Regulating for consensus and trust

modernising economic regulation

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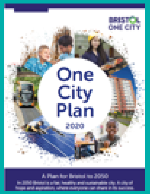
Regulating for consensus and trust

Regulation, and in particular price reviews, have become increasingly complex

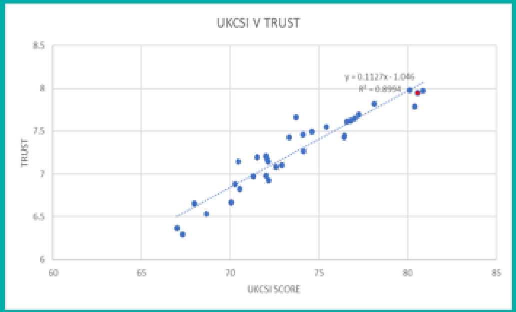
The challenges the water sector faces, in particular climate change and ecological emergencies, require trust and consensus.

Meeting these challenges also requires:

- Purposeful companies who understand societal wellbeing and public value
- Local accountability

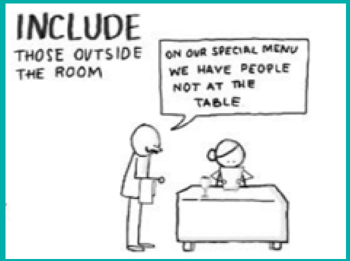


Trust & ethics matter to consumer satisfaction



Economic regulation that relies entirely on competitive market proxies will struggle to adapt to these challenges, because:

- Efficiency, finance and outcome delivery incentives rely on neo-classical economic assumptions of supply and demand which do not hold in practice
- Pluralist and ethical economic theories that value trust, groups and communities should carry more weight
- Customers trust market choices that make sense, but not where there is a local social impact monopoly. To avoid this – social purpose in public service matters



An ethical and social approach to regulation is required. **Trade-offs** involve value judgements and regulators need an ethical basis for these, rather than just a market basis or cost-benefit analysis.

Company led social contracts will allow economic regulation to evolve. **So….**

- Price reviews should allow companies **to build a range of scenarios and seek consensus**. Revealing consensus is more important than information asymmetry.
- Regulators should not see incentive design and risk and return trade off decisions as the preserve of economists. **Financing incentives should evolve beyond market data to link to explicit long-term choices on risk and return**

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1. Executive summary

Water economic regulation has achieved much over the last 30 years. It has allowed the water sector to retain its legitimacy as an essential public service. Customer trust is high, prices are generally seen as good value for money and there is little of the sense that consumers are being treated unfairly or have significant issues with water companies. The sector has a diverse range of companies operating in it – a surprising amount of diversity for a regulated industry that has an economic regulation framework that relies on comparative incentives for the price reviews which dominate its regulatory processes.

Water economic regulation was built and refined over a 20 year period up to 2010, following which there was a reform phase, driven largely by independent reviews that identified that the industry had become too focused on Ofwat, rather than on the needs of customers. The reform phase over two successive price reviews saw a significant increase in local customer stakeholder engagement and participation. This was accompanied initially by a significant reduction in the degree to which Ofwat told the sector what it should deliver and how this should be done – companies had to work this out for themselves through their engagement.

The most recent review at PR19 saw a significant retrenchment in this logic. A greater number of comparisons on efficiency and incentives were used, perhaps reflecting the maturity of the outcomes framework but also perhaps the wider perception that regulators should constrain the potential for outperformance. This has led to a very complex and uncomfortable situation – Ofwat continues to use the language of great customer engagement; of considering wider public value; and of the need for society to trust water companies, to be confident that those running them and their Boards and investors to be operating with the wellbeing of society at its heart. However, when it comes to the regulatory framework and Ofwat's price review decisions, these factors, and the views of customers and local stakeholders appear less important. The incentive tools of economic regulation and decisions are entirely left to the regulator. Stakeholders are expected to trust the regulator, because they are experts in economic regulation. What is never explained or explored is why this should be the case. Why should stakeholders engage with the water sector if a regulator does not place much, if any, weight on their views on topics that the regulator spends the majority of its time on?

Trust matters to society and perceptions of ethics correlate very closely to trust, something that rational market participants (*homo economicus)* are meant to ignore from self-interest. Evidence in this paper shows a strong correlation between trust, ethical perceptions and customer satisfaction with utilities. There is also evidence that regulators are more likely to be trusted if they recognise this link and adapt regulation accordingly – an ethical and social approach to regulation.

Avoiding the reshaping regulation to recognise ethical judgements may not be sustainable for much longer – the "long term" challenges which are now all too immediate of climate change and the environment require public value and societal well-being to be at the heart of the water sector plans at a local level if trust in the water sector, and its regulation, is to be maintained. Failure to modernise and evolve independent economic regulation to directly reflect the trust and consensus these challenges require may see a revolution that would bring its extinction as a result of a series of systematic failures to address the needs to society. That would be a bad outcome, as independent economic regulation is a powerful, adaptable and valuable tool. It just needs to revisit its focus and become more aware of its limitations. Unpicking this is needed before we layer on further incentives.

We conclude that the economic theories that underpin economic regulation are well past their sell-by date, if applied without considering the wider context. They are based on trying to incentivise an equilibrium of efficient costs and service benefits that cannot reliably be measured. Alternative and more pluralistic theories of economics exist – an ethical and social approach to regulation that values trust and relationships is supported by theory, and also would be superior in practice.

While Ofwat's strategy for regulation recognises the limitations of traditional economic regulation incentives and tools, it has yet to work out how to incorporate improvements into regulatory processes. Instead, we have an increasing burden of regulatory expectations on companies and investors, without a commitment to consider changes in economic regulation that question its fundamental tenets and logical assumptions.

Research on customer satisfaction suggests that ethical perceptions of companies make a significant difference – the most ethical companies are the most trusted, and have the highest customer satisfaction. The same logic applies to ethical economic regulation – whilst many regulators have considered this perspective, it is not something that is yet to be clearly set out in the water regulatory framework. This is a gap that requires addressing, as even if you accept the position that the decisions on incentives and risk and return is only something that economists have the expertise to assess, there are still value judgements involved in the underlying societal assumptions being made.

However, we are confident that this apparent contradiction between price review regulatory processes and the obvious public value strategy for the water sector can readily be addressed. It is a confident and trusting water company that can create a social contract during a price review, rather than waiting for a lead or requirement from the regulator. In Bristol Water's case the strength of customer and stakeholder buy-in to the concept locally meant there could be no other alternative but to make long-term commitments irrespective of the regulatory and competitive market framework; other companies across the utility sectors have their own equally relevant stories to tell. It is a confident regulator that can welcome and encourage such innovation. We observe that the whole water sector, in their own communities, should be able to feel confident in doing this given Ofwat's strategy, if only we can make sure price reviews are seen as an enabler rather than a barrier to overcome.

Customers and stakeholders will not trust economic regulation, including its traditional role of being a poor proxy for competition until contestable markets can be introduced, unless consensus and trust on the regulatory framework is established. Currently, the lack of consensus limits both reducing the complexity of price reviews, and the introduction of more competition. Unless this changes economic regulation will fail to recognise the shift in expectations that see companies and markets focus more on purpose and public value.

This paper explores the changes in society and economic theories that should help to set out the reform path for economic regulation. It deliberately does not present detailed conclusions on improving the tools currently used in economic regulation – this would be counter intuitive based on the analysis. Instead, two changes to price reviews are proposed, designed to focus on building consensus and trust in both the process and water companies.

First, the primary focus of price reviews should shift away from regulator incentive decisions to a process that builds consensus amongst local stakeholders. Although regulators have to make decisions during the process, the language of regulation needs to evolve so that the value of relationships of stakeholders with the regulatory process, and trust in those relationships is explicitly used in explaining trade-offs and decisions. To support this, companies should develop scenarios to test consensus and regulators should be involved in those conversations. The concept of trying to compare and judge "best" company plans used to reveal information has less value and should carry less weight in the future, because it does not necessarily reflect trust or do anything to build strong relationships between non-economists and the economic regulation process.

Second, the approach to risk and return trade-offs needs to form part of how consensus on company plans and regulator decisions is built, rather than being a judgement made by regulators exclusively at the end of the process. This will be particularly important in a world where investors with a social purpose are to be attracted to the water sector. It may mean that more explicit choices on levels of risk and return are developed using scenarios, and that the return decided may vary more ex-ante between companies at price reviews where there is consensus that this is appropriate.

This is an important discussion. Those interested in exploring it further can contact us at strategyandregulation@bristolwater.co.uk.

2. Introduction

By 2024 water economic regulation in England & Wales will have existed in broadly its current form for more than 30 years. It has evolved over time from its original focus on how to ensure the water sector could finance the increased investment in quality enhancements, and then after this initial investment how it would find a new balance for efficient on-going cost, financing and service levels.

The water and wastewater sectors are not homogenous and the regulated firms have diverse backgrounds, have a legacy of local circumstances and future needs similarly vary. At the point of establishing economic regulation of the water sector, the framework was driven by the privatisation of the ten regional integrated water and wastewater authorities. The existing private statutory water only companies, who prior to privatisation had Government control of prices, were eventually brought within a single regulatory framework. This process of integration towards a single framework had been underway since the 1930s, but top down Government water policy had always left space for local variation in implementation, as long as progress towards priorities was being made.

The sector has increased in diversity over time, in part because of the introduction of competition in parts of the supply chain, including business market retailers, new appointment providers, developer services market participants and other commercial entities who have degrees of direct regulation or indirect interest in the framework and price controls.

Price control setting[1] was designed to be seen as only part of regulation, and it was intended that the focus on it should decline over time. The fundamental choice of a simple *ex ante* RPI-x (efficiency) framework was designed to operate for a period of time until it was no longer required. It was assumed that the framework would be displaced by greater competition where this could be introduced, with simple minimum service standards. Even without competition, if investment needs were modest then simple indexation and monitoring of performance may have (in a very optimistic scenario) proved to be sufficient, particularly if there was still some threat of competition as an alternative to avoid the harmful impacts of monopoly power.

There were clear limitations in this approach, which were recognised as relevant factors in reviewing the original framework at the time it was originally established. Effectively the first ten years (up to and including PR99) was a **building phase,** that saw the approach **refined** in the period up to and including PR09 (2010) - in broad terms[2]:

- The cost of new investment was not something that was easy to assess in an RPI-x framework, where comparators were not readily available. In many cases it was hard, ex-*ante*, to define the enhancement solution and to assess what additional cost / efficiency would prove to be possible. This resulted in strictly

[1] A process for simplicity described in this paper as price reviews, making the distinction with tariff controls – the two in water have at times gone together but to a large part are currently separate.
[2] This is not intended to be a comprehensive list of reforms, more to give a general flavour for the purpose of this paper in considering why, and what next.

defined outputs. However, defining the outputs ran the risk of a focus on capital expenditure driven "hard" / "end of pipe" solutions to what were often wider societal and cross-sector issues rather than just the responsibility of the water sector. The existence of the water sector price review process meant there was a risk that the water sector invested beyond its responsibility for the underlying environmental challenge. With this requiring clear Government policy on the extent of investment, and with the need for price reviews to be cyclical, a risk that the process created peaks and troughs of activity for the supply chain (the cycle of investment) also arose.

- Whilst the focus was placed on the most difficult regulatory problem of enhancement investment, concerns in parallel emerged about whether long term maintenance and operational resilience was given sufficient focus in the process.
- A five-yearly regulatory cycle with new information being revealed did not incentivise longer term planning and solutions, particularly for investments that might involve wider public value benefits where it is harder to define the water sector output to be measured.
- This led to concerns that innovation was insufficiently encouraged, both in terms of what was delivered and how it was delivered. In economic regulation terms, this created the risk of losing the potential for dynamic efficiencies, whilst also not maximising allocative or productive efficiencies that are more readily believed to be considered through price reviews and regulatory incentive mechanisms.
- Competition for most of the value chain was not clearly superior as an alternative to the water sector to a planned system, at least not on a universal basis to substantially reduce other forms of regulation. Where competition has been introduced with clear benefits to choice and customer service identified (business retail), it is less clear that it has resulted in reduced cost of regulation, improved social outcomes (e.g. efficient use of resources) or reduced upstream/wholesale costs which were the assumption in advance, from improved allocative efficiency with greater market forces. Whilst the logic of the competition dynamic would suggest extending retail competition to households, there would appear little or no appetite and trust in Government and policy stakeholders that even in an optimistic scenario that the benefits would outweigh the costs. The demand for such choice from consumers is also not readily apparent[3].

Water companies and the regulation of the sector has generally evolved in a largely agreed and non-contentious way to reflect recognition of these limitations. Generally the objectives have been agreed, with any disputes being limited to the mechanics of its application. When there was a disconnect between companies and the economic

[3] e.g. see https://www.ofwat.gov.uk/wp-content/uploads/2016/09/pap_tec20160919RRRfinal.pdf

regulation framework, the openness of the sector and its regulators to challenge provided signposts that allowed for a **reform phase**[4] from c.2010.

Examples of key reforms were:

- Exploration of more **risk-based** approaches to economic regulation, taking into account for instance the wider Government economic regulation principles. Of particular importance in the water sector was that it had sufficient Government **trust** not to define detailed outputs for the sector, but to provide Ofwat with a **principles-based** framework (with a Strategic Policy Statement). This left it to Ofwat to consider how the framework would consider **trade-offs** between different priorities.
- A pragmatic approach to improving transparency in different parts of the value chain, including but not solely where competitive forces within the market could reveal information. Whether the outcome of this was improved regulation or actual competition varied, and the balance between the two was not always explicitly stated.
- A shift to setting cost assumptions / allowances during price reviews to one based on totex costs, rather than separately for opex and capex. The extent to which this was achieved was mostly limited by accounting treatment of expenditure (i.e. distinguishing base expenditure from enhancement as a pragmatic approach), due to the potential step changes in bills as part of transitioning for the set of price control reforms at PR14.
- Reducing the reliance on concepts of Modern Equivalent Asset Value (MEAV) and Current Cost Depreciation (CCD) for setting capital maintenance / depreciation allowances, particularly where it risked driving assessment of maintenance needs.
- Use of an outcomes framework (at PR14 largely defined by companies from a set of general principles supported by customer and stakeholder research / consultation), replacing as far as possible defined outputs. Companies still had to satisfy non-economic regulators that outputs had been met for example on water quality and environmental measures, but delivery of those improvements was much less of a concern for the economic regulation framework to monitor delivery against the price review than was previously the case, as the outcomes companies targeted sought to go beyond statutory requirements
- Moving away from customer service being focused on compliance with a defined minimum set of service standards, to incentivising performance against more qualitative measures of customer experience, and ultimately widening the scope of customers being monitored from end-users to include developer and retailer satisfaction with wholesalers.

[4] e.g. Reforms driven by the competition potential review by Martin Cave, the affordability review by Anna Walker and the review by David Gray of Ofwat and consumer representation of the water sector. https://www.gov.uk/government/publications/review-of-ofwat-and-consumer-representation-in-the-water-sector

- The use of *ex-ante* defined financial incentive adjustment mechanisms (in particular for outcomes), rather than ex-post regulatory assessments that outputs or asset serviceability/ asset health commitments had been delivered. This created greater certainty for companies, and also incentivised further performance improvements.
- An increasing use of customer engagement and participation by the companies in preparing for price reviews, and as reference points for regulator judgements in decision making.
- Greater recognition of a sharing of financial risks previously assumed to be within management control (and also therefore fully available for outperformance), such as through the indexation of new debt, and totex cost sharing adjustments back to customer bills.
- Greater transparency on financial returns and the link to executive pay and dividends, e.g. through the use of measures of Return on Regulatory Equity (RoRE)
- Greater focus on the issues facing particularly vulnerable customers, rather than just more general concerns on affordability of water bills as a whole. This was reflected both in an increased set of measures for monitoring performance, and expansion of the support companies offered, for example through social tariffs.

Most of these reforms embedded relatively quickly. There were reform elements that were originally envisaged but in practice fell away, generally because of consensus that they were not in practice proportionate to the challenges and objectives for the water sector (such as the use of menu regulation to remove the importance of information asymmetry in price setting).

We would observe there is a logic in the above framework and the story of how it has evolved in recent years should be seen as positive. In part this was because there was general consensus as to the need for and direction of change, and that it enabled a wider group of stakeholders at a local level to engage positively with the water sector, given the focus on outcomes rather than centrally defined outputs. However, the framework faces a number of challenges, for what follows the **reform** era of PR14 and PR19.

Whilst the successes of the framework can readily be defined – through either Government and stakeholder recognition of water sector performance, or through improved service levels at a lower cost, neither are necessarily sufficient to assume more can be delivered through the existing tools.

