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Regulation of Telecom: What Works & Why?
Lessons from Independent Central Banks

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1. Telecommunications Regulators and Independent Central Banks

Oftel has now been the regulatory agency for UK telecommunications for over 15 years. The FCC has regulated US telecoms for 67 years. Within the EU, regulatory agencies for telecoms now exist in all 15 EU member states.

Over the last 15 years, the UK has seen an increase in the number of licensed fixed line operators from two (BT and Mercury) to more than one hundred and fifty. Mobile telecoms has grown from a glint in the eye to the point where Vodafone was the largest quoted company on the London Stock Exchange and the 3G license auctions raised £22.5 billion for the UK Exchequer.

According to OECD statistics, between 1985 and 1999, the number of fixed lines in the UK rose by over 50% from 21 million to over 31 million with a growth in mobile subscribers from zero to 24 million. Over the same period, telecommunications revenue as a percentage of GDP increased from 2.45 of GDP to 3.5%. By 1999, the penetration rate (fixed and mobile) was 56.5 per 100 inhabitants, compared to 36 per 100 inhabitants in 1985. In addition, OECD Working Papers report estimates that (i) telecom prices in the UK are 40% lower than the OECD average; and (ii) the UK had made more progress by 1998 in aligning tariffs to costs (price rebalancing) than any other OECD country.

Oftel has presided over - and provided - an orderly regulatory framework for all of these changes with a view to making markets work effectively for consumers. That has meant:

- Protecting consumers from unreasonably high prices and poor quality;
- Providing the framework for very large investments by the licensed companies; and
- Ensuring fair competition - a level playing field for all operators, incumbents and new entrants.

Ensuring fair competition raises the most difficult questions and has probably been the hardest. Given the decision by the Thatcher Government to privatise BT as a single company, a very large part of Oftel’s work has focused on regulating BT and, in particular on pricing access to BT’s network.

Oftel, like most other telecom regulators, has encouraged the voluntary negotiation of interconnection terms and prices. However, whether it is for trunk networks, mobile inter-fixed interconnection and more recently at the local exchange level, for good economic reasons, BT and its competitors have not been able to reach voluntary agreements without Oftel intervening significantly either in laying down interconnection pricing rules or in setting these key prices.
The same is true in the US, where the FCC has had to specify detailed principles for setting interconnection prices, and similarly for other EU states. However much some observers may argue that telecoms can be handled entirely via a competition policy regime and that there is no need for a specialist industry regulator, we have yet to see any established telecom regulatory regime be abolished. Indeed, the increasing importance of the local-loop for accessing consumers if competition is to work - and to deliver to homes the growing array of new services such as films, E-commerce, internet and computing - arguably increases the need for and the complexity of regulation. This is not least because of the need to cover network access issues in broadcasting along with telecoms and the “convergence” agenda. So, it's "Goodbye Oftel. Hello OFCOM".

In the same way that developed and developing countries have increasingly been unbundling, liberalising and privatising their telecom industries over the last 15 years, so countries have increasingly decided to assign the control of monetary policy instruments such as interest rates and/or monetary growth rates to an independent central bank rather than leave monetary policy instruments in the hands of the government.

The conventional economic argument for an independent central bank is that it reduces (and is perceived to reduce) the average rate of inflation and its variance by taking monetary policy out of the hands of politicians. Proponents of this view argue that this allows not just a lower rate of inflation but also a steadier and possibly higher rate of growth of output, lower unemployment (at least on average) and the avoidance of a "boom-bust economy". The independent central bank, in its operation of monetary policy, has a strong incentive - and is usually given a legal remit - to achieve low inflation.

But, this argument is very similar to the claim that independent regulation of telecoms is necessary to facilitate and promote commercialisation, liberalisation and privatisation of telecom industries. Again, for telecoms, like other regulated and privatised utilities, a key issue is to ensure that short-run policy considerations are not allowed to damage the investment climate for the industry. Investment considerations are particularly important in telecoms with its capital intensity and rapid rate of growth of technical progress.

In the monetary policy case, the issue is the establishment of effective institutions to ensure a credible macro-economic and monetary policy framework, particularly for investment. In the telecommunications case, it is the establishment of effective institutions to ensure a credible micro-economic framework to support private investment and competition in telecoms. Moreover, the issues of what institutional design characteristics lead to effective operation are very similar in both cases, with independence from short-term political pressures as a common concern.

In both cases, the question of introducing an institution separate and independent of government is intimately related to the questions of the role of (a) rules relative to discretion and (b) the degree and nature of the accountability of the institutions. These are still contentious issues both for central banks and for the development of telecom and other utility service regulation.
In both cases, the establishment of an independent agency is typically accompanied by a move to a more rule-based and less discretionary mode of operation. In both cases, some voices argue for a totally, rule-based and non-discretionary mode of operation, but others argue for agencies with limited discretion but high accountability. The latter is the model most often found in practice. In the UK, the introduction of monetary policy control by the Monetary Policy Committee of the Bank of England has been accompanied by a move to a much more rule-based framework for macro-economic policy but a high degree of accountability. (See Gordon Brown (2001).)

