed in each country. It has been run every two years since 2001.

Pfeiffer (2009) and Buurman et al (2012) both reported different attitudes to risk and social responsibility amongst private and ublic sector workers, both using German datasets. To understand if this characteristic was reproduced more widely, an exploratory analysis tested the association between working in the public sector and various attitudes. Data were used from Waves 1-5 (European Social Survey , 2010). The table below details the factors associated with working in the public sector.

		All respondents	All respondents	Males only	Females only	All aged >35	All aged <=35
Citizen of country		0.444 ***	0.442 ***	0.379 ***	0.503 ***	0.358 ***	0.639 ***
Female		0.429 ***	0.428 ***			0.432 ***	0.418 ***
Age		0.021 ***	0.021 ***	0.024 ***	0.019 ***	0.019 ***	0.026 ***
Manages other staff		-0.082 ***	-0.081 ***	-0.079 **	-0.066 *	-0.072 **	-0.094 *
Years of work		-0.008 ***	-0.008 ***	-0.013 ***	-0.003	-0.006 ***	-0.022 ***
Most people can be trusted (scale 1-10)		-0.005	-0.005	-0.021 **	0.009	-0.004	-0.008
Most people try to be fair (scale 1-10)		-0.003	-0.003	0.003	-0.010	-0.001	-0.009
Most of the time people helpful (scale 1-10)		0.017 ***	0.017 ***	0.018 *	0.016 *	0.013 *	0.029 **
Interest in politics (scale 1-10)		-0.072 ***	-0.072 ***	-0.089 ***	-0.054 ***	-0.053 ***	-0.120 ***
Wages should reflect effort (scale 1-10)		-0.226 ***	-0.225 ***	-0.228 ***	-0.227 ***	-0.230 ***	-0.214 ***
Boycotted products last 12 months (scale 1-10)		0.056 *	0.055 *	0.029	0.072 *	0.027	0.131 **
Govt should aim to reduce inequality (scale 1-10)		0.046 ***	0.046 ***	0.063 ***	0.023	0.058 ***	0.014
Level of trust in...	country's parliament	0.006	0.006	0.013	0.000	-0.002	0.027 *
(scale 1-10)	the legal system	-0.007	-0.008	-0.002	-0.009	-0.014 *	0.011
	the police	0.006	0.006	0.007	0.005	0.009	-0.002
	politicians	0.006	0.005	-0.004	0.014	0.015	-0.017
	political parties	-0.006	-0.006	-0.014	0.001	-0.010	0.003
	the European Parliament	0.001	0.001	0.012	-0.017	0.003	-0.007
	the United Nations	0.005	0.005	-0.013	0.028 ***	0.005	0.005
Important to...	be rich	-0.023 **	-0.022 **	-0.049 ***	0.003	-0.022 *	-0.024
(scale 1-10)	treat all equally	0.015	0.015	0.037 *	-0.005	0.005	0.041
	show talent and be admired	0.002	0.002	0.019	-0.015	-0.001	0.005
	live in safe surroundings	-0.025 **	-0.025 **	0.005	-0.052 ***	-0.035 **	-0.004
	try new or diff things	-0.012	-0.012	-0.021	-0.003	-0.003	-0.034
	follow rules	0.025 ***	0.025 **	0.020	0.028 **	0.016	0.044 **
	understand people	0.019	0.019	0.028	0.006	0.027 *	-0.001
	be humble	-0.026 **	-0.026 **	-0.021	-0.028 **	-0.032 ***	-0.019
	have a good time	-0.035 ***	-0.035 ***	-0.010	-0.057 ***	-0.046 ***	-0.004
	make own decisions	-0.024 **	-0.024 **	-0.024	-0.025	-0.011	-0.059 **
	help and care for others	0.083 ***	0.082 ***	0.073 ***	0.092 ***	0.071 ***	0.110 ***
	be successful and recognised	-0.008	-0.007	-0.020	0.006	0.000	-0.025
	have strong govt	0.017	0.017	0.011	0.030 *	0.019	0.021
	seek adventures	0.016	0.017	0.033 **	0.001	0.017	0.019
	behave properly	0.019 *	0.019 *	0.024	0.019	0.017	0.025
	get respect	0.015	0.015	0.035 **	-0.002	0.010	0.026
	be loyal	-0.071 ***	-0.071 ***	-0.066 ***	-0.080 ***	-0.070 ***	-0.072 **
	care for environment	0.032 **	0.032 **	0.027	0.038 **	0.044 ***	0.007
	follow traditions	0.053 ***	0.053 ***	0.038 ***	0.063 ***	0.048 ***	0.062 ***
	seek fun	-0.014	-0.014	-0.038 **	0.003	-0.009	-0.027
My preferred job...	requires initiative		-0.002	-0.034	0.028	0.019	-0.066
(scale 1-10)	is secure		0.007	0.039	-0.035	0.020	-0.020
	provides a high income		-0.029	-0.057	-0.006	-0.035	-0.016
	provides a good work-life balance		0.005	-0.009	0.031	-0.006	0.054
	Number of observations	15,498	15,498	7,777	7,721	10,452	5,046

Variables not listed here: highest level of educational attainment; size of establishment; constar Significance: 10% * 5% ** 1% ***

Source: European Social Survey (2010); datasets constructed from waves 1 (2002) - 5 (2010)

Respondents were selected from those currently working. The binary dependent variable was set to 1 if the individual worked in the public sector (central or local government, or public corporation). Six probability regressions were run: all respondents with and without the variables identifying preferred jobs; one each for males and females; and one each for those above and below age 35.

Results were broadly consistent across the different subsets. Certain personal characteristics were associated with public sector working (female, older, citizen, less management responsibility and less experience). Public sector workers appear to be uninterested in politics and do not have strong views of the relationship between effect and wages, although they believe government has a role in reducing inequality. Their confidence in institutions appears no different for the private sector workforce. Preferred job characteristics appear to be the same in the public and private sector.

In terms of their value systems,

- workers in the private sector are more likely to think it important to: be rich, live in safe surroundings, have a good time, be loyal to friends, and make their own decisions
- public sectors workers are more likely to think it important to follow rules, be humble, help others, care for the environment, and follow traditions and customs

This association of characteristics in the public and private sector should be treated with caution. No causal relationship can be inferred, and the limitation to current employees may distort results. Nevertheless, these findings do provide some cross-European support for the findings of Pfieffer (2009) and Buurman et al (2012).

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