- **What next?** In the absence of an externally driven review (such as the David Gray review of 2011 which helped to build the **reform** era), it is harder to test whether the current approach and tools of economic regulation are likely to be as effective in the future
- **What are the limits to complexity**? The regulatory framework has become increasingly complex, and in parallel is also increasingly focused on price reviews (including annual reconciliation exercises), as opposed to other regulatory

approaches. There is a question of the degree to which this complexity matters - it could be argued that it is largely the preserve of regulatory specialists who can manage it - but the lessons of the past suggest complexity must have its limits, as over-complexity can carry risks and have the potential for unwanted consequences. **Why this level of complexity is necessary, as opposed to being an inevitable outcome of the process, may be an important challenge**

- **Are there risks to consensus (and does consensus matter)?** The reference of the outcome of PR19 by four companies, including Bristol Water, to the Competition & Markets Authority (CMA)[5] does not necessarily indicate a fundamental conflict, as the process exists to explore technical judgements and the specific impacts on individual companies. A broad consensus can still exist with a redetermination of regulatory judgements that requires **trade-offs**, particularly with a set of statutory duties in the water sector (as recognised in the Government's Strategic Policy Statement[6]). However, the language of regulation and degree of challenge to the issues of trade-offs and judgement, during the process during the redetermination suggests a fundamental difference in view on the objectives, purpose and tools of regulation between Ofwat, the CMA and the appellant companies. Although it is too easy to lift quotes out of context, there are clearly relevant learning points given the fundamental differences in view that the redetermination appears to suggest with the statutory duties (such as the role of investors, the right incentives for financial risks). As an example of the fundamental challenges[7]:
    - Should regulation necessarily be demanding big improvements?
    - Does four companies asking for a reference imply there is consensus amongst the 13 who did not request a CMA review (or a division with the four), or this means one group of companies is necessarily performing better for customers?
    - Is a stronger package of incentives necessarily better for consumers and the environment?
    - What is the role for investors and the risk **trade offs** they should face, if financing risks ultimately do flow to consumers. Is it right to describe returns to investors as something regulation should explicitly address?
- **Is regulation too technocratic with its building blocks reserved for economists (or even worse regulatory economists?), or is greater pluralism (a range of logic used to explore a topic) appropriate?** One of the main shifts between the 'refine' and 'reform' phases of water economic regulation was the shift in view away from the narrow monopoly economics of the water sector to wider social and public value considerations. As an example, the initial reluctance of regulation to

[5] Anglian Water, Bristol Water, Northumbrian Water, Yorkshire Water. https://www.gov.uk/cma-cases/ofwat-price-determinations#references-from-ofwat

[6] https://www.gov.uk/government/publications/strategic-policy-statement-to-ofwat-incorporating-social-and-environmental-guidance

[7] We do not intend to review the specific issues concerned in the CMA re-determination in this paper, or its final outcome. Our purpose here is to consider the overall approach to economic regulation, rather than the individual tools and range of specific issues at PR19.

consider catchment management actions was reduced during the 'refine' phase and became a fundamental expectation in the 'reform' phase. More recently, social contract and purposeful company discussions (which go beyond regulated companies) suggest there is now more to economic regulation than just the core economics of monopoly rents. These are not concepts that immediately fit with the original principles of economic regulation (and do not necessarily fit with a characterisation of rent seeking investors), but suggest that more pluralistic concepts are involved than trying to replicate competitive market forces.

3. How do we consider reform and modernisation?

Just like companies, economic regulation will work best when there is a clear purpose that can guide trade-offs. We argue that for the water sector in particular, that purpose should focus on the relationship between water services and customers and local stakeholders who have an interest in these decisions. Their voices should have sufficient weight to balance the policy makers and regulators who are directly engaged with the process as their day job. Customer and stakeholder opinions should carry weight, and be a test of how well the process is working, not just about company performance, but about the process itself.

As set out in the introduction, a twin reform phase with a dual focus on markets and customer ethos clearly was the right focus at the time of the Gray, Cave and Walker reviews that in combination set the scene for the PR14 reforms. But this emphasis has changed, both in the DEFRA Strategic Policy Statement and in Ofwat's Strategy and approach. Whilst we do not explore in depth the changes to societies' expectations, the development of company purpose statements and social contract commitments is a response to not seeing markets or regulation as representing a sufficient commitment from companies to society, or offering adequate customer protections.

Ofwat published a set of challenges in themes or key questions as part of looking to PR24 and beyond. We summarise below the relevance of this paper to these themes

Key question	What are the challenges and how are they addressed in this paper
What could the water sector look like in 2040, and how can Ofwat and water companies work towards that vision?	The water sector will best be shaped by companies and a mix of local or national stakeholders. If public value matters, then the local aspect will become increasingly important, within a framework of national policies. Regulation will monitor national policy issues , but decisions will need to allow for more local diversity. We argue this should change the process and tools of regulation.

Key question	What are the challenges and how are they addressed in this paper
How do we best regulate to help companies to achieve long-term goals such as adapting to climate change, reducing leakage, improving water efficiency and delivery of net zero?	**Economic regulation tools assume that it should act as a competitive market proxy, when the challenges of the future may require greater cohesive planning,** A few big long-term national goals, such as climate change, will need many local alternatives. The best solutions to adaptation may be cross sector. We see a big and emerging role for local plans (for instance the Bristol One City long term goals[8]). Regulation will need to adapt its tools and methods if it wants to help companies achieve these goals. The water sector is not seen as a net zero priority currently, say compared to transport and energy, but the impact of water use on ecology and the environment is important.
How do we encourage companies to ensure services are affordable for all, both now and in the longer term?	There will be many pressures on household bills, and general affordability is becoming less of a public priority than questions of both fairness and vulnerability. However, this can easily change as society does – we need a wide range of grounded information, potentially using scenarios, to help plan for the long term.
How can we encourage companies to innovate and take advantage of technological change to increase productivity, reduce costs and improve resilience, service and the environment?	**Economic regulation has shifted towards "collaborative competition" to encourage innovation – an approach that runs the risk of the regulator setting policy for the sector, or picking winners. This could change relationships and then blurs risk allocation in regulation.** We focus indirectly on the innovations in regulation that allow companies to meet local needs. Trust and building strong relationships enable collaboration (alongside markets and incentives), and is something regulation can usefully consider.
How do we encourage companies to improve service to customers and operational resilience?	This is the fundamental purpose of companies, but the horizon for long-term planning may need to expand beyond the historical scope and tools of regulation. We see that process changes for price reviews, and more explicit trade-offs for risk and return scenarios may be required to focus decision making on long term plans rather than just shorter term incentives (which still have a role to play in any context).

[8] https://www.bristolonecity.com/about-the-one-city-plan/

Key question	What are the challenges and how are they addressed in this paper
	This reflects the importance of **partnership** working – the water sector naturally delivers many of its resilience and vulnerability activities by collaborative working with other companies, but also across sector. Social contracts and seeking wider public value reflect the increasing importance of partnership working. It is not consistently enabled or supported by price reviews, other than on a piecemeal basis for specific schemes. If the regulatory regime can evolve to recognise that the water sector and its regulated companies are not the only focus for water sector decisions, we will maximise public value. We consider in this paper why this is and how this objective can be achieved.
How can we encourage companies to best take account of customer needs and priorities, while ensuring services are comparable across companies?	**There is a real risk that if regulators are seen to over-ride not just customer research evidence, but dismiss customer and stakeholder interest and participation in the water sector, it will reduce trust in independent economic regulation. This is the risk many stakeholders saw realised at PR19.** Comparability is not necessarily an objective – it has a role as one source of information but implies top-down decision making. We argue that economics is a matter of trade-offs and regulation should take a pluralist view of the economics before assuming objectives such as comparability. Comparability assumes an objective which is not the only outcome, or necessarily one that benefits customers.
What, if any, could the role of the price review be in encouraging or incentivising companies to better deliver public value?	The current tools of economic regulation do not have a grounding in economic theories that allow public value to be explored. We test the logic of how this could evolve. We also test whether the weight of focus on the price review process is inevitable. If we can enable better decisions and faster decisions, including on green infrastructure development, we have the potential to maximise the delivery of public value. We can only do this if we build consensus, using a range of scenarios that are tested with stakeholders, and that the regulator gives adequate weight on trust and relationships where consensus exists that requires the regulatory process to change.
How do we better use markets to deliver better	Rather than being solely seen as a competitive market dynamic, markets can also be seen as a synthesis for

Key question	What are the challenges and how are they addressed in this paper
value to customers and the environment?	cooperation. This is hard to replicate with a monopoly regulation outlook on the water sector. As an example, stakeholders may question how cohesive regional planning for water resources can be translated into a competitive market for that activity. As with past market developments, developing a consensus of how the market can work is a good place to start.
How can we best account for specific issues, circumstances and Government policies/priorities in England and Wales?	Strategic Policy Statements from Government are designed to be an outcome framework which companies and regulators operate within. The degree of devolvement of how outcomes are delivered is something regulation can reflect and enable. The National Infrastructure Commission 2019 report, "Strategic investment and public confidence"[9] included the following recommendation: ***"In future price controls, regulators should demonstrate how they have taken consideration of the strategic vision of metro mayors and relevant local government, within devolved powers, where this has material impacts for network investment"*** We argue that bottom up consensus in how policies are applied and shaped can help solve tough problems (or at least explain the local impact of decisions to citizens who want to influence them). We suggest that this may balance the price review decision phase with other regulatory approaches.
How can we best align the interests of investors with delivering for customers, the environment and society?	The right investors for the water sector should recognise a benefit from a long-term purpose of a water company that delivers public value. The right sort of regulation should ensure that they want to invest in the water sector, and the returns available for delivering this are attractive to them. The right sort of investors is something regulators have an interest, but the language and tools of regulation may need to evolve to reflect the role in society that is expected from investors. The trade-offs and management of risk within regulation can be approached differently than has been perceived historically. A more explicit discussion about

[9] https://nic.org.uk/app/uploads/NIC-Strategic-Investment-Public-Confidence-October-2019.pdf

Key question	What are the challenges and how are they addressed in this paper
	what affects risk and return may be helpful to ensure investors in public value are encouraged to choose the water sector.
How do we encourage companies to collaborate and work in partnership with others, such as on nature-based solutions, to better achieve outcomes for customers and the environment?	There are options that allow regulation to encourage collaboration and partnership working. Trust in the process, and strength of relationships, is something that regulation could consider as an outcome that has value in its own right.
How can we simplify the price review while increasing value to customers, the environment and wider society?	**What customers say they value may be different to the needs of the environment, society and regulators. Such trade-offs require areas of consensus and difference to be explored to resolve.** There are simpler approaches to price reviews that are possible, but we exist in a world of complexity that economics as a narrow discipline often tends to "assume" away. More pluralist approaches can improve the application of economic theories. We explore what this could mean. We do not focus on regulatory tools, as a complex tool can still apply in a more meaningful process – we argue that collaborative processes that explore trade offs may help to answer this question. This is not necessarily simpler, but more purposeful. Explaining decisions, rather than the price review mechanisms, seems a good place to focus on the purpose of the process rather than price reviews just being complex mechanisms. However, we find that what is easier to describe, may prove to be harder for regulators to control, and simplification in itself may therefore result in less, rather than greater, trust and consensus.

4. The drivers for modernising economic regulation

If we are to modernise economic regulation, so it can focus on public value, trust and consensus, there are a number of background questions to consider. We explore some of these below:

4.1 Why public value?

The language of economic regulation has evolved to describe a concept of "wider public value". Recognising public value also means recognising that there is a network of individuals and organisations whose decisions have a dependencies on each other. At its simplest, it is an interest in the functions of an organisation beyond its own immediate transaction of products or services. It may be implicit, but as soon as regulation moved towards outcomes rather than outputs, public value ceased to be seen as just something for the realm of Government to consider through policy (and regulators on their behalf), and became part of the trade-offs affecting regulated companies.

Moving beyond outcomes towards public value requires recognition of how the water sector delivers, rather than just what is delivered. It is unlikely that public value can easily just be added on to a regulatory framework, without clarity on what companies have to trade off, before public value becomes a new regulatory requirement. Where regulators are making judgements on trade-offs, this therefore requires an ethical basis for making these assessments, one that needs to be balanced with judgements on incentives and efficiency.

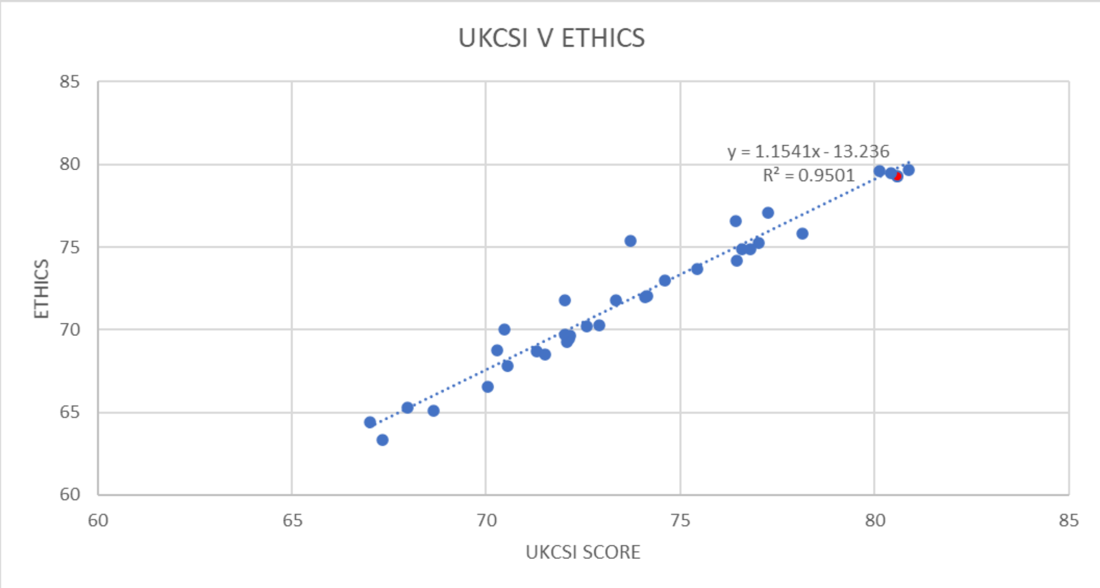
4.2 How does a focus on trust align with customer satisfaction and experience?

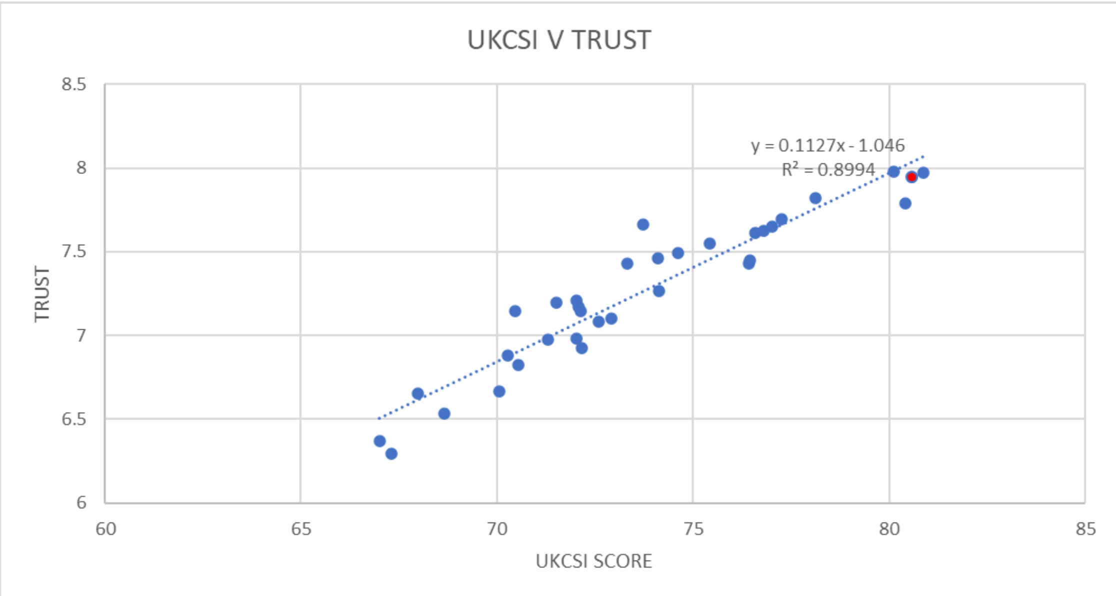
We believe that trust in regulation goes beyond trust in the incentive properties of its tools. This implies that value judgements by regulators also require an ethical as well as economic basis. To support this proposition, we need to consider the evidence that customers care about ethical concerns as part of their satisfaction with services.

The Institute of Customer Service UK Customer Satisfaction (UKCSI) index gives useful evidence of the factors that affect trust and how important they are. The smaller water only companies (WoCs) do not always feature in the main six monthly surveys due to sample size, however a top up survey using the same methodology is something many of the WoCs such as Bristol Water use.

The data includes the overall customer service index, as well as measures of ethics (such as reputation; openness and transparency; and does the company do the right thing in business practices for employees and society), and trust. The data show a clear correlation between consumer satisfaction with an organisation with both ethical matters (which give a sense of wider public value) and the more open, rounded question of trust, as shown in the graphs below.

Bristol Water has been added to the published UKCSI scores and is indicated in red.





On average utilities have a c.5 point lower UKCSI and Ethics scores than the UKCSI all sector average (July 2020 – measured out of 100) and 0.6 points lower on trust (measured out of 10). However, the best utilities are ahead of the sector average on ethics and emotional connection (i.e. trust). In general, the top utilities include new entrant retailers where customers have made a distinct switching choice (Bulb, Octopus Energy), publicly owned or mutual (Dwr Cymru, Scottish Water) and smaller utilities with a local brand, such as Bristol Water. Larger water companies with a strong social focus seem to be able to distinguish themselves, although this does not offset the need to maintain high standards of what is traditionally seen as good customer service.

The Institute of Customer Services research identifies that customers expectation for reputation and trust change over time, for instance vulnerability and employee treatment increasing in importance during Covid-19[10]. This saw an increasing importance and satisfaction with local public services, at a time that wellbeing was increasingly important to consumers.

This suggests a continuing focus on ethics and public value is required, and that regulation could usefully consider this as a leading indicator for future customer satisfaction (which is a lagging indicator).