There has been extensive theoretical and empirical study over the last 10-20 years of whether, why and how independent central banks achieve the objectives outlined above. In recent years, there have similarly been studies of whether, how and why independent telecom regulatory agencies achieve their regulatory objectives. In this paper, we provide a discussion of the key results from the central bank economic literature and of the telecom regulatory literature and conclude with a discussion of the similarities and differences to help identify the critical features to achieve effective regulation in telecom services.

A critical issue is what “independence” actually means and what are the key attributes of independence. This is an issue that is much discussed both in the literature on independent central banks and in the literature on utility service regulation. In neither case is independence absolute, either in law or in practice, and in both cases, questions of independence are intimately bound up with issues of accountability. In this paper, we will compare and contrast the conclusions.

The plan of the rest of the paper is as follows. In Section 2, we discuss independent central banks, their impact on macro-economic outcomes and the key features, particularly about their governance, that help explain their impact. In Section 3, we discuss independent telecom regulatory agencies under the same headings. In Section 4, we compare the results and set out the main conclusions.
2. Independent Central Banks: Governance and Impact

2.1 The Case for an Independent Central Bank

Gordon Brown, in the article based on his July 2000 lecture to the Royal Economic Society, has made the clearest non-technical case for an independent central bank. His case is:

(i) effective monetary policy as well as demand management is necessary to deliver low inflation and high and stable rates of employment;

(ii) effective monetary policy can only be delivered within the discipline of an institutional framework that provides limited and accountable discretion to meet defined targets

- neither unfettered discretion nor fixed monetary targets deliver low inflation and high and stable rates of employment;

(iii) the institutional framework must command public trust and market credibility

- in the UK, this is achieved by having an independent Bank of England and a Monetary Policy Committee, including outsiders, which operates monetary policy to meet a (symmetric) inflation target laid down by the Government.

(iv) the credibility of framework depends on “maximum openness and transparency” with “clear objectives and well understood procedures” – and openness underpinned by accountability and responsibility.

Gordon Brown summarises his case as follows: “….public trust and indeed stability require not mechanistic responses, but judgments made within a disciplined framework. Stability should be built on a foundation of credible objectives rather than fixed relationships and on well-understood procedures within which judgments can be made and openly explained rather than relying on decisions made behind closed doors” (Brown, op cit. p. C35).

It is worth noting at this point that Gordon Brown’s summary statement could be taken as an excellent summary of effective utility services regulation eg for telecom regulation. In particular, the strong emphasis on (a) well-understood procedures and (b) on openness meshes directly with descriptions of good regulatory practice. Sound and well-understood procedures are, in particular increasingly being recognized as the true safeguard of effective and genuinely independent utility service regulation. Indeed, UK regulatory practice is often criticised for deficiencies in its procedural requirements relative to eg US or Australian utility regulation. This has a pleasant irony given the way that UK commentators criticise the European Central Bank (ECB) for its lack of openness and unclear procedures relative to those of the Bank of England and the Monetary Policy
Committee.

Not surprisingly, the non-technical case for an independent central bank derives from a substantial theoretical literature on macroeconomic credibility. In essence, the argument is that Governments which face elections every few years find it difficult credibly to commit to a *sustained* low inflation policy. There is a “time inconsistency” problem in that:

- Governments always have an incentive to have a short-term monetary expansion to boost economic growth and reduce unemployment just before an election leaving the next government to deal with the resulting inflation; and

- market participants *know* that Governments have such an incentive so that they are very likely to discount Government statements on the need for a stable anti-inflationary policy, however strongly made.

This problem was set out in the classic Kydland and Prescott paper in 1977.

Originally monetary growth rules were seen as the most likely way of handling the macroeconomic time inconsistency problem. However, such rules are difficult to apply strictly and their performance has been increasingly disappointing for many reasons, not least because of the increasing liberalization of financial markets. Hence, increasingly, the preferred solution to the macroeconomic time inconsistency problem has been for governments to delegate the operation of monetary policy – particularly interest rate setting – to an independent central bank, operating under a forward-looking inflation target. The theoretical case for such a policy has been set out by Rogoff (1985) among others.

It is also worth pointing out that the same “time inconsistency” argument exists almost identically in utility regulation. If Governments regulate utility prices, there is always an incentive for governments to hold back on necessary price rises (or to cut prices back beyond what is justifiable on economic cost grounds) in the short term – particularly in the period approaching elections. In addition, as with monetary policy, private investors in (and managers of) utility service companies *know* that Governments have such an incentive. Hence they will discount government statements that they will price such services at full economic cost and always allow prices to include the expectation of a reasonable, risk adjusted rate of return.

In consequence, the cost of direct Government regulation of utility service prices is that it is likely to reduce investment and raise the cost of capital in the future - unless the utility is operated as a state-owned vertically integrated company (ie as a “nationalized industry”), which has many other disadvantages eg on efficiency. This is a major practical as well as a theoretical problem in many countries, most obviously (but not just) in middle and low

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1 The UK’s move away from M3 growth targets in the 1980s and the apparently low weight placed on them by the ECB are good examples of the decline of monetary growth rules.
income developing countries.

The parallels between the time inconsistency problem as it affects (a) monetary policy and (b) utility services investment and pricing have been explored in a number of theoretical articles (eg Currie et al., 1999) and the recommended solution is the same – the government assigns the role of economic regulation of utility services to an independent regulatory agency.

2.2 Independent Central Banks and their Impact on Macro-Economic Performance

The general consensus is that countries which assign monetary policy to an independent central bank have lower and less variable rates of inflation.

There is less evidence that countries with independent central banks have higher average growth rates or employment levels or that they have less variance – ie that they avoid “boom and bust” as claimed by Gordon Brown. If countries with independent central banks have lower and less variable inflation, their real interest rates should be lower and this should encourage investment and increase the rate of growth for a long period if not in perpetuity.

Critics of independent central banks often point to the need to combine monetary and fiscal policy in the same institution to avoid damaging conflicts eg the US in the early 1980s where a tightening of monetary policy was necessary to compensate for large fiscal deficits. However, there is some evidence that countries with independent central banks have better outcomes on output and employment (see Levine et al., 2000) and no evidence that they have worse outcomes.

The real difficulty with assessing the impact of independent central banks is that choosing to have an independent central bank is related to countries’ macroeconomic policies. For instance, in 1948, Germany established a highly independent central bank, which was given extensive control of monetary policy and a strong anti-inflation objective. But, all the evidence is that, as a result of its history, post-1945 Germany was a highly inflation averse country and that the political choice for a highly independent central bank was in response to this inflation aversion. Similarly, the UK only made the Bank of England independent and established the Monetary Policy Committee (MPC) to set interest rates after a decade or more of low inflation and when all major political parties had become convinced that a low inflation environment was essential for good economic performance.

In consequence, as has been recognized by others, the statistical association between assigning monetary policy to an independent central bank and low inflation may or may not be causal. It may partially or wholly reflect the fact that countries which are more inflation averse or which place more weight on having a sound economic policy choose to have an independent central bank. There is some evidence that this is the case, as countries with healthy economies, not surprisingly, find it easier to establish independent central banks - and much easier to sustain them.
The exploration of this issue has been one reason for the considerable literature on what are the key aspects of independence and central bank governance in terms of generating the beneficial effect on macroeconomic outcomes. We discuss the key conclusions below. In this regard, the independent central bank literature is more advanced than the literature on regulatory governance for utilities, which we discuss in Section 3.

2.3 **Key Features of Independent Central Bank Governance**

2.3.1 **Political Independence**

Many of the indicators used to assess the degree of independence of central banks in controlling monetary policy are the same as those used to assess the degree of independence of telecom and other utility regulatory agencies. This is particularly true for measures of political independence. For instance, both literatures agree on the importance of issues such as:

- Procedures for appointment and, more importantly, for the dismissal of central bank governors;
- The existence of fixed terms of office;
- Government’s rights to give instructions to the central bank;
- Rights to veto, suspend or defer central bank decisions; and
- Governments’ rights to have central bank board members.

These indicators are typically taken as measures of political independence and are usually measured from provisions in the relevant law. They are thus examples of formal, legal aspects of governance.

In addition, some attention has been given to actual independence as measured eg by the turnover rate of central bank governors or the proportion of governors replaced within 6 months of a change of regime or a change of government\(^2\). This can give significantly different results than those obtained from what is written in the relevant laws. In general, formally independent central bank governors in developing countries are more likely to have high departure rates following a change of government or regime. Argentina is a case in point.

2.3.2 **Goal Independence**

An interesting issue is the nature of the goals of monetary policy and who sets them.

Most independent central banks have price stability or an inflation target as one –

\(^2\) See papers by Cukierman and associates eg Cukierman and Webb (1995).
sometimes the only – goal. This is the case both for the Bank of England and the ECB but not for the US Federal Reserve which also has output, employment and other ‘real’ economic variables included in the objectives for monetary policy.

However, the UK does not have “goal independence”. The Bank of England’s inflation target is set by Ministers – neither the Bank nor the MPC chooses it. We have seen that the current Chancellor sees it as a virtue that the inflation target (which he is largely responsible for setting) is symmetrical around the 2.5% target.