4.3 Are customers likely to trust regulators with public value and structural reforms?

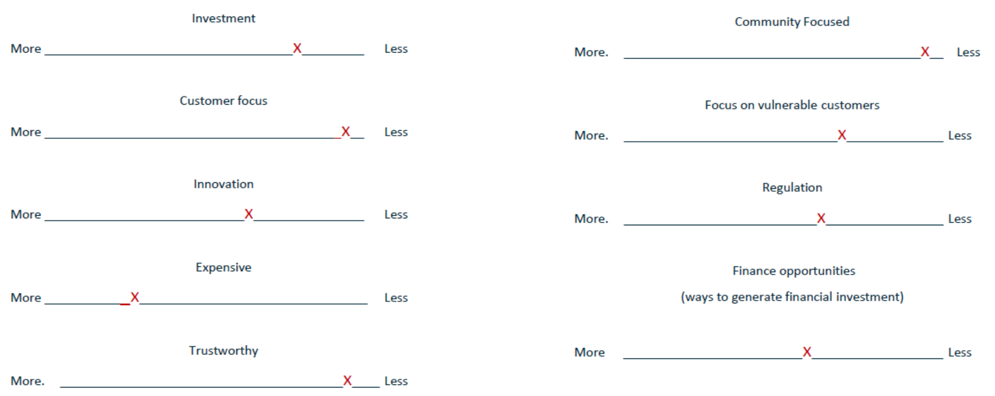
In summer 2018 Accent undertook quantitative and qualitative research for Bristol Water, in the context of the debate about nationalisation of the water industry, exploring what drove trust in different sectors, alongside perceptions of contribution to the local community.

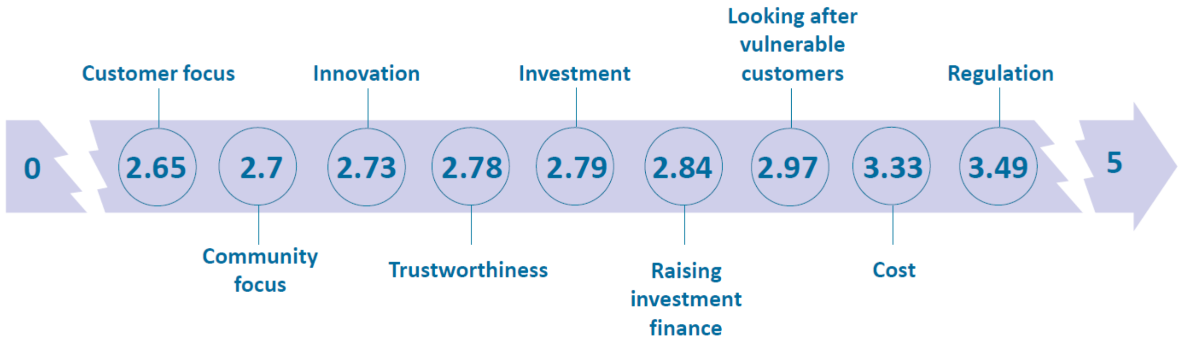
The research identified that where there was a connection to the local service, this created a resilience in terms of trust. In the absence of choice of supplier in the water sector, personal experience of a lack of problems, or positive response when issues rarely arose, was sufficient for today's customers to support the status quo in the sector. There was a lack of compelling reason for change. However, in younger generations there was less awareness of the water sector, and less support for a privately funded service in the absence of choice (which wasn't seen as credible).

The main challenges seen with a change in industry structure (in this case nationalisation) would be the need for more regulation, with less customer and community focused (with decisions focussed nationally rather than locally, and standards slipping because of the local connection).

[10] source: Institute of Customer Service UKCSI Exec Summary July 2020

Changing status quo feels unattractive in the context of perceived low cost/good service





A number below 3 equates to expectations of less focus / spend, and above 3 more regulation required or higher cost.

Customers also saw the need for local frameworks for investment and returns to investors, but in the context of a national regulatory framework for minimum standards regulation was seen as helping to maintain that trust (with less trust in Government in general). The most popular option was for utilities to develop a social contract in partnership with the communities they served, alongside keeping local companies that customers had a connection with out of national structural changes.

This suggests that regulators can themselves build trust, even where there is a national standard framework, by being seen as engaging and validating local diversity of decisions within that framework.

4.4 The purpose dynamic isn't about economic regulation, but does inform its reform

The development of social purpose and social contracts is not a dynamic limited to regulated companies or industries. In February 2019 Bristol Water worked with ICS Consulting to publish "Social Contract for Water – Evolution or Revolution"[11], which argued that a new social contract for water was required. This should at least indirectly affect the regulatory framework, as it is the relationship between companies and wider society has to work beyond this framework – they cannot be considered in isolation. As we explain in section 7, the importance of trust when making ethical value judgements is better left to companies to manage, without this removing the role for regulators to take action.

At its heart of the purpose debate is how companies (and ultimately investors) deliver for society. A good example of this is the British Academy "Future of the Corporation" work[12]. It is fair to say that water companies, given their regional public service set up have engaged extensively on these concepts (Anglian Water, Severn Trent and Bristol Water being examples). However it is not limited in application to regulated monopolies

[11] https://f.hubspotusercontent30.net/hubfs/7850638/2019%20Bristol%20Social%20Contract%20Brochure%20V1.1.pdf

[12] https://www.thebritishacademy.ac.uk/programmes/future-of-the-corporation/

Corporations were originally established with clear public purposes. It is only over the last half century that corporate purpose has come to be equated solely with profit. This has been damaging for corporations' role in society, trust in business and the impact that business has had on the environment, inequality and social cohesion. In addition, globalisation and technological advances are exacerbating problems of regulatory lag.

British Academy: Reforming Business for the 21st Century, p8

The same issue now appears to apply to economic regulation – its tools rely on a narrative that assumes companies and investors, unchecked, will seek to maximise their economic surplus at the expense of consumers. Clearly without any forms of regulation, this may be the case and, as importantly, consumers would see it as this. This is not the sole driver of regulation. If regulation is designed through an economic surplus framework, the challenge becomes self-fulfilling and there can be no wider public value or purpose within a regulatory framework. If we are to move forward, a new language of regulation is required, and the framework to support it should recognise as an objective the need for trust and strong relationships to guide the use of incentive tools in economic regulation.

ICS Consulting found four shared aims from social purpose that also reflect public value:

01 SOCIETAL WELL-BEING

Societal well-being – re-invigorating the social purpose of water companies would recognise that societal well-being is what water companies "do".

02 PARTICIPATION

Actively promoting customer, stakeholder and employee participation in decision-making.

03 STEWARDSHIP

Acting as stewards or custodians of water systems and facilities is not a new consideration for a water company. But valuing stewardship of community assets and resources as part of its social purpose would be.

04 TRANSPARENCY

Enabling all parties to be clear on their rights and responsibilities under the social contract. This also emphasises what freedoms all parties willingly give up as part of the social contract and what benefits are provided in return. In this way the social contract becomes a mechanism which is two-way rather than a one-sided set of obligations or expectations.

This provides a useful framework for regulation – transparency has a trade-off with participation, but the current regulatory framework fails in not being clear what stewardship means, potentially undervaluing participation (i.e. with a focus on customer research and engagement as tools to monopoly regulation), and not really having a clear framework as to how societal wellbeing is considered.

Why is this? – to answer this question we have to unpick some of the key tenets perceived about water economic regulation.

5. Unpicking the key tenets of economic regulation today

5.1 How important are price reviews?

It is challenging to imagine how price reviews can be equipped to deal with public value issues and trade-offs. One of the main concerns with a focus on economic regulation based on price reviews is the degree of commitment to the long-term. On the one hand, a world that is increasingly uncertain does not lend itself to longer price review periods, without greater risk for both companies and investors. On the other hand, the main worry of informed stakeholders (and companies) is whether long-term water investment issues can be addressed within a five year price review framework, even with the potential flexibility that an outcomes framework adds. Whilst defining longer term outcomes was considered at PR19, in practice there proved to be little room in the framework. It is possible to provide longer term commitments and projects were available, as indicated by the range of green growth proposals that followed PR19 in response to Covid. Necessity provided some indication that price reviews are not the only way to consider investment, and just seeking to make price reviews cover a longer period may not be the only answer – whether it is will need testing. The only aspect of regulation that is lost, may be the ability to make comparisons.

The tools of economic regulation are not well placed to address more complex problems of trade-offs without direct Government policy intervention. Comparative regulation leaves companies pulling together evidence and then the regulator will need to compare propositions. The capacity of companies and stakeholders to provide information on the long term for this purpose is limited – the nature of future and local challenges and the impact on water services is that they are uncertain in terms of cause and effect. Either regulators pick winners from company innovations, and hope the risks do not fall to customers or investors in an “unequitable” way, or the framework loses credibility if it tries to extend itself into the realm of public value decisions.

The alternative may be to put less emphasis on price reviews and consider more flexible and adaptive tools. That, as with the Green Growth projects, requires a large degree of trust, both of the companies, investors and the regulatory framework itself.

5.2 Are price reviews becoming of increasing focus, because of complex incentives?

Outcomes (as opposed to outputs) have resulted in more complex incentives. At their simplest, they attempt to reflect a neutral investment value as an incentive, based on a level of service where costs equals benefits. Adjustments represent a payment to reflect a timing difference, rather than being rewards and penalties as they are often inevitably described by both companies and customer representatives.

On a company-specific basis the calculation of outcome incentives remains relatively straightforward, but as soon as comparisons on performance, value and cost efficiency are included, the price review process becomes far more complex. The process of regulation has correctly recognised a greater need for smarter risk allocation and greater scope for adaptation (a correct response to the uncertainty). But the corollary is we then spend a greater amount of time on the process of incentives setting and adjustments, with effectively annual adjustments arising from the price review. In trying to remove the fixed nature of price reviews through incentives, we increase the complexity and decision points of that review. We consider the reasons for this further in section 5.4

The submission of Stephen Littlechild[13] to the Competition & Markets Authority set out a challenge to a focus on price reviews in a salutary way:

"In 1986, the Government proposed to privatise the water sector and asked me what kind of price control would be suitable there, where it was assumed that competition would not be viable, hence price control would be permanent. I advised that, while RPI-X was not designed for that, it seemed better than US rate of return control. It was duly implemented, and similarly for British Gas.

"What happened after that? Alas, the time taken for these price control reviews has steadily increased, in both water and energy networks. From one year, to two years, to three years, to more. My understanding is that, with the possibility of appeals to the competition authority, and with the process for taking stock and considering the lessons learned after each review, and the process for considering what approach to take before the next review, the whole process for setting a five year price control often takes about five years. One review no longer finishes than the next one starts. Indeed I am told that the first steps of the next water price control review have already been taken, before the present one is complete. I am also told of colleagues who have left the sector, having led a price control review, precisely because they could not stand to start another one. There should be more to life than arguing about price controls.

"Surely this is awful. It is a quite indefensible use of so much time and resources of the regulatory bodies, of the management teams of the companies involved, and of the CCGs and of other participants in the price control processes. In 1983, the Secretary of State requested "regulation with a light hand". That is what subsequent UK regulation has

[13] Stephen Littlechild (Emeritus Professor, University of Birmingham; Fellow, Cambridge Judge Business School; Associate Researcher, Energy Policy Research Group, University of Cambridge; former Director General of Electricity Supply (DGES) and head of the Office of Electricity Regulation (OFFER) (1989-98). https://assets.publishing.service.gov.uk/media/5eda3e6ce90e071b7bd7a2ed/Stephen_Littlechild_submission.pdf

claimed to stand for. Today that is a hollow claim. This is now arguably one of the most heavy-handed regulatory regimes anywhere in the world.

"Indeed, it is worse in this respect than the apparently heavy-handed US regulation that it was intended to replace. A concern about US regulation that Alan Walters and I had back in the 1980s was that, although most US rate cases were dealt with routinely within a year or so, occasionally some cases could drag on for two or three years. And now we have a situation where, for all UK regulated water and energy network companies, the price setting process routinely takes about five years, is indeed an ongoing never-ending process. It is like purgatory - "a place or state of temporary suffering or misery" - except that it is no longer temporary: it is a place or state of permanent suffering or misery."

We can take from this that whilst the **reform** phase of economic regulation set a direction of travel that would address these challenges, it does not look like this has been successful to an independent expert observer from outside of the water sector. The distinction to rate of return regulation made above is also becoming blurred as regulators try to balance risk with greater complexity of incentives. For instance, in the Ofgem RIIO-2 approach[14], the regulator assumes that there is such a significant risk of incentives being set incorrectly ex-ante that outperformance is assumed with an explicit adjustment to the cost of equity, which is adjusted ex-post if the company does not outperform as predicted. This approaches rate of return regulation by dampening down the ultimate impact of incentives, whilst retaining their complexity. This is in addition to an explicit ratcheting of sharing to up to 90% customer share beyond a level of outperformance or underperformance (described as a "Return Adjustment Mechanism"). It is a valid challenge as to whether the incentives are penetrable for even sophisticated investors and at what point this distils down to rate of return regulation, given the layers of overlapping incentive approaches. This outcome appears to satisfy no-one.

5.3 Can we really measure efficiency in an outcome focused world?

Whilst better solutions (outcomes rather than hard outputs, particularly considering public value impacts) are likely to result in greater productivity in the long run, there is a risk this is conflated measurement of shorter term efficiencies. There are a range of overlapping efficiency challenge approaches, and each of them can be perceived to have benefits. What is less often considered is whether the sources of efficiency benefits can exist together, or whether we are cherry picking to create a cost challenge. The problem with cost challenges is they can be self-fulfilling, if regulated companies take them as the market signal proxy:

- Catch up benchmarking – companies that deliver outcomes better, or find better solutions, may have lower costs. Equally this may not be true. Historical efficiency modelling used for catch up benchmarking can practically a) only compare the past and b) only use exogenous variables outside of management control. A methodology to measure public value success, or outcomes, has little chance of

[14] https://www.ofgem.gov.uk/system/files/docs/2020/12/final_determinations_-_finance_annex.pdf

being reflected in this modelling, unless we a) ignore cost differences for local factors or b) adjust for some standard public value impact.

- The historical approach in regulation has been to separate the baseline (constant, standardised or benchmarked) level of service from the costs of further improvements (enhancements). This is fine for regulated outputs, but starts to struggle for outcomes. Resilience challenges, for instance, end up being reduced to a set of defined outputs for enhancement purposes. The regulator ultimately has to set rules and, to a degree, pick "public value" winners if investment or changes in service is required
- The alternative is to assume that changes in service have no additional costs (or that any costs are offset by productivity improvements). However, that assumption is not logical – it undermines the rationale for economic regulation that stems from the need to ensure marginal costs equals marginal benefits at an equilibrium of supply and demand.

5.4 Do customers care about comparative performance and incentives?

Clearly the tools of economic regulation on efficiency and incentives in general are powerful, otherwise we would not be debating them. We do not argue in any way that they are redundant, or unimportant, or even that the power of incentives should be weaker. The rationale for using them ultimately comes from consumer protection, against costs or service levels that see a transfer of risk over time, with investors making short term decisions because their time horizon is different to customers, regulators, other companies, employees and wider society.

In a thought piece for Bristol Water, ICS Consulting (September 2019) was asked to consider how the landscape for outcome incentives and Willingness To Pay research used to set these had evolved over PR19. Their thought piece ***"Will it all be Upper Futile in the End?[15]"*** reflected their concerns, that incentives had always mattered in water regulation, and had been successful, but had limitations:

"What water companies deliver for their customers is their primary focus. How they get there is at best secondary. But as our opening quote testifies, behind the outcomes that water customers experience will lie the set of incentives that link how water companies are operated and managed with how they perform for customers. As Nikita Khruschev also observed "…incentives are what get people to work harder."

For water regulators incentives have always mattered. Since its inception Ofwat as the water regulator has had as its raison d'être the mission of encouraging water companies to work faster, work harder and work better on behalf of water customers. And to do all that for less as in lower water bills."

[15] https://9e1ff87c-51e3-4f07-a342-03839a07bf23.filesusr.com/ugd/e82626_484b1724a76942adb5834ac5923c1ef7.pdf

A more historical perspective with regulation has been "sticks and carrots" – although there are limits to this, there is a degree to which for outcomes that it can be accepted that there is a far greater weight to sticks to than carrots – as ICS Consulting observed:

"This all feels pretty consistent with the idea of loss aversion. The water customer evidence suggests fairly clearly that service losses are valued more highly than service gains. And the findings of neuroscience point towards using punishments as the way to deter "bads" or a negative occurring, whereas rewards are better if you want to promote positive action (Sharot, T. (2017) What motivates employees more: rewards or punishments? Harvard Business Review, September 26, 2017)"

This suggests that the model of regulation is right, on customers' behalf. But there are limits to this – a) customers don't want financial incentives on "sticks" to be sufficiently harsh that it affects solving the issue (particular as many of the issues can be weather or third party related – increasingly so with tighter targets and more complex risks such as climate change); and b) expected returns matter – if the "sticks" become embedded as an expected part of the regime, it reduces company positive action and ultimately affects returns to shareholders, which affects risk. But there is little evidence to support the position that customers prefer higher returns in return for greater downside risks to companies. A trust gap has developed between the potential for regulation to drive further gains through comparisons and incentives, with the customer appetite to pay for such risks.

"But the climate that has rained on PR19 suggests ever so subtlety and perhaps unwittingly that the ODIs' carrots and sticks have in reality offered a useful barometer of how tough the regulatory settlement could be. Being tough on water company execs and the returns they can deliver would sit quite comfortably with the Khruschev like message that people running water companies just needed to be made to work harder. A case perhaps of the temptation to side with "could we tweak the ODIs" appearing too great without asking "should we tweak the ODIs".

ICS Consulting also observed:

"With its emphasis on financial risk and reward, the system of incentives embodied in the current ODI framework can be looked upon as an elegant solution to a classic principal-agent problem in our privatised water sector.