Conversely, the ECB is, formally, completely independent of EU Ministers of Finance and the EU Commission in terms of its objectives as well as in its operations. The ECB was established by Treaty of Maastricht which states that its primary objective is the maintenance of price stability. It is the responsibility of the Governing Council of the ECB to make this operational – ie the ECB has an unusually high degree of “goal independence”. In December 1998, the ECB announced that their definition of price stability would be an annual inflation rate for the Euro area of under 2%. This is a non-symmetric inflation objective, unlike that chosen by the UK Government for the UK and has been criticized by some observers (including some major political figures) for imparting an unnecessarily deflationary bias to ECB monetary decision-making.

The US Federal Reserve has a relatively high degree of goal independence but, unlike the ECB, it is formally accountable to the legislature (the US Federal Legislature) – as well as informally to politicians, business, the media, etc.

Some observers see Government specification of the monetary policy goals as reducing goal independence; others see it as strengthening the position of the Central Bank by showing the commitment of government to the framework and the policy. Gordon Brown’s comments quoted above show that he strongly believes that goal-setting by the government strengthens the position of the Bank of England.

This debate is very interesting from a utility regulation perspective since the utility regulation literature tends to take it for granted that policy should be separated from regulation and that Ministers should specify the policy framework within which regulatory agencies like Oftel should operate. This is consistent with the view that Governments should specify monetary policy objectives and that this increases the effective independence of regulatory agencies. Comparison between the experience of the MPC in the UK and the ECB in the EU supports this view. The ECB clearly has more formal independence but has had a much harder time establishing its reputation and fending off pressures from national Ministers of Finance and others.

2.3.3 Impact of Key Governance Aspects on Central Bank Outcomes

The key problem in testing for the effect of individual components on inflation and other is that they are highly related – countries which give fixed terms for bank governors are also likely not to require government approval of monetary policy decisions.
The solution adopted by researchers is therefore to combine governance elements either (a) into e.g. a number of types of central bank with similar characteristics or (b) into a continuous index. Both methods suggest higher central bank independence is associated with lower inflation, but the literature has not yet identified which variables are most important. Indices are probably the better solution but they do have problems e.g. rankings of Japan and some countries can be very different between similar indices.
3. Independent Telecommunications Regulatory Agencies: Governance and Impact

3.1 Telecommunications and the Development of Independent Regulatory Agencies

Explicit regulation of telecommunications and other utility services by designated and independent regulatory agencies was originally developed in the US. The FCC (Federal Communications Commission) was established in 1934. It is no coincidence that regulation developed first in the US since telephone and other utility service providers were more likely to be privately owned and managed there than in other countries.

US regulation originally developed to protect the rights of consumers facing a vertically and horizontally integrated monopoly utility like the Bell System. However, it was also realised that protecting the consumers in the medium to long run meant that utilities – particularly privately owned companies - had to be able to earn a reasonable rate of return on their investments. In particular, the companies had to have the regulatory guarantees to be able to finance the large network and other investments required to roll out the system and create an efficient, nation-wide telephone system. These considerations led to the concept of “just and reasonable rates” being placed at the heart of the US regulatory system.

In many other countries, including the UK, mid-twentieth century telephone companies were state owned monopolies, often linked in with postal services. The relevant government Ministry regulated investment and prices as well as setting policy and exercising ownership functions. British Telecommunications was only established as a (wholly state-owned) commercial entity and fully separated from the Post Office in 1981. Separation from posts and from detailed Ministry oversight came later in most other European countries and has only recently been achieved in Greece and in many Central and East European countries.

The technological revolution that computerisation has brought to telecom services since 1970 has led to an explosion in the supply of (and demand for) new telecom services. It is this that has led to the rapid decline of the old nationalised industry monopoly supplier model because of:

- massive investment needs that governments were not prepared to fund:

- the need for highest level commercial and management skills to keep abreast of rapidly developing markets and technologies;

- the growth of competition in the market, first in mobile and rapidly spreading to other services .

The result was privatisation and the rapid growth of competition. BT and their other European counterparts were privatised. Bell Telecom was broken up. Competition
developed initially in markets for equipment (including handsets, PABX exchanges, etc), followed by mobile, value-added services before spreading to core fixed-line data and voice services.

The establishment of an independent regulator has been a major element in the privatisation process. A regulator with clearly defined powers and duties is (rightly) seen around the world as providing protection for the new shareholders in a way that no Government can guarantee. Oftel was the first UK regulator, established in 1984, following the Littlechild report in 1983, and its establishment was clearly part of the privatisation package. Other independent regulatory offices were set up in the UK for gas, electricity, water and railways as they were privatised.

Oftel was installed to protect consumers in the face of a privately owned highly dominant supplier (BT) facing very limited competition. It was also, however, installed to protect the company and investors in it, many of whom were first-time shareholders. As telecom competition developed, Oftel increasingly had a role in protecting the interests of shareholders in the new entrants.

However, it can be argued that the introduction of competition – particularly competition over networks owned by the dominant incumbent – has been the major force for the introduction of strongly independent, decision-making regulators. The growth of telecom regulation throughout the EU and the EU Directives which require member states to have national telecom regulators is intimately associated with finding solutions to network access problems (particularly access prices) for trunk networks and now, increasingly, at the local loop.

It is possible credibly to introduce regulation of a privately owned (or financed) monopoly utility by a Ministry or with an advisory or consultative regulator. It is much harder to avoid the need for a strongly independent decision-making regulator once there is significant competition at the retail service level. This is because network access terms and prices become crucial to the working of the market and, in practice, these cannot be voluntarily negotiated between all the relevant parties – hence the virtually universal need for a regulator to determine at least the principles of interconnect prices if not to regulate the actual prices charged. Initially, this was very largely a problem of regulating the incumbent and its conditions and prices for network access but it is now increasingly becoming a problem affecting other networks eg mobile termination prices.

The single most important reason why independent regulators are needed when competition is introduced into network industries is that new entrants – particularly potential new entrants - do not have a seat at the table in the negotiations over network access arrangements and prices. For this reason, independent regulatory agencies are increasingly being introduced into utility service industries where state ownership of the incumbent supplier remains but where competition is being encouraged. Examples are Postcomm for UK postal services and electricity regulation in Norway.
3.2 Time Inconsistency and the Need for Telecom Regulation

The classic time inconsistency problem for utility services like telecoms is that they require large volumes of investment which, once installed become “sunk assets” in the sense that most or all of them cannot be removed and used elsewhere or sold on second-hand markets. In consequence:

- private investors are at risk of opportunistic behaviour by Governments, particularly over prices, once the investments have been installed; and
- awareness by private investors of this regulatory risk drives up the required rate of return and the cost of capital.

The government has a commitment problem, particularly given the legal and/or practical inability of governments to bind their successors.

In theory, this problem can be handled by devising appropriate contractual terms. In practice, the difficulties of contract monitoring and enforcement (eg involving binding international arbitration) mean that this route is both difficult and uncertain.

Because of the problems of a contractual arrangement, the standard solution is to install an independent regulatory agency whose powers and duties are specified in a primary law. If possible, the regulatory agency should also have clearly prescribed and transparent procedures. If the main purpose of independent central banks is to encourage investment by reducing the average level and variance of real interest rates; the main purpose of independent regulatory agencies is to reduce the cost of investment to utilities. Of course, this has to be done while protecting the legitimate interests of shareholders and consumers. But, in itself, protecting these interests reduces investment risk premia and the cost of capital and hence further reduces the costs of investment and, hence, of prices to consumers.

As set out above, the underlying rationale for an independent telecom regulator and an independent central bank is extremely similar. Not surprisingly, therefore, both have evolved the answer of creating an institution which can establish and maintain a credible reputation for making and keeping commitments in a way that governments find extremely difficult to do. Hence, again not surprisingly, many of the governance issues for telecom regulators are identical to those for central banks.

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3 In this context, the failure of Railtrack in the UK is instructive. Privatisation of the railways was the only UK example for which continued government subsidies were required. But, the government kept control of the volume of subsidy to be provided and did not give subsidy-granting powers to the Rail Regulator. Railtrack collapsed when the government refused to grant additional major subsidies. In cases where continued subsidy is essential, it is clear that there remains a continued time-inconsistency problem whether there is an independent regulatory agency, provided that the government retains control of subsidy levels and disbursements.
3.2.1 Regulatory Governance for Telecom Regulatory Agencies

Over the last decade, a considerable literature has developed on regulatory governance for telecom and other utility service industries. Much of it hinges on issues like fixed terms for regulators, appointment and dismissal criteria, enforcement powers and – increasingly – on regulatory procedures. This exactly mirrors the independent central bank literature.

It is particularly interesting to note Gordon Brown’s emphasis on “well-understood procedures within which judgments can be made and openly explained rather than relying on decisions made behind closed doors”. Increasingly, clear and open regulatory procedures are seen as the essential foundation of fair and effective regulation by telecom and other utility service regulatory agencies.

The case for clear and open procedures often leads to the suggestion that regulatory agencies should operate by simple rules and have no (or minimal) discretion. This view is particularly associated with Spiller (see for example Spiller and Guasch, 1999) and it is developed in a framework where the emphasis is on the need for regulatory stability to achieve successful privatization. Critics of UK regulatory processes regularly maintain that regulators have too much discretion.