In this problem the principals of customers and owners are seeking to ensure their agents – the water company managers – are encouraged to make the effort to deliver the outcomes that are in both of their interests. Owners get higher returns paid for by higher customer bills who in turn get higher value from the "extra" services they receive. And on the flip side owners take a hit when customers are entitled to lower bills for outcomes not delivered. Incentives and interests become aligned.

At the heart of this system lies a familiar tension. It is an arms-length contractual tension between suppliers and consumers. This tension between effort and outcome is reconciled through the risks and rewards that stem from sets of obligations on each party.

But how comfortably will this approach chime with the current mood music within the water sector around the need for a social contract in water? Rachel Fletcher, Ofwat CEO, herself observing "It does not chime with people that the relationship between them and their water supplier is transactional".

So there are limits to which customers care about comparisons – sufficing enough that their water company is performing well enough against national targets on service, cost etc, but not at the expense of risk or an impersonal relationship to their local suppliers.

Water economic regulation has recognised this, with financial incentives on customer experience which summarises comparisons as customers see it – their expectation of a well run public service and company they feel an attachment to – we explore this further in section 7.8.

5.5 Is information asymmetry a justification for a regulation-centric price review process?

The arguments set out above suggest that public value and increasing complexity in trading off risk, returns and uncertainty may mean that economic regulation tools seeking to mimic market equilibria may not be the best way of protecting consumers in the long run. However, there is an additional "shining a light" argument for regulation that relates to information asymmetry. This is that the process of economic regulation needs to focus on revealing information in order to challenge companies on customers behalf. Whilst there is potential to inform consumers and stakeholders through transparency on performance, the nature of the water industry means this isn't sufficient. Water sources, pipes, supply chain and cost structures are difficult to observe, as are the cause and effect of performance.

However, this lack of market data[16] is an information asymmetry that affects company management and investors, as well as regulators. It may equally be the case that the regulatory process increases rather than reduces information asymmetry, if it encourages narrow comparisons rather than collaborative understanding of risk and solutions.

The logic of this alternative perspective is:

- Information asymmetry would logically be a bigger issue with less comparator companies – it would appear that Ofwat consider it to be a significant issue and is mentioned more in water regulation than in other jurisdictions.
- This suggests that the perception of information asymmetry has therefore growth with the complexity of regulation, i.e. further incentives failed to resolve information asymmetry and made it appear to be an increasing issue.

[16] Across the whole water sector supply chain as even competitive markets such as business retail remain stubbornly local markets, even when there are national market participants,

- It appears to matter less with the original “RPI – x” concept – prices were simply reset for actual information, but it is the process of creating incentives and then tweaking to correct where these do not confirm to the “neoclassical” efficient market incentives view of economic regulation principles that creates the issue. The ICS Consulting challenge on outcomes incentives becomes increasingly important.
- So this alternative perspective is that the potential presence of information asymmetry is not on its own a justification for the status quo, rather it is a challenge to its retention.

The challenge that in trying to address information asymmetry through incentives that the process becomes self-fulfilling, as increasing complexity in information gathering and incentives design when price setting increases the risk of information asymmetry.

It is entirely reasonable to learn from mistakes in forecasting during price setting and to seek to adjust the balance of risk between companies and customers. Incentives are also a better tool than using ex-post adjustments. However, increasing the power of incentives based on past outperformance at some point must put long-term investment at risk by either reducing investor expectations on future returns, or reducing the power of the incentives to drive change. Ultimately either outperformance is a good outcome of well-designed incentives, and when it occurs then this should not be seen as a problem unless there is evidence that this outperformance was from a source other than company performance. Once the incentives are in place, they become factual parts of targets and there are regulatory mechanisms for such errors – there should be a high hurdle therefore to re-design incentives solely to avoid the risk of outperformance, as opposed to resetting them to reflect that the share of past outperformance is now benefitting customers.
This is clearly different from asserting that information asymmetry between firms and regulator in itself requires stretching targets, irrespective of past outperformance or underperformance, without specific evidence of disbenefit for customers. The risk is complexity and micromanagement, which does not sit comfortably with the original aims of RPI-x regulation.

If the source of outperformance has become contentious, then this may undermine trust in economic regulation as a concept. Ultimately there is a clear risk that information asymmetry is expounded as a reason to make outperformance harder, or distinguish between earned or unearned outperformance. Ofgem’s RIIO-2 assumption that companies will outperform incentives by 0.25% in the cost of capital, but then on a company specific basis to subsequently adjust returns if the company does not then outperform, would logically provide a further source of information asymmetry argument in future (i.e. do companies not try to outperform if they cannot beat 0.25%) by persisting with an incentives approach that assumes there is an information disadvantage in setting targets ex ante by observing past outperformance. Such solutions mean that more and more detail would need to be gathered to try and understand the cause and effect of incentives on performance – the problem may be exacerbated rather than solved.

5.6 What about competition?

Until 2016 there had been a strong Government push to a) introduce more competition and b) to roll back regulatory boundaries (for instance through "one in, two out" rules when introducing new requirements), with a strong emphasis on using both to improve UK productivity. It is notable that economic regulation was not included in the de-regulation priorities, in part because the push for more competition in regulated sectors was replaced by a focus on more effective competition. The water business retail market was successfully introduced in this climate, and not just because it was five years in the planning following the Cave review, but because a consensus was built supporting its introduction and the approach to its implementation meant that the Government could observe the consensus from regulator, customers and companies alike that the introduction would be successful (which it was, given it was introduced on time and allowed customers to choose supplier).

A shift in 2016, in part caused by the Brexit referendum but also by the introduction of price caps in the household energy market saw a sentiment change away from the assumptions that competitive markets (and deregulation) were the default public policy, to a trend towards more directive, intrusive and top-down interventionist approaches.

This is not exceptional, and the risk of political intervention on new targets, and even matters of financing has occurred throughout the history of the water sector before and after privatisation. One of the main arguments for independent economic regulation, even in a competitive market, is that the discussion on risk sharing through incentives helps to minimise (but not avoid entirely) the number of times these interventions happen. The interventions also happen in competitive markets, just less transparently. It is the transparency on risk sharing and trade offs in the market which we argue is the distinctive feature of economic regulation, rather than incentives replicating a well-functioning contestable market.

The February 2021 report from John Penrose MP **"Power to the People: Stronger Consumer Choice and Competition so Markets work for People, not the other way around"**[17] may signal a shift back to the pre-2016 approach to de-regulation. It goes further, indicating that this time sector regulators should be included in the shift to de-regulation (one in, two out) where their remit extends beyond price reviews. At the same time, the extended scope of price reviews is also noted in a similar way to Stephen Littlechild:

"Price control decisions by sector regulators have grown over decades from scores of pages of submissions in a process which lasted a few months when the system first began, to thousands of pages of expensively-lawyered expert testimonies in a process which takes years now."

[17] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/961665/penrose-report-final.pdf

The report brings a further perspective of the competition landscape, where the complexity of combining the tools of economic and competition regulation into a quasi-legal framework has a particular cost and benefits large firms.

"This puts smaller, disruptive and entrepreneurial firms at a disadvantage, because they find it harder to afford the expert advice without which it is increasingly impossible to take part in the processes successfully. It also gives large, deep-pocketed and well-lawyered incumbent firms the advantage of using legal process delays to 'walk backwards slowly', bogging things down when they're faced with otherwise-legitimate challenges so entrepreneurs are prevented from bringing new technologies to market for years, until the commercial window of opportunity has closed and it's too late. If we allow our competition laws and processes to become more complex, expensive and slow at the same time as digitisation is pushing businesses to become cheaper, faster and more convenient, we will weaken competition and hamstring British firms severely."

We would argue that this replicates many competitive markets as they are found without regulation, because a centralised national framework with national standards will always carry this risk, in the same way. The recent battle between Facebook and the Australian Government (and arguably a media that has a particular influence on the political process) is as good as example of the risks of social impact monopolies[18] where the battle for trust exists.

Penrose argues for much faster regulatory and competition cases at the Competition & Markets Authority (CMA). There is also a more local market impact with strengthening the CMAs civil enforcement powers, alongside local competition courts.

The Penrose report still however supports the view that choice benefits consumers, and that the sector regulators need plans of converting their sector "***into a 'normal' pro-consumer, high-standards competitive market as possible".*** The assumption is still made as to what this means in practice, beyond the references to a "Brexit dividend" it is quite hard to translate this to the water sector, where there is general agreement on both water and environmental standards, and general public pressure for these to be tighter rather than looser (noting there is more trust in drinking water regulation than environmental regulation, we would argue because the former has taken a risk and trust based approach and the latter has far more sectors and political externalities such as farming to deal with).

Penrose also makes a nod towards the development of the Digital Markets Unit in the CMA, which is an important transition towards consumer trust in the emerging social impact monopolies – there are trade offs between the efficient technology and digital market and the local impact. Penrose describes a Network and Data Markets Unit (NDMU) that sectors would cede powers to if they extend themselves too far beyond "economic regulation" (although this is not clearly defined). The nod to trust of the market participants in the

[18] We explore this further in section 7.5. We define social impact monopolies as those that operate in what appear to global competitive markets, but the impact on consumers has local and social wellbeing impacts, beyond the reach of competition policy or regulation. There existence and size however means they have a monopoly in terms of the social impact from their market offering is not corrected by regulation or local competitive markets.

regulatory process is also to be noted, with consumer bodies or half of the regulated companies being able to trigger exploration of a shift of authority from the sector regulator.

In our view this last step of the proposals would do little to build consensus and trust as it implies confrontation and feels more like a threat. Although Penrose elsewhere is careful to suggest that the decision to shift such powers would need to be independent from Government, with a sectoral equivalent of the Regulatory Policy Unit used for less arms length bodies, this does not appear to apply to the transfer of powers measures.

In practice this may be difficult to construct independently. There is also the risk (which is also found with negotiated settlement and where consumer bodies have appeal rights) that the consumer bodies become pseudo-economic regulators, using the same language and replicating skills and functions somewhat removed from the civil advisors to individual consumers that they were originally designed to be. Of using the same language and from a perspective on (say) incentives and returns beyond how tough regulators are, consumer bodies may find this does not enhance trust with consumers. Once centralised, consumer bodies may become participants in overly economic and legal process, rather than amplifying consumers voices. Like negotiated settlement, there is a risk this reduces rather than increases trust, particularly if increased pro-consumer choice in markets proves illusory.

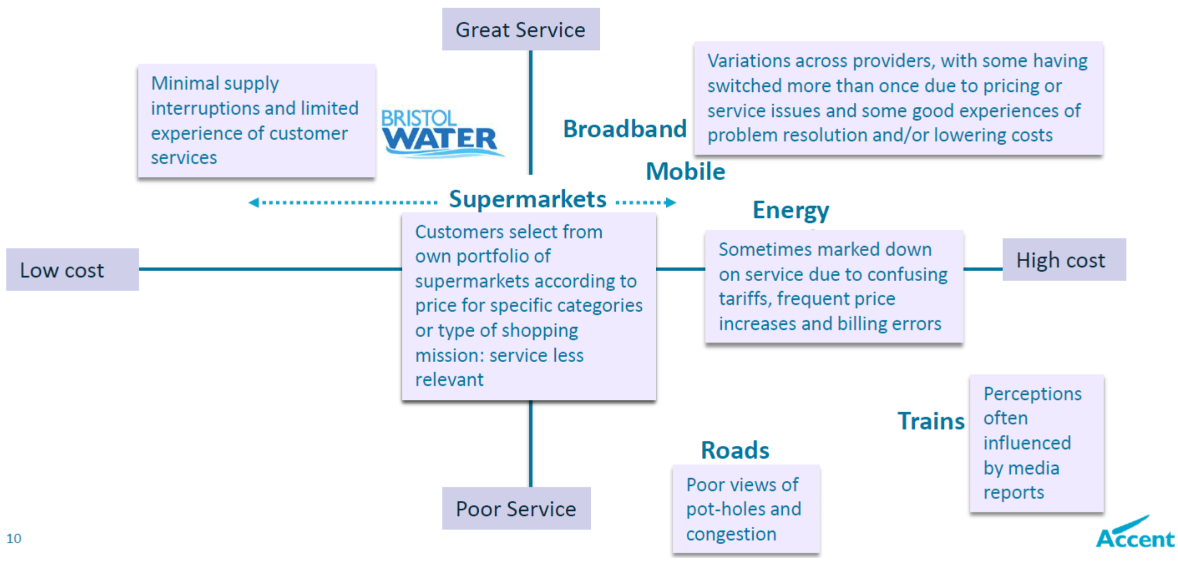
The Penrose report also makes several references to fairness, including to regulated companies in the transfer or powers proposal. This comes across strongest when describing digital "sludge", the use by companies of behavioural nudges in emerging competitive markets. The report assumes that the CMA can develop tools to identify and measure this "sludge", although in practice this may be difficult as behavioural science experiments can suffer from the same limitations of general economic principles of only being applicable to the single context being observed, and are inherently more complex i.e. what is observed or measured as "sludge" may not be observed or may not be "sludge" by the time the study is completed.

However the principle of fairness does have a wider application in competitive markets – the impact of ethics, trust and perception is recognised.

"CMA should update its guidelines on what treating customers fairly means in practice, including 'transactional fairness' in its work, so it is as easy as possible for businesses, charities and public bodies to identify and avoid problems in advance, and so the guidelines keep up with changing attitudes of what society views as 'fair' in future too."

Does the Penrose report include too many contradictions here with the assumption that choice in competitive markets is possible, without questioning whether customers trust competitive markets?

There are fundamental assumptions here that include a customer preference for choice through markets. Whilst there is strong evidence (whether through UKCSI or otherwise) that choice can increase customer trust, the evidence suggests it has to be a real trust, and that requires ethical perspectives on what is considered fair. Research for Bristol Water by Accent in 2018 found that customers generally trust water services despite the lack of choice of supplier, because as far as consumers were concerned such a choice would feel meaningless. The general failure to encourage switching in the energy market, and the incoherence of choice to consumers in rail services cause them, alongside what they perceived as poor service, to be meaningless choices.



Customers were happy with being able to make price/service/quality trade-offs in supermarkets, and could see the benefits of active competition. The importance of perceptions, both of price and quality where choice wasn't seen, was important. In the case of broadband and mobile, the behavioural sludge from bundling was often interpreted as positive to service from a convenience perspective. In most of these markets it is a local aspect that will have the largest impact, such as rural broadband, or in areas where there is less effective choice of supermarkets.

It is also entirely possible that perceptions of consumers can change rapidly – if supermarkets are competing on price and that results in more plastic packaging, such a choice may rapidly become unacceptable to consumers, with calls for Government intervention. A healthy sector may recognise this risk, but come up against competition policy as a barrier to imposing standards, which can be avoided only with transparency that avoids collusion. Transparency on value judgements is required for a market to be trusted.

None of this means that customers would not support greater competition in water and other markets. Rather, it implies that the degree of trust and communication in the design and implementation of the market will determine whether it will be successful. This can be seen in the research on customer satisfaction, which is often higher where customers feel they have a relationship with the supplier, or where there is a generally positive message from decision makers and regulators (along as its credible to communicate this message) that the industry is performing well on customers' behalf. Ofwat's customer research when investigating the potential for the residential water retail market in 2015 made similar findings – a trusted industry was more likely to be able to introduce competition successfully than one where the ability to replicate market conditions was seen as failing[19].

6. What theory is relevant?

As we describe above there is a strong sense that the direction of economic regulation at least requires re-focusing, and if it doesn't evolve, then we may face a revolution that throws away its key tenets entirely, and loses independent economic regulation as a strength of the UK market landscape. To support this principle, it has to remain relevant to the challenges faced by society.

One the one hand, there is the public value challenge to the tools being used – we are searching for more sophisticated "better" long-term decisions that support delivery for consumers, and (to those who may have swallowed behavioural economics) nudges of consumers that together result in better public outcomes. Exactly what benefits consumers has to be inferred, beyond lower prices, better services and more investment (and now, a zero carbon society).

On the other hand, there is the view that economic regulation cannot realistically replicate competitive markets, and that regulation should introduce them wherever possible with a deregulatory zeal. It is clear on what the basis of the presumption that real choice benefits consumers is based on, although it requires a very sharp U-turn, and would be a minimum ten year journey for the water sector (and probably other sectors include energy). The John Penrose take on local competitive markets is a new and more interesting angle which is worth exploring, but is not obviously something that would apply to water markets as the top priority.

The third way that attempts to do both appears to assume the perfect economic regulator. So this leads to a question as to what the design of this fantasy regulator would look like – what theoretical underpinning would help in its design and construction?

6.1 BEIS principles of economic regulation

The BEIS principles for economic regulation[20] starts with the assumption that competitive markets are the best way in the long run to provide economic infrastructure services to business and citizens. Economic regulation therefore provide a proxy for competition, where it is not "meaningful" to introduce it. What is "meaningful" is not specified and perhaps somewhat ironic in the sense that it in itself lacks meaning in its use! However, it is possible to interpret this as meaningful competition that "promotes efficiency and fairness" as well as sufficient return on asset to investors in the relevant market.

[19] https://www.ofwat.gov.uk/wp-content/uploads/2016/07/Ofwat-residential-competition-research-final-report.pdf

[20] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/31623/11-795-principles-for-economic-regulation.pdf

The challenge of delivering meaningful alternatives to competition is therefore assumed, rather than implying a fixed outcome. The principles of economic regulation are set out as characteristics that the regulator should exhibit. Selected elements include:

- *Accountability*
  - ***independent regulation needs to take place within a framework of duties and policies set by a democratically accountable Parliament and Government***
- *Focus*
  - ***the role of economic regulators should be concentrated on protecting the interests of end users of infrastructure services***
  - ***economic regulators should have clearly defined, articulated and prioritised statutory responsibilities focussed on outcomes rather than specified inputs or tools by ensuring the operation of well-functioning and contestable markets where appropriate or by designing a system of incentives and penalties that replicate as far as possible the outcomes of competitive markets.***
  - ***economic regulators should have adequate discretion to choose the tools that best achieve these outcomes***
- *Predictability*
  - ***the framework for economic regulation should provide a stable and objective environment enabling all those affected to anticipate the context for future decisions and to make long term investment decisions with confidence***
- *Coherence*
  - ***regulatory frameworks should form a logical part of the Government's broader policy context, consistent with established priorities***
  - ***regulatory frameworks should enable cross-sector delivery of policy goals where appropriate***
- *Adaptability*
  - ***the framework of economic regulation needs capacity to evolve to respond to changing circumstances and continue to be relevant and effective over time***
- *Efficiency*
  - ***policy interventions must be proportionate and cost-effective while decision making should be timely, and robust***

These principles clearly involve some trade-offs. What is not traded-off is democratic accountability of regulators to Parliament, and the purpose that the tools of regulation include incentives that attempt to replicate the outcomes of a "well functioning and contestable market". It assumes a competitive market moral and ethical framework.

It is clear however from above that there is no generally shared view, even amongst economic regulators about what the outcome of a contestable market would be. Regulators are left the discretion as to what the relevant tools and incentives therefore are. For instance, there would appear to be a trade-off with cross-sector working (i.e. the definition of the market), as presumably that would require some consistency on these tools, assuming that the contestable market will not recognise the boundaries of what the market is.

The "Predictability" objective is also worth noting – it appears to assume a static market equilibrium in the way it describes "enabling all those affected to anticipate the context for future decisions and to make long term investment decisions with confidence".

If one of the challenges is that society and the world is becoming less certain, is this false confidence to predict the context of decisions, and even harder than this for the economic regulator to be able to design incentives to replicate that future competitive market?

6.2 Ethical business regulation

Research by Christopher Hodges set out an ethical basis for regulation[21]. In essence this takes behavioural psychology and applies this to the approach to regulation.

"The basic idea is one of a collaborative approach between businesses, their stakeholders and public officials, based on a shared ethical approach. It recognises a series of points. First, that compliant behaviour cannot be guaranteed by regulation alone, and that ethical culture in business is an essential component that should be promoted and not undermined. Second, that regulatory and other systems need to be designed to provide evidence of business commitment to ethical behaviour, on which trust can be based. Third, that systemic learning has to be based on capture of information, and that maximising the reporting of problems requires a no blame culture. Fourth, that regulation will be most effective where it is based on the collaborative involvement of all parties. Fifth, that society needs to be protected from those who seek to break laws, and that people expect that wrongdoing deserves proportionate sanctions"

We would argue that the maturity of regulation and the public service nature of the water sector means that economic regulation should consider its tools using this framework, in particular the value of systemic learning and collaborative involvement of all parties.

Indeed this is recognised by this view provided by Chris Hodges for Ofwat in its 2019 strategy and vision for the sector[22]. This applies to regulation not just the regulated companies – the limits to which ***"The voice of consumers, staff and others is critical"*** and that "***Regulated decisions may become more complex and need new structures"***, making decisions based on fairness rather than binary on incentives or efficiency is something we explore in more depth in this paper. As this piece also suggests, ***"Organisations that embrace open and ethical cultures deliver success for themselves and society".***

21 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/497539/16-113-ethical-business-regulation.pdf

22 https://www.ofwat.gov.uk/vision-waterstories/news/7-things-you-need-to-know-about-ethical-business/

There is very little assumption here that markets themselves result in fairness or ethical outcomes. This leaves the question open about whether then perfect regulator is the replicator of perfect markets, or the consensus builder extraordinaire!

6.3 Revisiting the principles of economics and economic regulation

The challenge of defining the perfect economic regulator is as futile as agreeing that there is a perfect market outcome that incentives can replicate. The fundamental tenets of economics have moved on, and were in any case illustrations that were rather too constrained for real human life and relationships in the first place. For those who want to explore this further might want to consider the work of Yorum Bauman, performing as the "Stand up Economist", who undermines the principles of micro-economics, choices and incentives in a five minute video[23] (to be fair, macro-economics took about five seconds to do the same). The first principle of economics covered in this important work that "people face trade-offs" unwinds to choices being bad and that markets require people to be bad at making choices. These conclusions on the principles inevitably therefore apply to economic regulators.

The challenge to economics in general is that it takes too narrow a view of economic or human behaviour – through ignoring culture, diversity, philosophy, psychology – with calls for a pluralist approach to economics that takes more account of co-operation and complexity. The difference between the BEIS principles and ethical regulation illustrates the challenge.

Given the maturity of water economic regulation and the social and public value topics inherent in the influences on Ofwat's strategy, it is important to consider whether the approach to economic regulation is sufficiently pluralist.

For instance Earle et al[24] (2017) argued that economics is too narrow in its technical focus and too broad in its assumptions on societal impact. The introduction of this book (written by Andy Haldane) argued that the language of economics has become pervasive in policy making, but doesn't explain its narrow focus.

Economic regulation faces the same challenge – we risk defining tools based on the impact on our ability to undertake the process of economic regulation, assuming therefore that this benefits consumers (with a high hurdle to any hypothesis to the contrary, even where the evidence for the success of the economic regulation process is weak and based on assumptions).

6.4 Incentives and efficiency

[23] http://standupeconomist.com/videos/#mankiw

[24] Earle et al (2017), "The Econocracy: or the perils of leaving economics to the experts", Penguin.

A book edited by Edward Fulbrook[25] set out the limitations associated with the neoclassical economic views on supply and demand, that underpin an incentives based approach to microeconomics:

- the need for a broader conception of human behaviour;
- a recognition of culture;
- consideration of historicity; and
- using observation, rather than just empirical analysis.

Specifically for economic efficiency, market efficiency depends on what you choose to count, and relativity matters given that the necessary principle of a free and fair exchange of goods is an illusion as an assumption given the existence of government, law and companies.

There is an ethical challenge for policy makers and regulators to use behavioural insight, but not companies, without consider how legitimacy is maintained. This was eloquently described as "sludge" by John Penrose. Given the ethical position that wellbeing can be harmed by a disruption to cultural and societal norms, without transition measures, dealing with the uncertainty of how this affects markets and economic efficiency (ie what is the outcome) requires strong relationships of regulators with those affected. Before regulators intervene, or even make efficiency assumptions, do they understand enough on what the wider impact might be, not just to the direct market concerned and investor returns, or even what services and bills to customers are being incentivised, but on stakeholders and employees? Is public value being delivered?

The use of incentives without context assumes that the public value from transitioning from point A to point B may not be sufficiently considered. As Joan Robinson found in 1933 in "The economics of imperfect competition", comparing two equilibrium positions is not the same as exploring the process by which one moves from one equilibrium to the other. There is a challenge that economic regulation assumes that an equilibrium exists without considering what the costs and risks are in between two points – a dynamic process which comes with ethical matters and value judgements beyond incentives. In such a context, efficiency is likely to be measuring the wrong thing, and is not absolute.

Economic regulation itself has a language and has a set of rules and common processes. It reflects an institutional assumption on markets and designs, but at its heart is the contradiction that very few, least of all customers, believe its key tenets to hold true in practice. Therefore, if we want to evolve regulation to the benefit of customers, then this matters. In recent years the DWIs approach has changed to a risk based regulatory model, with data and metrics supporting this. The language of regulation supports water quality staff but challenges leaderships i.e. it poses an ethical challenge and question of "why wouldn't you want to improve your understanding of water quality risks". The purpose of the regulatory approach is clear to all, and includes reviews of culture and processes, with clear consequences based on observing risks and consequences in practice.

[25] Fulbrook (ed) (2004), "A guide to what's wrong with economics", Anthem Press

It is less clear whether and how this approach could apply to water sector economic regulation – is the objective more limited to better economic regulation in line with the BEIS principles (better incentives accepting the basic principles of neoclassical supply demand and monopoly control), or improving trust and relationships? Clearly the principles appear to be trying to achieve both, and the language suggests both, but the process and what is measured in practice appears to be focusing more on the former rather than trust and relationships.

6.5 Asymmetric information

Imperfect knowledge is inevitable in any dynamic system faced with uncertainty, but in the regulatory framework includes challenges to the motivations of the individuals involved. Taking an absolutist approach to economic efficiency imposes identifying what is efficient as an immutable objective on the process – it is perfectly possible though that what appears to be efficient may not be optimal in terms of wider value. For instance, a market allocation or bidding approach to reducing pollution with farmers may be less effective than a more equitable / ethical approach that provides some allocation to all farmers, which scale through economic efficiency may dismiss. The value of engagement to meet future targets (which require the less low hanging fruit to be tackled) would justify this. If we look to the long term, should we look beyond short term market mechanisms? Clearly both have a role to play, but efficiency and market principles take our focus down a particular narrow route.

As Robert Solow set out in 1985[26] ***"all narrowly economic activity is embedded in a web of social institutions, customs, believe systems and attitudes"*** *and* **"…different social interests may call for different background assumptions and therefore different models"**.

Economic regulation focuses much on the risk of asymmetric information but although asymmetric information is a source of inefficiency, this only matters if you believe there is, in principle, an equilibrium to be found. However, the key policy decision promoted by economic regulation is often to avoid unwanted consequences and moral hazards, not to try and remove the asymmetry altogether, which is impossible.

6.6 Pluralist economics and efficiency

Much of the debate about the tools of economic regulation and its focus on replicating contestable market incentives relies on a single view of what is efficient. At the same time, as with the John Penrose report, this is implied inconsistently as a principle even where it is believed, as in the BEIS principles, to be dominant.

There is an alternative perspective in terms of **Pluralism** – the belief that a diversity of competing paradigms and ideologies is good for society.

[26] R. Solow (May 1985). "Economic History and Economics", American Economic Review

Richard Wolff set out in "The 'Efficiency' Illusion"[27] the case that efficiency assumes you can identify and measure the outcome, it constrains cost to past outcomes (or separates cost into different pots which in itself wouldn't be efficient, or is assumed away. It assumes that an economist can identify the consequences of an economic act, event or institution. Even on the few occasions that data is available, economists are making value judgements in interpretation. An alternative interpretation by a different economist, let alone more pluralistic paradigms is always available.

At PR19 Ofwat assumed at times that inefficiency was such that better service levels did not cost more, which breaks a fundamental assumption behind efficiency. This was either explained through **implicit** allowances from past improvements within existing costs, or through unmeasured or asymmetric information on inefficiency. When challenged through the CMA process, this reduced to a fixed reference point of company plans to a set benchmarks, and further reduced to *'there has to be some degree of challenge because of the risk of information asymmetry'*.

We would argue this makes the process of efficiency somewhat reductive and possibly pointless. If it isn't possible to use observed data because of information asymmetry, why assume an efficiency process that implies that it does? If there has to be some challenge, would a random number generator not have the same probability of measuring efficiency as any other paradigm. The conclusion that efficiency is an illusion starts from the principle that different local services can be compared, and the process reduces to a debate about whether a particular judgement is material, or within management control or not.

A simpler approach to driving cost expectations down (RPI-x with cost sharing) can be taken. And the simpler approach would mean that efficiency would not be reserved to economic regulators – it could be a matter for consensus and engagement building with new cross checks (information from other sectors and stakeholders).

The counter assumption is that the sector or individual companies choose to be super-efficient or less-efficient. Currently some companies receive additional returns compared to their own view of costs, and less efficient companies receive some protection that the efficiency judgement may be wrong. There is a question about whether the process of efficiency is in consumers' interests today, balanced by the obvious shared perception that prices would be higher without such efficiency challenges in the past.

6.7 Community decision making

One alternative to efficiency and incentives in economic theory is to reveal objectives through public co-operation. Attempts to set out the role of community in economic decision making are not new, for instance Jonathan Boswell in 1990[28] set out six key forces that would allow public co-operation in community decisions, rather than this been driven solely by economic theories that relied on efficiency and cost-benefit analysis.

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[27] Richard Wolff in Fullbrook (ed) (2004), "A guide to what's wrong with Economics", Anthem Press
[28] Jonathan Boswell (1990) "Community and the economy: the theory of public co-operation", Routledge

Four of the key forces were institutional:

1. Threshold continuities of economic organisations, their decision makers and public bodies that influence them to cooperate (i.e. a "push factor").
2. Not too many organisations, or ones that are too big or too small – described as "comfortable size distributions".
3. Organisational transparency – a process that is publicly watched / observed.
4. Behavioural proximities – a relationship between decision makers

Two of the key forces are social:

5. Attitude, ideology and cultural – ethical virtues
6. Catalytic emergencies – smooth convergence is unlikely to encourage co-operation. In general, a shared emergency tends to drive co-operation.

This is helpful in describing the circumstances when efficiency and incentives become less useful in economic regulation. The "catalytic emergency" implies a disequilibrium where social factors, and therefore "ethical virtues" should take priority over day to day efficiencies. This is the apparent contradiction in water at PR19, with the language of major challenges to resilience set against assumptions on efficiency that assume improved services can be delivered without a higher cost.

The other challenge is between the range of size of organisations, both between the companies in terms of size, but also with the other interested parties. This is helpful in showing why just using different engagement tools to improve decision making by companies or regulators is unlikely on its own to work, unless decision making processes also allow for more explicit community decision making carrying weight in the process.

The language of regulation is a barrier for community engagement – particularly if an assumption forms that, because of information asymmetry and incentives, it is just economic regulators to push for change. The challenge often is there are a range of competing reform agendas, and one size fits all is unlikely to allow for co-operation in a way that builds trust.

6.8 Will economic regulation ultimately fail wellbeing?

Tibor Scitovsky in the "The Joyless Economy"[29] identified that an increase in goods did not make society any happier. He made a distinction between pleasure and comfort. We give an example below of how this pluralist approach to economics is important for reconsidering how the water sector is tasked with its role by economic regulation, in the face of rising water use at a time that reducing use will result in long term lower costs and support net zero carbon.

With water being a basic comfort need in its normal use, but providing pleasure with some of what is often termed by the water policy makers as "excessive" use (whether baths instead of showers, garden watering etc), there is a challenge in consumer communication.

[29] T. Scitovsky (1976), "The Joyless Economy", Oxford University Press

Prior to water economic regulation, when the sector was a mix of large regional public sector authorities and smaller local water companies, the messages about excessive use traditionally were left for drought conditions, but have become more frequently used day-to-day as droughts that affect consumers have become increasingly less frequent over time.

This provides a wellbeing risk in that what policy makers describe as excessive or try to challenge for some consumers, may in fact be a more basic comfort / hygiene factor for others.

There is a challenge to this in trust for the water sector and wellbeing – on the one hand the sector's efficiency models do not use the volume of water to avoid incentivising higher usage, but for most consumers more direct use increases their own personal wellbeing, or would require intrusive data in order to monitor a distinction of what use was acceptable designated by policy makers.

At the same time as water use not directly being considered in efficiency, this is balanced through incentivising companies to target reductions in the 'Per Capita Consumption' of households. This has the potential to reduce trust – both amongst the most vulnerable for whom water use is a basic need and those who use more for pleasure. As Boswell described, this risk exists without the counterfactual of a credible "catalytic emergency" from consumers perspective.

Monopoly regulation is normally justified with the assumption that without regulation, supply will be constrained to the point where marginal cost equals benefit, and there is a consumer loss for pricing at this point, in the presence of largely fixed costs of network monopolies. In this case, the marginal cost is very low, other than a) potentially in the long term if the cost of infrastructure investment in supply or b) if the economic and environmental cost of water use in a drought was considered, rather than reduction in demand being targeted. There is a logic gap in using incentives through economic regulation to restrict supply to consumers, when the justification is normally to prevent such supplies being restricted with the presence of a monopoly. Price to consumers cannot easily be used as an incentive for social wellbeing reasons, but incentives place the responsibility for reducing consumption on companies, through assuming there is a cost and benefit trade off. A more community led approach, building consensus to agreeing targets would be supported by a pluralist perspective (and the wider public value objective), rather than incentivising through economic regulation efficiency and outcome financial consequences on companies.

One of the key challenges to incentives assuming market outcomes in public policy making comes from the use of relative cost benefit analysis (CBA). Conceptually, the main criticism of CBA starts from the status quo of market outcomes and assuming an equilibrium position exists, without considering option values towards longer term social or wellbeing goals. This can result in a failure to consider **trade-offs** between different options properly.

Water economic regulation has successfully considered this – for instance at PR09 sufficient space to allow for catchment management pilots to emerge. However at PR19 it is less clear that the future resilience outcomes have similarly allowed for option values, by taking a narrow view of impact on outcome incentives (e.g. defining resilience in terms of impacts on interruptions beyond 24 hours, which are not generally experienced because market incentives would apply to more common events which were not low probability and high consequence). The challenge is whether the need for regulators to have data to feed analysis tools, efficiency modelling and comparative targets with outcome incentives limits appropriate trade-offs in decision making (and achievement of longer-term public value outcomes).

The importance of public value and citizenship to a more pluralist approach suggests there needs to be greater awareness and scrutiny of the goals and tools used in economic regulation. The economic regulation orthodoxy suggests that the tools themselves are too complex for consumers to understand and make decisions on. Both CCW and Ofwat have expressed such views in considering the role of customer research. This is a proposition which does not treat consumers as citizens, as it implies they are not intitled to views on matters considered reserved for economic regulation. Even if this were acceptable as a proposition to current citizens, this is unlikely to be the case for future citizens – why should they trust economic regulators / consumer representative bodies who believe this to be the case? It does not appear to address the ethical concerns of fairness discussed in section 6.2.