In the context of Latin America and in many developing countries, Spiller rightly argues that the essential is to create effective governance arrangements. These must be tailored to the institutional capacity of the country and are more important than the content of regulation. Hence, it is argued that countries with limited institutional capacity should carry out regulation by simple, minimum discretion procedures or, if possible, by reliance by the regulatory agency on contract enforcement. The problem is that the proposed solution is very inflexible and seems to create significant problems beyond the short run viz post-privatisation conflicts in Chile and other Latin American countries.

The alternative view is that proper regulatory governance arrangements are crucial precisely because telecom and other utility regulation cannot avoid discretion. Indeed, regulatory systems work better where independent regulatory agencies are given (limited) discretionary powers but which they must exercise in a fully accountable and open way. Accountability is the key to achieving regulatory stability through political legitimacy and market credibility. This is our view.4

Interestingly, it is also Gordon Brown’s view – at least for central banks. He rejects monetary growth and similar rules and instead argues for “judgements made within a disciplined framework”. However, as yet, neither he nor any other member of the current UK Government has advocated the equivalent formality or openness of regulatory procedures for Oftel and other regulators that is required of the Bank of England and the MPC. It would be very interesting indeed to have the right to read the minutes of the relevant meetings of Oftel within two months of their publication, but this does not seem very likely to happen. The UK also has far less in the way of regulatory public hearings than Australia let alone the US.

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4 See Stern and Holder (1999) for a justification.
There are costs as well as benefits in having a fully open regulatory system, but the degree of accountability (eg in terms of justification requirements both for regulatory interventions and for decisions) is rather less in the UK than in Australia or the US - and also relative to some EU member states. In absolute terms, UK deficiencies over regulatory procedures and accountability have also been attracting more UK critics eg the recent report by the Better Regulation Unit. Recent moves eg involving the OFT (Office for Fair Trading) and the Competition Commission are changing this but the contrast with the MPC procedures remains.

For central banks, we saw earlier that there was a question of how far actual independence corresponded to formal, legal independence, particularly in developing countries. This has also been a major issue for telecom and utility regulation. Some authors (eg Noll, 2000) argue that it is unreasonable to expect smaller and poorer developing countries to establish effective independent telecom and similar regulatory agencies. Indeed, this view is one that has led to the push for relying solely on regulation by contract or seeking for regulation by multi-national agencies. The problem is that it is just as difficult to find credible (and time consistent) regulatory alternatives to an independent regulatory agency with some discretion as it is to find time consistent alternatives to monetary policy control by an independent central bank. The problem is similar in both cases but the solution is equally as elusive.

A crucial issue is that the history of telecom and other utility service regulatory agencies is very limited, particularly outside the US. In contrast, a significant number of countries still have very clear memories of hyper-inflation and the damage it causes. For many other countries (including the UK), there is a greater understanding of the need to maintain a low inflation rate through the relationship between monetary stability, low inflation and a good economic growth performance. Historical experience (eg the difficulties over re-establishing the gold standard in the 1918-39 period) has shown that democratic pressures make it very difficult to sustain the value of key assets when this value depends on controversial political decisions. Hence, achieving the necessary understanding can be crucial in obtaining support for – and sustaining - low inflation policies and independent central banks, particularly in young democracies. This has become increasingly clear in many Latin American and Asian economies. Conversely, the experience of the damage that is caused to telecom and other utility services by opportunistic regulation is much more limited and there is much less understanding of the issues.

Central banks and national monetary issuance regimes have evolved since the seventeenth century and there is a long history across many countries of how they can be managed in the context of a variety of international monetary regimes. Even so, many countries find it hard to manage the process and some opt for currency boards or dollarisation. Monetary arrangements of this kind imply not just a completely rule-based regime but non-discretionary regimes which, if adopted as other than short-term emergency measures, imply the renunciation of an independent national monetary autonomy as a medium-term or long-run policy.
For telecoms and utility services, the much more limited history - both in time and across countries – means that there is much less institutional and legal experience on which to draw. Hence, there are far fewer experiments and fewer variants from which to explore what works, in what circumstances and why - and what does not work, in what circumstances and why not. Learning by doing is much more limited for utility service regulation so it is more difficult to come up with convincing variants where conventional independent regulatory agencies are either infeasible or unsustainable.

3.2.2 The Differences between Independent Central Banks and Independent Regulatory Agencies for Telecommunications

There are, of course, some significant differences between the governance criteria for independent central banks and independent telecom regulatory agencies.

The most important relates to competition and supervision of companies. The main issue is that telecoms regulation is inherently about the monitoring and enforcement of the behaviour of regulated companies according to licence conditions or equivalent obligations. Monetary policy is not primarily concerned with the regulation of banks. Indeed, the Bank of England does not have any banking supervision functions outside those relating to systemic risk. In general, central banks with banking supervision obligations are usually considered to have less independence whereas telecom regulatory agencies with sole responsibility for issuing, monitoring and enforcing licences are usually taken as having more independence.