If trust and relationships matter to the ability of economic regulation to support wellbeing and public value, there is a role for economic regulators to create a **shared space** that make its tools more accessible, rather than being a public authority contracting standards to fit with a top-down policy design set centrally (which is inconsistent with public value). We argue that a "shared space" approach to decisions result in a better environment (of trust) and better long term outcomes. The analogy is made to the comparison between "shared space" traffic management schemes, where outcomes improve for both road safety and wider public value of a more pleasant environment by removing the top-down application of hard rules and structures (such as road signs, traffic lights, box junctions etc). The focus is on responsibility, with regulation in the background, rather than foreground. The limits to which this approach can be used come down to trust.

This comes from a general challenge to economics that it tries to rely on **known, predictable forces.** For instance, this limits the purpose of the firm to managing contractual risk, something that then needs regulating, for instance in assuming that changes to the legal construction of the nature of the firm (section 172 of the Companies Act 2006) would improve outcomes from companies, rather than being seen as part of longer term corporate risk management – based on trust and relationships.

There is evidence for an alternative proposition that uncertainty as to societal change and both social and commercial purposes are driven from this. Many firms are originally set up with both these purposes in mind, and effective local markets allow both purposes to continue to thrive. Social change and wellbeing has at least the same influence on competitive market decision making as predictions of market efficient outcomes. Even for finance providers, it is regulation based on assumptions on market forces that forced companies and their investors away from managing risk against a wider purpose, attempting to plan for the long term in a way that compensated for short termism that market outcomes implied[30].

The challenges for economic regulation can be seen as trying to keep issues of **efficiency** and incentives separate from issues of **equity**, trust and fairness, or ascribing that the former are the property of regulation and the latter of purposeful / enlightened companies, by assuming they are beneficial to efficiency of market outcomes however these are arrived at. But beneficial does not necessarily mean they are cost free. This may be the case, but it is an unproven assumption that citizens may not trust or take for granted. The language of economic regulation does not currently suggest these issues and any trade-offs are explored, other than to deny this trade-off should be considered.

An example of why trade-offs and equity should be important to economic regulation can be seen in the suggestion that more use of revealed preference economic valuations should be considered, because of the perceived limitations in customer research driven stated preferences values. Revealed preferences are preferrable from a neo-classical economic perspective, because they are an independent market observation so not susceptible to research design. Whilst this is true, it ignores the question as to why trade-offs should not be relevant to economic valuation, particularly given that the neoclassical position does not deal with externalities or where equity (rather than efficiency) is a concern . As Earle et al observe:

"Revealed preference can lead to some strange and unpalatable conclusions, such as the idea that lives in poor countries are worth less than those in rich countries, and has been criticised on the basis that it extrapolates from trivial individual behaviour to life-or-death political issues. It is especially problematic when dealing with the impact of environmental damage in the far future, since it relies on the decisions of people who are alive today. It therefore cannot take into account the interests of future generations simply because that are not yet born".

So even if we believe that it may be appropriate for the limitations of a particular economic regulation tool (e.g. CBA or outcome delivery incentives), equity and public value theory suggests this should be extremely problematic and should be ruled out from the a pluralist perspective of trade-offs.

Economic regulation will fail to be pluralist if it does not take institutional, evolutionary and ecological economic principles into account, preferring the traditional neoclassical orthodoxy for regulation and incentives. As we show earlier, the tools themselves of both efficiency and outcome incentives can lack logic from a consumer trust perspective.

6.9 Groups, networks, trust and incentives

An additional aspect of pluralist economics concerns the importance of groups and networks, rather than the focus necessary for efficiency and incentives on individual

[30] We explored the history of firms and social purposes in "Age of Purpose", https://www.linkedin.com/pulse/age-purpose-organising-new-social-contract-full-version-mcguffog/?trackingId=BHsCsoAzRBqixMaDSgjj6w%3D%3D

companies and consumers. For instance, Frijters & Foster[31] explored the potential that groups and networks can be given greater weight in economic theory. They do not argue that the benefits of networks mean that we should not encourage competition, as the opposite position that monopolies benefit society is not a behaviour that they consider is observed. Instead they argue that competitive markets tend to show efficient outcomes that include collaboration and groups that can benefit consumers. We would argue it is the social impact of this collaboration (rather than the market impact) which is often less clear, and should be given greater weight in the tools used in economic regulation.

The question also arises as to why regulators should be trusted, particularly economists as regulators. Frijters & Foster raise the question ***"When the whole rationale of regulation rests on the fact that one does not trust the regulated monopolist to do the right thing for society as a whole, why should one trust that the regulating economist will do the right thing for society as a whole?"***

They conclude that as this requires a focus on wellbeing for society as a whole, it relies on an implicit trust in the way that economists as a group work, and that this trust underpins societies trust in them as regulators. They conclude it is important to understand this dynamic, and its limits.

This matters to incentives – economic theory and the tools of economic regulation relies on a rational agent in companies and consumers who respond to financial incentives. We would argue this ignores the reputational power of incentives which behavioural evidence suggests is stronger, for both boards and consumers, at least where they have close enough relationships to the communities that they serve to allow this reputation to matter to them personally. Response to incentives is the only rational reason why different forms of ownership may matter, if we recognise that one of the arguments regulators have used for increasing both efficiency and performance financial incentives has been to balance investor's focus on financing incentives with more "customer" focused areas of performance. The UKCSI evidence in section 4.2 suggests that with utilities, smaller companies, and those who have a public or mutual ownership, may have higher trust and service levels, although the cause and effect here is not clear or universal in other sectors.

Ofwat has recently made observations on the different behaviours of different types of investors, which may be a group dynamic rather than a purely economic observation[32]. But the frame of the observation is through economic regulatory incentives (efficiency, focus on short term financing etc). There is evidence of consensus behaviours emerging (e.g. companies and investors adjusting behaviours to reduce gearing and risk, because of reputation and trust challenges from Government, Ofwat and stakeholders), but this consensus was reduced during the PR19 price review process, because of the application of a financial incentive mechanism (the Gearing outperformance sharing mechanism). The CMA had to consider both the incentive properties of the mechanism, but also whether

[31] P Frijters & G Foster (2013), "Economic Theory of Greed, Love, Groups and Networks", Cambridge University Press

[32] e.g. https://assets.publishing.service.gov.uk/media/6021626be90e0711c8c3d4ba/20210203_Ltr_to_Kip_Meek_from_Jonson_Cox_Redacted_---.pdf

there were procedural or other alternatives to a financial incentive. Ultimately the CMA could not reconcile the theoretical or practical logic of the proposal[33].

Financial incentives rely on rationality, but reputational incentives carry a greater sense of equity/fairness with customers. But if agents were rational then the economics/regulatory tools should be redundant, because the harm would be avoided unless there was information asymmetry and the harm could be hidden by the rational agents. Of course, the world is not perfect and neither do companies interpret financial incentives perfectly, and economic regulators cannot design such tools perfectly. Rather than introducing further incentives to reduce the potential for information asymmetry, an alternative approach could instead attempt to focus on the wider issue of trust and relationships. To address concerns on information asymmetry requires a participative process to engagement, rather than one that reserves "red lines" of policy to economic regulators and the rationality of incentives or market efficiency theories.

6.10 Conclusions on theory

So, taking the observations from group and network economics and from an institutional perspective, we have to question whether those both within regulated companies and those undertaking economic regulation are focused on it as an intellectual challenge to make an orthodox view of economics apply in practice. It is likely to be the case, given that group power that is involved that those engaged in the process have more knowledge about how efficiency measurement and financial incentives design and how it fits into the wider policy making than those traditionally less engaged in regulatory processes – an observation made by John Penrose.

One question therefore is whether those involved could equally grow to love an alternative process (and language) that was more open to the imperfect, and more inclusive to building consensus with a wider group of stakeholders.

The challenge to ethical regulation is that a process needs to be described. One of Daniel Kahneman's concerns with the application of behavioural economics was that it was "*destined to be non-cumulative*" i.e. when a new model is developed to account for an anomaly of the basic theory the parameters that were modified in earlier models will often be restored to their original settings.

In economic regulation there is an increase in complexity, burden and unrealistic expectations for the process in isolation of other institutional and cultural aspects e.g. attempting to improve a cost benefit/equilibrium, rather than being a continuous process. The example given earlier of Per Capita Consumption may be a case in point. To reduce consumption over time will require the trust of cohesive groups and a series of transactions and relationships – it will take a large amount of social capital to be built. This includes trust in the process being used to target reductions in consumption.

[33] https://assets.publishing.service.gov.uk/media/604fa141e90e077fe7a5f45a/-_CMA_water_redeterminations_-_summary_-_online_version_---_-.pdf, paragraph 102.

There are two conclusions reached from the assessment above:

- First, there is a contradiction between the tools of efficiency, comparative incentives and economic regulation, and the ethical needs of regulating for the wellbeing of society. The assumption that economic regulation can improve its tools to bridge this contradiction appears to be flawed. The theories of the world are inconsistent with each other, and even if they weren't, the ethical basis wouldn't be clear to those who feel outside of the regulatory process, including most stakeholders and citizens / customers. The language of outcome incentives and cost-benefit analysis requires too many ethical judgements to make this central to short term price reviews.
- Second, efficiency measurement and financial incentives still have an important role to play, even if they become less central to the language of economic regulation. If we amend the regulatory framework to attempt to build consensus on risk and trade-offs, what changes to how we consider risk and return from incentives may be required.

We consider proposals related to these two priorities for modernising regulation to focus on consensus and trust in turn.

7. Proposal 1: build consensus with stakeholders

7.1 The use by regulators of Customer Challenge Groups (CCGs) in price setting

We have established that the focus of price reviews relies on assumptions of efficiency and incentives that are open to challenge. The main issue with this approach is it affects adversely affects the trust of non-company stakeholders in both the regulator, and potentially the water company.

The Harry Bush & John Earwaker report for UKWIR in 2015 (*The Future role of customer and stakeholder engagement in the water industry*) suggests three models for the use of Customer Challenge Groups (CCGs) in price reviews.

a) as consultees into a regulator led price review;
b) certification of customer preferences, with a remit given by Ofwat (the PR19 model); and
c) for the CCG and company to reach agreements on the plan as a whole – with a role for the regulator to test consensus and provide key parameters.

The experience of CCGs from PR14 and P19 is that they can play one or more of these roles. Acting as consultees is not controversial, and many of the members of CCGs would act in this role through other fora if CCGs did not exist. Providing certification of customer preferences is also within their abilities, although a constraint is lack of specialist knowledge on research techniques, leaving them vulnerable to misinterpretation of results. The controversial issue is how far CCGs should move towards playing a role in reaching agreements on the plan – to what extent they and regulators would be willing and able to transfer decision making to CCGs, without creating undue risk of reaching a settlement that is not as challenging to the company (and therefore beneficial to customers) as one which the regulator would otherwise impose.

The limit of their role to the long-term is likely to reflect the limits of price reviews, as the role and tool of CCGs as on-going interested stakeholder groups is not novel or particularly challenging. Rather, consensus and transparency building will work best on a long term basis, and also reflect progress and performance. This leads to regulator concerns as "capture", although how easily this sits with regulator concerns on "information asymmetry" is open to challenge.

In reality CCGs in price setting become one or more stakeholders, who the regulator can choose to engage with and define price review remits, but this should be not their sole focus. However, they can play a role in explaining and understanding the regulatory framework to other stakeholders, rather than this being direct from the regulated company.

There is an institutional economic argument for this, to deal with complexity of a process, and through this build trust in the regulator, as well as the company. Collaboration between CCGs and the regulator can do this – particularly if the definition of what is to be decided nationally, locally and the ambition and distinction requires exploration if there is a consensus that can be found.

7.2 The Littlechild challenge and negotiated settlement

An important submission by Stephen Littlechild to the recent CMA water appeals described the price review process as a ***"straight-jacket that I found myself having to impose on some of the companies and, by implication, their customers. In order to bring some order into the process, and to facilitate comparisons between companies, I had set out a framework and methodology that would be followed by all companies***."[34]

The question he raised was whether the straight-jacket could be removed through negotiated settlements – a process where the regulatory framework sets some steers (e.g. directions on prices and efficiency) but then allows for consensus to build within the framework. He described his experience as

"It eased the burden on the regulator. The agreement provided the efficiency incentive of a fixed price instead of a profit limit. And it left both the customers and the company feeling satisfied because they had negotiated an outcome that was mutually acceptable and preferable to the regulatory alternative – an alternative that was costly in terms of time and resources, and uncertain in terms of outcome.

The process did not always work smoothly or completely – sometimes a company and the various customers or customer representatives were not able to reach agreement, or only a partial settlement or a non-unanimous settlement. And occasionally the regulatory commission did not feel able to accept the negotiated settlement in its entirety, though they usually tried to accept it subject to small modifications. But in the jurisdictions mentioned, as well as some others, it gradually became the norm to at least

[34] https://assets.publishing.service.gov.uk/media/5eda3e6ce90e071b7bd7a2ed/Stephen_Littlechild_submission.pdf

explore a negotiated settlement before committing to a full rate case. Indeed, I understand that in Texas the regulatory commission now requests that the parties seek to reach a negotiated settlement before petitioning for a new rate case to be opened."

There are no real limitations on any regulator to use negotiated settlements, as in itself it is not a specific approach. It does not change the duties on the regulator, or the tools of economic regulation as such. It does not change the judgement that is needed when applying those tools. It does not transfer responsibility, although it may increase understanding of the trade-offs faced and transparency on regulator decisions. It does not change accountability of the regulator to Parliament. Negotiated settlements do not on their own improve local accountability for decisions made, nor is it likely to directly result in an increase in consumers' trust. Not does a negotiated settlement change the potential for competition to replace economic regulation.

There is a risk with negotiated settlements that it becomes a figment of consensus, unless policy making itself also listens to the bottom up views, and then some accountability for policy making is similarly devolved. It is entirely possible that in England the outcome of price reviews with an element of negotiated settlement could be worse and result in more complexity in the regulatory framework – with overlapping companies (e.g. between water and wastewater), and a mix of national and local issues, there could be a multi-tiered negotiation required. Ultimately a negotiated settlement might end up being very similar to the current CCG process, just with a bit more marginal delegation. It would remain difficult to describe the process to consumers, and to persuade them that their interests are better served through this model compared to national regulation.

What can be fundamentally taken from a negotiated settlement therefore is the communication and engagement with the CCGs and other local interested parties at an early stage of a price review process – a shared proposition on objectives and issues for the industry could be developed by Government, regulators and companies that set out the remit for exploring local issues, and then building consensus.

However, Littlechild goes further and sees the main challenge as being a "one size fits all" price review approach, based on the comparators, which limits the CCGs role as regulatory bodies retain a monopoly on ultimate decision making. ***"The regulatory bodies retained their monopolies on price control decision-making: they alone would decide the nature and duration of the price controls, reflecting their own views of what was in the interests of customers."***

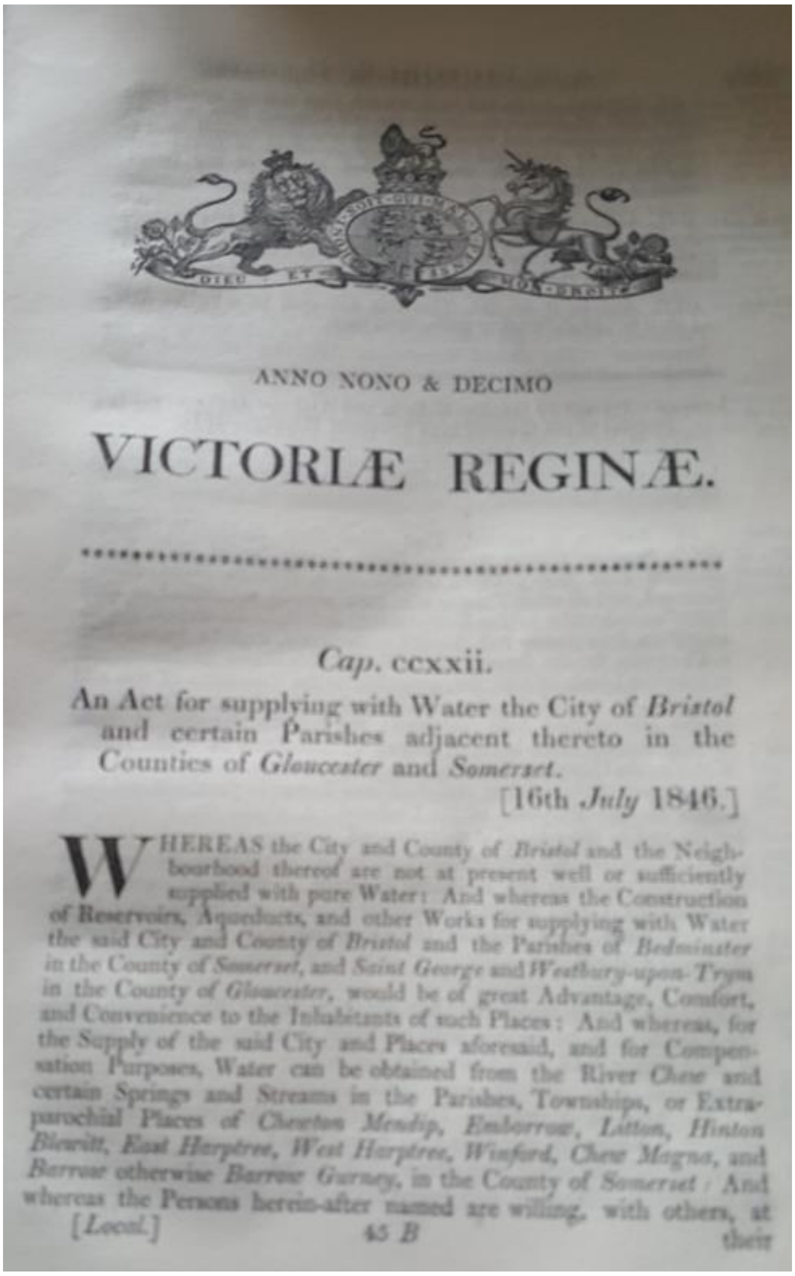
Ultimately there is a gap in negotiated settlement, which is the degree of risk allocation. It is not possible for regulators in practice to give up on a monopoly on ultimate decision making when faced with national policy setting. Water is ultimately a local public service but will always be in the context of that national framework – for good environmental reasons, but also the risk of a public policy challenge of "postcode lottery" where service levels and outcomes vary across the country.

7.3 Barriers to local consensus in a national framework

Although we cannot avoid a degree of “postcode lottery” due to natural differences in the geophysical and economic dynamics of water company supply areas, in water there are common service standards but reflecting local communities needs inevitably will make it harder to compare all outcomes, where wider societal or environmental factors are being considered. The perception of fairness and ethics become important. The challenge therefore is not to remove the monopoly in decision making from regulators. In reality such a monopoly does not sit with the economic regulator in any case, as other bodies impose standards irrespective of the financial settlement. Most water companies have experienced this when new obligations come along outside of price reviews, which is part of the financial risk that shareholders carry and has a degree of licence protection (interim determinations and notified items) that in itself form a part of a price review judgements.

The alternative is to more explicitly consider fairness and ethics as part of risk trade-offs that companies face. This assumes we do not restructure the water industry to match a new framing of national and local responsibility and accountabilities, for instance returning to local Parliamentary bills or requiring explicit local authority support and oversight. Devolving water and other utilities is a matter for central Government, and would not solve the challenge of economic regulation (assuming it did not remove it, which appears unlikely given international experience of central economic regulation, normally cross-sector, existing even with municipal control of utilities).

It is appropriate that Bristol Water is writing this piece – being established in 1846 by an Act of Parliament that set out rights and obligations and included a range of what we would now describe as economic regulation – from specification of maximum prices, free water for fire fighting, restrictions on borrowing and dividends, penalties for non-supply and even social tariffs.



ANNO NONO & DECIMO

VICTORIÆ REGINÆ.

Cap. ccxxii.

An Act for supplying with Water the City of *Bristol* and certain Parishes adjacent thereto in the Counties of *Gloucester* and *Somerset*.

[16th *July* 1846.]

WHEREAS the City and County of *Bristol* and the Neighbourhood thereof are not at present well or sufficiently supplied with pure Water: And whereas the Construction of Reservoirs, Aqueducts, and other Works for supplying with Water the said City and County of *Bristol* and the Parishes of *Bedminster* in the County of *Somerset*, and *Saint George* and *Westbury-upon-Trym* in the County of *Gloucester*, would be of great Advantage, Comfort, and Convenience to the Inhabitants of such Places: And whereas, for the Supply of the said City and Places aforesaid, and for Compensation Purposes, Water can be obtained from the River *Chew* and certain Springs and Streams in the Parishes, Townships, or Extra-parochial Places of *Chewton Mendip*, *Emborrow*, *Litton*, *Hinton Blewitt*, *East Harptree*, *West Harptree*, *Winford*, *Chew Magna*, and *Barrow* otherwise *Barrow Gurney*, in the County of *Somerset*: And whereas the Persons herein-after named are willing, with others, at their

[*Local.*] 45 *B*

The history suggests that there had been a degree of consensus building attempted – the 1846 Act includes a range of consensus elements, but also includes outcomes necessary where consensus couldn't be found, such as compulsory purchase of rival proposals water supply infrastructure. Ultimately Parliament had the monopoly of final decision making, but only could do this with information provided bottom up rather than created top down. This seems a useful analogy for the current monopoly of regulation Littlechild describes economic regulators as holding onto.

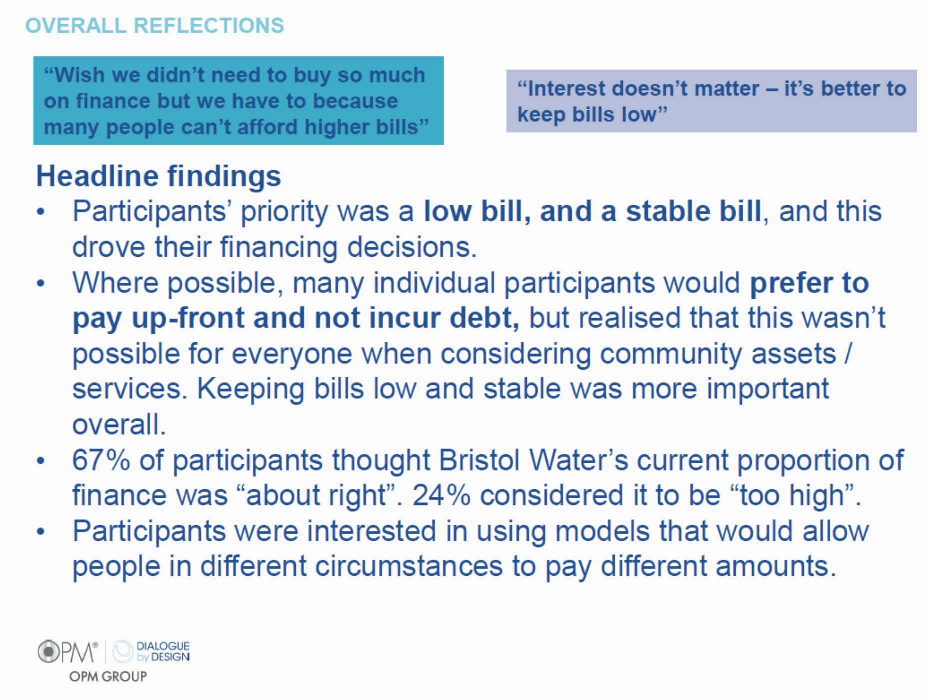
This suggests there could be role for alternative plan scenarios to be developed, with local expression of the pros and cons (and degree of consensus for each one). Alternative plans are not a new concept in regulation, but could allow loosen the monopoly of economic regulators, avoid the complexity of thousands of marginal adjustments, and explore consensus.

The water service standards in any case are increasingly based on international standards (irrespective of Brexit), which does not seem to prevent most countries allowing control of how water is delivered to be based on local consensus. There is a challenge here that water standards in the UK are at least as good as most of the international comparisons in many regards, and those that are not (such as leakage perhaps) largely reflects both historical factors of how water services developed, and more recent policy priorities. The focus of one company plan and then using comparisons to overcome information asymmetry would not be completely lost with such an approach.

7.4 The risk of capture

A key issue, that was identified by the UKWIR report on involvement in price setting, but also at PR19, was the perception of capture of CCGs (expressed by Ofwat and national consumer bodies). This tended to occur where CCGs went beyond the regulator's view of the CCG's role, and the consumer bodies view of what customers can express a view on, into areas seen as preserve of regulators (in particular cost of capital, econometric modelling and design of incentives). From a regulator perspective this is seen as capture where CCGs support a companies' view of a plan and customer research, whilst from the CCG and company perspective this is a based on an understanding of trade-offs. There are two challenges here

- First, there is an absence of evidence that customers cannot explore these topics of regulation, if the language is translated. Whilst it is true that customers do not generally think about these issues (and don't have the understanding of why, for example, in the water sector borrowing/investment can keep bills lower if not done on a "Pay As You Go" basis), this does not mean that you cannot explore customer views on these options in developing a business plan, as the options are tangible in that context. For instance, we show below the conclusions of an exercise we carried out for PR19 which explored views on financing in the context of community and infrastructure assets:



Source: Company Financing and Bill Impacts Deliberative Event, December 2017

- Second, rather than suggesting capture, the language about the limits to the role of CCGs tends to focus on risk and incentives, rather than trade-offs – the accusation could be that economic regulation fails to recognise inherent trade-offs and judgements, or believes these are largely reserved to the regulator. Our argument that this will destroy trust and relationship in the regulatory process if this position is taken. Negotiated settlements are not a specific solution that is an alternative regulatory approach, but exists in a continuum. There are a number of features of a successful modernised regulatory process that moves beyond price reviews as a regulatory response to a neoclassical view on monopoly rent seeking:
    - Acceptance of pluralism of opinion, and ethically seeing this as part of the process;
    - Recognition that the regulator should test the degree of consensus and respect / respond to this context (as a minimum); and
    - Commitment from the regulator to the process, such that trust and strong relationships are seen as an important outcome as the level of process or the price review itself

One issue raised in the UKWIR study was the risk to investors if there was heterogeneity between different company settlements, in the sense of a more complex regulatory framework. In reality, we already have such divergence (e.g. fast track companies at price review), which has caused a degree of confusion as to what the regulatory framework is. There are also bespoke arrangements such as Direct Procurement for Customers, reflecting competition in the market on a piecemeal basis. However, a wider view of consensus building can include between the regulators, companies and Government and not just CCGs – transparency of this discussion about standardisation versus localisation may help with building a wider consensus (including whether it meets the local accountability challenge across utilities, such as necessary for local climate and ecological responses. (e.g. such as the Bristol One City Plan).

Ultimately, if we are genuine in believing there is a wider public value for the water sector, then we need to consider moving economic regulation away from economists, if their perspective cannot adapt away from models of incentives where the assumptions do not hold.

7.5 The role of trust and relationships

We established earlier[35] the importance of trust to seeking a pluralist approach to modernising economic regulation.

A previous think piece on purposeful companies and societal wellbeing "Age of Purpose[36]", set out the importance of who is trusted, which can be seen as important to long-term decision making in public services, and in particular for water. It summarised how design of regulation would generally have greater acceptability to those who had experience of the past when there were water supply, quality and environmental challenges less experienced today, perhaps under public provision. This left a trust gap to future citizens and younger groups of bill payers, both in how they could engage. For economic regulation the limitation of bill payers of today may not help identify what is necessary to protect future consumers.

"The other factor is who is trusted – corporate social responsibility and accreditation meant more to today's consumers than tomorrow's – the younger citizens of today and future citizens didn't have the same degree of shared connection to what the world of water supply and the environment used to be like.

"This ultimately comes down to trust. Corporate and employment law mostly relies on contracts – the provision of goods, services or labour in return for compensation, usually financial. The concepts of what is fair, either in terms of individual contracts or through competition law or regulation the operation of markets for the benefit of consumers. The view of firms that shareholder interest dominates decision making has often seen as acceptable if it operates within these boundaries. Within different firms and markets though the perception of how far the boundaries that are set on fairness in markets has varied significantly. For the "pipes and wires" firms traditionally considered as natural monopolies there has been a trend towards reducing fixed boundaries to avoid regulation stifling innovation and change that would be in consumers interests."

A key factor in institutional economics is to reflect that trust in the younger generation / future citizens also tends to be lower in Government and institutions because of their own more limited ability to engage. The challenge to regulation therefore must be that if companies and social contracts have recognised the limitation of framing a social relationship based only on current customers and a transactional relationships, how can

[35] Sections 4.3 and 6.6

[36] (https://www.linkedin.com/pulse/age-purpose-organising-new-social-contract-full-version-mcguffog/?trackingId=NZbdltSwSUWtIT0iE31niQ%3D%3D)

economic regulation improve its tools without a greater value being placed on trust and relationships. As "Age of Purpose" also stated:

"The challenge faced by future social impact monopolies is the same as the limitations with any contract that even if it was entered into willingly and fairly at one point of time, whether it was explicit or implicitly entered into can cease to be fair or trusted as markets or society changes. This is not just a matter of size of organisation – something that J.K. Galbraith described as countervailing power, but an ability to consider the benefits of that power from a social perspective. Political, supply chain, rival companies, union, consumer groups, regulator, legal and investor power may be sufficient to countervail a firm's market power, but it is far from clear what the role of a purposeful company with strong CSR adds to this. If companies are ultimately a network and organisation of people, there is an opportunity for social contracts to rebalance this – which I define as a restriction on freedom to act willingly taken by an organisation to achieve a social purpose that cannot be achieved"

7.6 How do investors fit into a world where regulation focuses on trust and relationships?

The development of the modern firm was a social response to the challenge of the Victorian Age, particularly for utilities. The original Victorian social enterprise firms tended to be set up by philanthropists with a network (sometimes families) active in more than (e.g. in Bristol Fry's Chocolate, Francis Fry was one of original founders of Bristol Water) – their organisations had lasting power and were successful because of the purpose, values and principles set down by their founders. This is challenging to recreate in organisations who have a different history, and particularly hard where there is a change of ownership.

The change in purpose perceived from a change in investors, and the negative impact on local communities where ownership of the chocolate firms changed with other multinational companies with a different history. It can be retained through social enterprises and charitable trusts that are part of the family, but this creates a disconnection from the history of the organisation when the ownership changes, even if a common name is retained. So, it is clear from this that without the support of investors, trust in an organisation through a social purpose is impossible to achieve. It is possible for a social contract to provide some protection of fundamental values from a change in ownership which allows the values and purpose to mean something.

Some may argue therefore that it can be recreated through regulation. Similarly, a social purpose can be included in company articles of association, but these are still subject to changes in ownership, changes in regulation and changes in law. Employee trusts and employee ownership may provide some protection, but these do not necessarily enhance employee or societal wellbeing, although this may depend on the nature of the firm and service it provides – for pipes and wires or other firms where there may detriment from a social impact monopoly, it is not clear this can work, although it clearly can for a pure service firm or technology products.

There is the opportunity to create or renew a legacy by building the company culture and values for the future, recognising my view that it is the relationships that companies build and maintain that defines what they are as an organisation, and not just their product or contract performance. These relationships are the set of knowledge and influences that will affect the evolution of the firm and the market it operates in. Relationships that are as strong as between the social entrepreneurs of the 19th Century remain possible but need to be modernised for society today. Organisations that don't focus on relationships are just left with transactions and will not have the agility to evolve as society changes around them. The same can also be said for incentives in the regulatory framework, if they are implemented based only on a neo-classical market view that consumers only trust well-functioning contestable markets, and not companies with any other purpose, as they are only allowed to be economically rational responders to incentives.

It is clearly in investors' long-term interests to achieve strong relationships and trust, if it is a key to market operation because it the voice of current and future citizens, and local accountability requires it. Where this is centralised, it is inevitably harder to include financial decisions within these impacts, as the decisions on a particular area become more remove from an investor perspective from the financial consequences. If regulators are to rely more on building strong relationships, rather than just incentives, and to improve the language of regulation to build trust, then it will influence and support investors to take this perspective.

The perspective of J.K. Galbraith that society used to have a culture of contentment, because of the countervailing power of business, unions and government is helpful if we consider that, for regulated industries, independent economic regulators have had to take up the role of being a pivot point in countervailing power. This, alongside liberalisation of financial markets and privatisation provided a role for economic regulators that was narrow (as Littlechild describes), but never sufficient or designed on its own to replace the social contract that broke down in the 1970s and was replaced with the spirit of individualism and popular capitalism in the 1980s.

As Franks, Mayer and Rossi[37] showed, the decline in family ownership in the UK and the social aspects to corporate purposes that were retained in many other countries, particularly continental Europe, related to law and regulation governing stock market and share structures, rather than being something driven by shareholders pursuing value for them at the expense of other objectives.

The rebuilding of public services in the 1997 to 2007 era used a combination of private investment and private provision of services which became controversial, partly due to the concentration of such arrangements through takeovers in a few firms. It can be argued that it is not the private investment that should be controversial but the centralisation of local responsibility and accountability, in part through takeovers, to complex structured firms that lost their links to local communities that relied on the public services. Ofwat has recognised this risk to water customers, but there appears to be a gap in the tools, that financial incentives or other regulatory areas (as discussed with gearing sharing) cannot address.

[37] *https://www.nber.org/papers/w10628.pdf*

The landscape changed again following the 2007 financial crisis (certainly in terms of trust in banks and financial services), but the impact of austerity saw further centralisation of both firm organisation, public services and public policy making. It is the impact of this on society that in our view provides the contract for all organisations, and not just local utilities, to focus on their relationships with local communities through establishing their social contract.

The implication is that if regulation is to move towards greater consensus and trust, then investors will need to be involved in the process and also consider the relationships they are building, rather than been seen as remote. This can still be delegated and reflected in processes that have Board scrutiny. In some ways this is a natural extension of sharing mechanisms.

7.7 A social perspective on governance and regulation

In response to the ethical gap for investors that arose as international financial markets become liberalised, there is a potential for better social outcomes through changes in the expectations in these markets. An example is through greater definition of social needs through KPIs (Environmental, Social and Corporate Governance metrics – ESG), It is also possible to argue that these metrics are well reflected through water economic regulation and outcome incentives, supported by the corporate governance that comes from regulation of dividend policies and executive pay, the more general Board Leadership, Transparency & Governance principles that Ofwat has codified (flexibly) through licence conditions, the general requirement for all companies to follow the Corporate Reporting requirements of listed companies.

It has been argued that ESG requirements are supported by investors, and can lower the cost of finance, with risk to investors reduced where a company can evidence environmental and social credentials. Some may therefore argue that this is sufficient to allow economic regulators to focus on efficiency and performance incentives, if the cost f finance is reduced by better social outcomes for companies. However, ESG finance effectively ties in management by linking financial terms to delivery of ESG commitments – there are higher costs if the ESG metric or outcome is not met. From a societal perspective this faces a similar challenge to regulation, but is at least aligned with economic regulation principles. It would appear unlikely that this could reflect local social priorities, or that consumers and stakeholders are ready to trust this shift in financial markets until it carries a local market perspective within its operation.