Similarly, we have seen that separation of the setting of policy obligations from regulation is almost always seen as increasing the effective independence of regulatory agencies whereas this is disputed for central banks.

The other major difference relates to competition. Independent central banks are not monitoring and enforcing competition. There may be competition between the central banks of different countries over reputation and credibility (eg in attracting foreign direct investment) but, to a lesser extent, this is true of different countries’ telecom regulatory agencies. The key difference is that telecom and other utility service regulatory agencies, unlike central banks, are directly monitoring and regulating the behaviour of commercial companies who are competing with one another over networks owned by some of the industry participants.

The network problem is most acute when there is a single network that all participants must use. This was the case in telecoms before the advent of radio and cable based services and while there was a monopoly or totally dominant network provider in the shape of BT, Bell Services, Deutsche Telecom, etc. But, over the last two decades, radio, cable and competition in fixed networks have been growing strongly although there is still considerable scope for anti-competitive behaviour by network owners eg on access and pricing of bottleneck facilities. Hence, there is still a need:

- for network operators to be ensured that they can expect to earn a reasonable rate of return on their network investments;
- for new entrants offering product services providers not to be economically disadvantaged in network access and pricing (or in product service pricing) relative to the incumbent offering both network and product services;

- for adequate incentives to be available for new network investment.

Although these are problems that are best addressed by an outside agency, it is not clear that an independent specialised regulatory agency is necessarily the best such agency. For electricity, where there is one and only one transmission or distribution system in any space, an independent regulatory agency seems to be the most obvious solution. Similarly, in countries where the telecoms market is unable to support several competing networks, an independent regulatory agency seems the best solution – at least for network issues and possibly for small customers. This would apply in most developing countries.

The same argument probably applies in countries where the market is heavily dominated by a recently privatized incumbent company with a strong brand and reputation (eg BT for the decade after privatisation). It is, though, a much harder case to argue where there is genuine competition within and between the various network segments, fixed line, cable and wireless. This is particularly true if the incumbent has totally unbundled its network from its product service elements – as BT is reported as having been discussing. Nevertheless, the number of actors and the degree of competition still remains relatively limited in most segments of the telecom market, particularly in network services.

In these circumstances, it is possible to argue that, for telecoms both the product service and network services issues discussed above are best addressed through conventional ex post competition policy rather than by ex ante regulation. In fact, Oftel’s work is increasingly of a general competition policy nature with regulation confined to specific bottleneck facilities (including the local loop). Oftel was given competition powers comparable to those in Articles 81 and 82 of the Treaty of Rome under the 1994 Telecommunications Act and these were extended under the 1998 Competition Act. If, as is planned, price regulation of telecom services to small customers is abolished by 2003, Oftel would become almost entirely a specialist competition agency – but with some ex ante as well as ex post powers of intervention.

The argument for abolishing telecom regulation primarily depends on their being sufficient competition between networks. In such circumstances, there is no longer a classic infrastructure regulation problem. But, there is still the problem about whether network issues, particularly access pricing issues, are so important that anti-competitive behaviour by network operators would put new entrants out of business before any competition investigation could be carried out or even mounted. In addition, there is the problem that the more regulators act to keep network prices low, the less the incentive for new entrants to enter the facilities market and augment competition.

More fundamentally, there is the question about how far investment in new, competing networks is efficient in economic terms. This is an issue that has surfaced in Germany and elsewhere over the obligations of 3G licence holders to build new networks and whether or how far they can share networks.
The anti-regulation case is increasingly being argued for the US and the UK. However, no telecom regulators have yet been abolished – and New Zealand is just introducing one having previously decided that they did not need one.

An interesting footnote to this debate is provided by banking. Retail banking depends heavily on payment networks eg for cheque clearing, credit card and cash machine networks. Similar “essential facility” issues arise with these networks over ownership, new entrant access, pricing of cash machine facilities to customers of other banks, etc as with telecom networks. In the UK, the Government commissioned a review of retail banking services by Don Cruikshank, ex-Director of Oftel. He recommended a new regulatory agency (Paycom) to regulate payments networks under a licensing system. However, in August 2001, the Government rejected his proposals in favour of assigning the regulatory task to the Office of Fair Trading.

Maybe in a country like the UK, the case for a telecom regulatory agency is increasingly derived from the complexity of the competition issues (eg from the convergence of telecoms and broadcasting and the need for rapid review) rather than from classic network infrastructure regulatory concerns of the kind that still dominate electricity, railways and water and sewage services.

3.3 The Impact of Independent Regulation and Key Governance Factors on Telecommunications Market Outcomes

The testing of the impact of independent regulatory agencies on telecom outcomes is in its infancy relative to the testing of the impact of independent central banks. There have been some tests of the impact of having an independent regulatory agency eg on investment, privatisation revenues, on beta values of regulated firms and on prices. However, the measurement of regulatory arrangements in these studies has not been very satisfactory and has been much cruder than in the studies of the impact of independent central banks on inflation and other macro-economic outcomes.