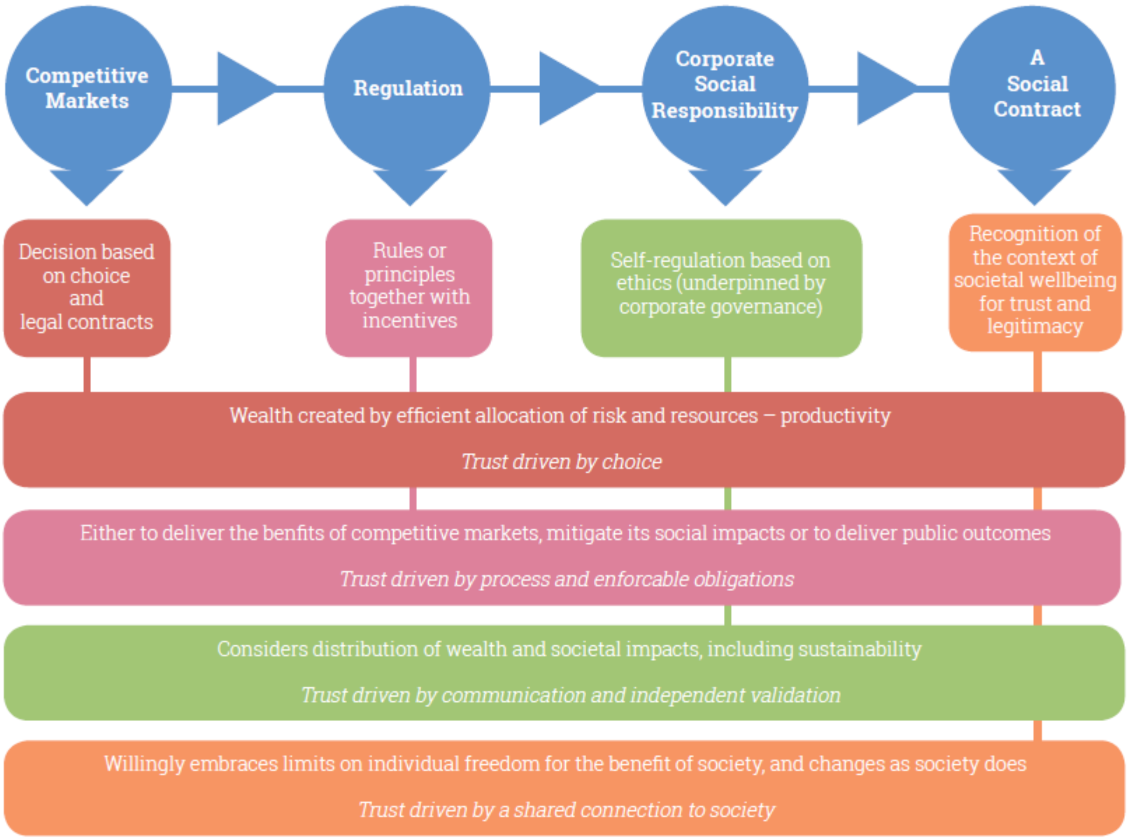
There is a separate but parallel challenge (similar to the general challenge to wider Corporate Social Responsibility), to what is known as “stakeholderism” – the definition of a wider group of commitments and responsibilities of the corporation. One of the main challenges has been the degree to which corporations see this as something within the remit of the CEO, and Board or investor commitment is therefore less clear. This suggests trust and quality of relationships is important in assessing how much alignment social and environmental focus in corporate governance really adds to societal wellbeing.

The reliance on legal contracts (e.g. by environmental and social financing providers) and regulation (through increasing reporting, or public value expectations on infrastructure firms) is insufficient without a wider perspective of a social contract. As we suggest in terms of the regulatory process, reliance on measurement does not necessary build trust in relationships, and may reflect national (or international) top down rather than local bottom up perspectives. Centralisation (i.e. standardisation) of decision making has social consequences.

What stakeholderism / ESG is less likely to resolve are ethical challenges, where trade-offs are required. This is because the social impact on power and the privilege that historical property rights gives to groups of individuals and firms is not something that law or regulation can easily resolve – they are designed to support it and can only use competition to erode it or incentives to mitigate it. Centralisation or power, in particular in the market for corporate control, has eroded the social contract that the Victorian founders of the modern concept of the firm saw as a solution to societal macro and micro challenges, such as health of the workforce due to poor water supplies or housing conditions.

7.8 What is the social scope of economic regulation?

When Bristol Water first considered what our new social contract could be like, we focused on our role for trust. Building a consensus with customers and stakeholders on what the role of that social contract could be, we had to explain why it was different to regulation, or Corporate Social Responsibility (CSR). Monetising or regulating CSR and governance is unlikely to build trust, as suggested in the trust framework developed below:



This framework recognises the limits of regulation of markets based on fixed rules. Earlier we used an analogy for alternatives to rules based regulation based on "shared space" traffic management schemes – fixed rules still exist (equivalent of speed limits), but the social responsibility to others is enhanced by removing the primary focus on these rules in the local environment – reducing barriers and boundaries forces drivers and pedestrians to focus on the relationships between each other in that shared space.

When the modern concept of the firm was developed in the 19th century, the traditional role of creating economic wealth through improving productivity and reducing transaction cost from trade, could be seen side by side with progress in improving the health and living conditions for workers and the wellbeing of the place where the firm was based. There was an implicit social contract – the most successful firms willingly saw local community investment as part of their long-term strategy.

This particularly applied to the development of public services, such as water and sanitation. The background to many water companies stems back to public and private development to reflect the needs of **society**, and the cultural aspects that affect the **wellbeing of the citizens within it**, and to be effective this should, as it was in Victorian times, start with the **local issues** where people feel they can make a difference, **especially for national or global crises.**

Understanding culture requires diversity and pluralism of thought. Antanas Mockus[38] described leadership of social and cultural change as an art, rather than a science: **"My *idea of the artist is someone who in a prison cell, takes a piece of chalk and draws a border to define his space, a person who has more restrictions than those normally apparent. But upon defining these restrictions himself, he liberates himself*"**.

For economic regulation, this "art" exists through a world of transactions, incentives and through the power of relationships. There is a risk that economic regulation forgets about the importance of people and relationships. This is important to ethical economic regulation therefore.

For economic regulation to reflect this priority is different from negotiated settlements, such as identified in the WICS model for Scottish Water. The model in England is a more complex landscape of relationships that includes diversity of company, stakeholder, Government and investors – one that requires the use of incentives, and cannot ignore or replace the role of private finance (in part as the result would be sub-optimal).

Instead, if regulation is to evolve, then it needs to provide the space for diversity and local accountability to be explicitly considered within the regulatory process. This may mean removing some of the certainty that rules and incentives may have by being set centrally, and replacing them with more local and bespoke outcomes. This does not mean removing power to determine price reviews from the regulator, or creating new institutions to allow for negotiated settlement. Instead it requires two factors, first how the regulator engages

[38] C. Tognato (ed) (2017). "Cultural Agents Reloaded: The legacy of Antanas Mockus", Harvard College

in company attempts to build consensus, and then how this is reflected in risk and return decisions.

7.9 Proposed approach to trust and consensus

To address this challenge therefore water economic regulation will need to leave ownership of building plans and consensus to the regulated company. The role of the regulator would be redefined to:

Still focus on the competitive market framework that Government policy expects it to introduce.

Ensure there is a clear distinction about what is nationwide central policies and local policies and decisions. The economic regulator's role is to translate this from Government to the regulatory framework. Companies, consumer organisations and other stakeholders need to make the case direct to Government for policies, rather than this being a role undertaken via the economic regulator. This includes the degree to which water decisions are devolved.

Undertake early engagement with companies to and stakeholders to build and test consensus as to what plausible scenarios about the industry and individual companies may be. Where the regulator has views on what should be incentivised, based on observations on industry performance or consumer detriments, the potential solutions should be specified at this stage (whether these are reputational incentives, financial incentives, competitive market action, enforcement rules etc).

Encourage companies to build a number of reasonably detailed, plausible future scenarios, so it is more credible to attempt to build consensus. The first stage of a company plan can then focus on a range of scenarios, rather than being information revealed through a single "best" plan. In practice, this reflects that having a single plan has increased complexity by putting excessive weight on producing a final plan, where regulator intervention remained inevitable.

Observe whether consensus is being built by individual companies on the scenarios, and on what elements from the scenarios are the main challenges to consensus and trust, and which groups in society this affects. Where consensus is clearly, the regulator will need to be satisfied (through measurement) of consumer trust in this consensus. Proposals from companies should focus on this impact. Over time, this can evolve outside of price reviews to being a more continuous process, assuming that consensus develops on longer term outcomes. On the main challenges, such as net zero targets, this should be a strict requirement.

The regulator should explicitly describe the risk balance and trade-offs they see from each scenario. Potential interventions are understood before companies develop with the regulator (and seek to gain consensus) on the likely judgements to be made in price control trade-offs.

At some stage then a preferred plan for the price review period can be identified. Ideally the tools of economic regulation can be applied to the scenarios before a final plan is developed. Efficiency can be measured comparatively, where there are standardised outcome incentives these can be calibrated, and financial risk and return considered (see below). This information is important if the choice between scenarios requires consensus. This is optimal but may prove to be the most challenging aspect for economic regulators, at least initially.

Where policy decisions can be devolved to local areas, particularly cross-sector decisions such as associated with changes necessary for the climate and ecological emergencies, the regulator should have a role with other sectoral regulators, the CMA and Government to enable this

Once the company has developed a prefer plan, the scope for intervention should have been reduced at earlier stages. The regulator would need to be specific about what the intervention meant for trust and consensus, particularly given that efficiency and financial incentives may have been sufficiently calibrated earlier. In practice though, the regulator can intervene in different ways at any stage, but there is greater information from a range of stakeholders (and not just the regulated company) about what the impact of this intervention may be.

8. Proposal 2: Risk and return trade-offs

The second part of a reform to the economic regulation process of price setting is to make incentives and returns a more explicit part of consensus building, to support the process described above. Ultimately this approach leaves risk and return judgements entirely with the regulator, but ensures there is sufficient dialogue so the justification for risk and return trade-offs can more easily be linked back to the range of scenarios that consensus was built around.

This requires a more explicit explanation of cost of capital, and in particular return on equity, beyond reading market data and assuming that the focus on market data is necessary from the perspective of financial incentives. This does not mean that market data does not have an explicit role, but recognises the regulatory orthodoxy that risk, particularly from asymmetric cost and outcome incentives, should be recognised in the expected rate of return that investors need.

This is something that was of particular debate during the CMA PR19 water re-determinations, with a difference of opinion between the CMA (and Ofwat on whether specific incentive risk should be reflected in return judgements[39], with Ofwat believing that the importance of financial incentives outweighed the risk of company underperformance in cost and performance incentives. Ofwat's at times characterised the apportionment of risk as favouring investors over customers, and there was perhaps excessive reliance on past performance and whether this was useful or not in incentivising the future, but ultimately this can simply be described as a judgement on interpreting evidence that is inherently uncertain, as would be expected for ex ante incentives. There is clearly unlikely to be an equilibrium of cost and benefit in incentive setting at any point in time that allows for clarity on the debate, even with the benefit of hindsight.

However, if we take the view that all incentives carry regulatory judgement, and we believe that engagement in a language beyond that currently used by regulatory economists is necessary for better long term planning, then it is difficult to see how we can avoid a more open debate on risk and return. The main challenge for regulators may be two-fold:

a) if investors are to have a social impact, this implies a weaker weighting is applies to the assumption that investors can diversify some risks when they invest (perhaps for longer) in individual companies; and
b) reconsidering whether different company circumstances may ultimately have different returns ex-ante.

In principle, there could be an explicit trade off made between the risk and return in the scenarios set out in section 8. There may be an explicit choice that companies and their stakeholders could make in this regard. For the regulator, this may mean some move away from the "truth telling" incentives associated with fast track, although it is entirely possible for such incentives to be retained as experience from PR19 suggests that, beyond the

[39] https://assets.publishing.service.gov.uk/media/604fa141e90e077fe7a5f45a/-_CMA_water_redeterminations_-_summary_-_online_version_---_-.pdf, paragraph 86

process and reputational incentives, they have become of more marginal value anyway. The principles of menu choice did not in water survive the PR14 application and subsequent review by the CMA, in part because of the greater complexity associated with it, which made it difficult to act as a real incentive on company decision making.

Instead, it is possible that the degree of ambition in a plan, and whether this reflected the consensus built by the company with stakeholders and customers, and observed by the regulator, could become the focus point of assessment. This may recognise that some plans need a higher ex-ante return, with higher efficiency or incentive challenges than others. Even if the regulator decides that ultimately standardisation should take place, this may be because alternative mechanisms (whether Direct Procurement or re-opening mechanisms) have a better risk and return balance than ex-ante recognition.

An explicit trade-off has occasionally been recognised between plan ambition, incentives and adjustment mechanisms and ex ante returns in water regulation.

One example In Italy, undertaken by the Independent Regulatory Authority for Electricity, Gas and Water (AEEGSI), developed an institutional framework based on the OECD recommendations on economic regulation, and was developed based on learning points promoted international co-operation between regulators that saw the foundation of WAREG (the network of European Water Sector Regulation.)

The establishment of this framework saw an evolution over time from ex-ante to ex-post regulation, but then in 2013 to a model setting out the long-term benefits of regulation, specific to the institutional model of Italian water sector, This allowed for regulation to vary depending on the initial operating circumstances of each operator. The overall framework was designed to introduce a set of innovative and asymmetric rules, which provided incentives to invest.

It considered a) additional cash flows where planned investment to RAB ratio was above a specified threshold and b) additional cash flows for an expansion of operations.

In 2016 this framework was amended to allow cash flows for contractual quality national harmonisation, and a common framework for legal obligations. The scheme allowed greater freedom in price controls where more investments were required, and where there was greater risk being taken (defined in terms of variations in operators objectives or activities – either water system integration or improvements in quality)[40].

Whilst specific to Italy, the principle that factors that affect risk could be agreed, and then within this framework customer representatives could with the company and investors select the degree of ambition, shared risks etc to fit with local circumstances has a large number of attractions.

[40] A good summary was provided by OXERA in https://www.oxera.com/agenda/the-strange-case-of-water-regulation-in-italy/

In the England & Wales water sector it is possible to make a distinction between water and wastewater services. Historically a split price control and rates of return have not been used, other than through recognising of Company Specific Adjustments to the cost of capital based on size. However, this principle, whilst also relevant, has always been tested by the impact on both financeability and risk, in terms of both the explanation of why a higher cost of debt will persist and also, more controversially and limited since PR09 to CMA decisions following appeals by Bristol Water, on the cost of equity.

In our view, the development of scenarios to allow consensus building about water company plans as a whole, a necessary component of building trust in water sector long-term decision making, needs to include explicit discussions on financing and other financial incentive risks as part of the trade-offs.

To make the consensus building meaningful, to make price reviews more accessible without automatically tying economic regulators into less use of comparators and incentives without some use of trade-offs, to attempt to reduce complexity unless it has purpose, and to avoid incentives remaining the preserve of a discussion between economists, then there should be a clear trade off explored on risk and returns against a range of scenarios that are being considered. It did not work at PR19 leaving the balance of risk and return discussion to a late stage of the process (between draft and final determinations), given the wide range of complex outcome, efficiency and other incentive levers that were amended, on what felt in practice like a very company-specific basis even if it was argued that this was being undertaken in the interests of standardisation. The length, complexity and depth of disagreement at the subsequent CMA reviews reflected this, even on some aspects that did not really appear to be in fundamental dispute.

What are the factors where some understanding and estimate of the alternative impacts on return, and the chance for the regulator, companies and their stakeholders to seek consensus on risk and return trade-offs? This should be explored as part of the regulatory framework (including the degree of commitment beyond the five year price review period. An indicative list of factors would appear to be:

- Water services vs. wastewater service
- size of company
- degree of service ambition
- degree of innovation
- degree of cross-sector and local public service ambition
- degree of existing and potential consumer harm (ie what is the balance of risk in the long term)
- Efficiency (degree of past and future challenge, including price effects)
- Outcome incentives (perhaps split between balanced, minimum, bespoke)
- Strategic investments
- Degree of intra-sector interaction (e.g. water trading risk and opportunities)
- Degree of competitive market introduction (both end user choice and in service provision, such as Direct Procurement).

- Degree of consensus around the scenarios, potentially with a menu incentive reflecting the regulator's conclusion on whether the degree of ambition is right, perhaps whether it reflects government policy from an accountability perspective.

This list of factors may be far from exhaustive. The process of building and testing consensus on a range of scenarios, and moving away from just considering water policy in a national context, are likely to build a set of relevant risk trade-off factors. Even if the regulator ultimately decides that some or all of these factors are not explicitly relevant to the level of return that is available, and the risk or opportunity to the long term scenarios can be mitigated through other routes, the justification for this decision will improve and is more likely to be trusted. This will encourage companies to think longer term, by reducing the risk that pressure from short term incentives and investors is a self-fulfilling cycle to over or under investment and returns that harms societal wellbeing. It will also aid engagement and trust that when regulators set incentives and make judgements, it is based on more than just a limiting economic perspective om incentives. Price reviews will become a strategic dialogue, rather than incentive design, and may be simplified and liberated as a result.

Ultimately, if this approach works, we could judge the success of both regulators and the regulated on their ability to build and maintain consensus, through their ability to maintain trust. There is very little disadvantage. That objective of trust and consensus on societal impact, long recognised as something critical to the water sector and with much evidence to support it from UKCSI and the rection of the sector and Ofwat to Covid-19, may in the long-run prove to be the most important thing to measure and incentivise. Irrespective of the specific proposals, a focus on this single goal may be the most important factor for PR24 and beyond.