In addition, it is not easy to construct good tests of an independent regulatory agency analogous to the simple inflation rate (or inflation and growth) test for an independent central bank. More investment in the industry is the most obvious – but an effective regulatory system may increase the efficiency and/or length of life of capital and reduce investment requirements. Reductions of prices to consumers may be a good indicator in comparing US states but, for Indian or Russian states, increases in prices may be more relevant as an indicator of regulatory success.

In general, the studies that have been done tend to demonstrate beneficial effects of both independent regulation and of competition for national telecom markets. But, much more needs to be done both in what is being explained and in the characterization of key regulatory governance characteristics.

The question of what to do in countries which find it difficult to sustain an independent regulator remains very open. However, given (a) the rapid growth in demand for telecom services; (b) a reasonable willingness to pay economic prices for service; and (c) the
awareness of the essential nature of telecoms for a modern economy, this has been less of a problem than one might expect – and much less than for electricity, natural gas, railways or water and sewage. The telecom distinctiveness is very important. It significantly reduces the problem of attracting and sustaining private investment in telecoms – unlike the other utility service industries - in developing and transition economies. It also allows a variety of different telecom regulatory institutions, of different degrees of effectiveness, to continue to operate in OECD countries and more widely and hence to provide (at limited cost) more examples of both good and bad regulatory practice.

Developing and transition economies may not absolutely need an independent regulatory agency to generate some private investment in telecoms but it is still, though, likely that having such an agency would reduce the cost of capital to the countries involved. By how much, and depending on what governance characteristics, remains to be established.
4. Conclusions

In this paper, we have set out the similarity in the nature of the underlying problems that lead to the establishment of (a) independent central banks to operate national monetary policies and (b) independent regulatory agencies for telecommunications and other utility services. In both cases, the solutions result from the difficulties that governments face in credibly establishing a reputation for sound long-run behaviour and resisting short-run political pressures while preserving significant discretion both in goals and in decisions. Hence Gordon Brown, the UK Chancellor of the Exchequer, argues, in the macro-economic context, that: “public trust and indeed stability require not mechanistic responses, but judgements made within a disciplined framework.” (Brown (2001). p. C35. Our emphasis.)

But, to achieve the necessary credibility, it is essential that the governance arrangements of the institutions – central banks and regulatory agencies – support the framework and provide the necessary reassurance that future governments will not be tempted to renege on the commitment. In both cases, this is necessary given the link to long-run investments. The consequence is, for both sets of institutions, an emphasis on powers and duties being established in a primary law that lays down the length of terms of office, appointment and dismissal criteria of institution directors, funding arrangements, etc.

Similarly, for both sets of institution, there is a need to take great care to ensure proper procedures. Proper governance arrangements require effective accountability and this, in turn, requires transparent procedures. Hence, Gordon Brown argues (rightly) that: “Stability should be built on a foundation of credible objectives rather than fixed relationships and on well-understood procedures within which judgements can be made and openly explained rather than relying on decisions made behind closed doors” (Brown (2001). p. C35. Our emphasis.). In both cases, what is required is institutions that provide limited and accountable discretion within a clear policy framework.

Of course, there are significant differences between the tasks faced by independent central banks and independent telecom regulatory agencies. The most important is that telecom regulation is inherently about the monitoring and enforcement of the behaviour of commercial (and competing) companies according to licence conditions or equivalent obligations. Monetary policy is not primarily concerned with the regulation of banks. In consequence, telecom regulation must operate within a general competition framework and may in time be replaced – at least in some countries - by general ex post competition policy. This is in contrast to electricity and some other utility service industries where ex ante regulation (with its accompanying regulatory agencies) is likely to persist for the foreseeable future.

It is clear that both independent central banks and regulatory agencies can be difficult to sustain in many environments. Their institutional form and sustainability depend on constitutional, political and legal issues as well as on economic factors. These non-economic factors vary, often considerably, between countries. However, both for independent central banks and for regulatory agencies, a proper legal governance
framework is the necessary starting point. But, the willingness to abide by the spirit of the framework, ie the acceptance by all actors, (including Ministers and politicians) of the need to sustain the institutions is the key to the effectiveness and sustainability of the regulatory compact whether for monetary policy or utility services. How to achieve this in modern democracies, particularly but not only in parliamentary democracies, is a critical challenge for political economy.

Others in the political economy literature have pointed out the roles of the judiciary, of legal contracts, of the strength and impartiality of the civil service and of informal behavioural norms. Our focus is on the need for open, transparent and well-understood procedures and the associated accountability of independent central banks and regulators. We argue that this is crucial for the sustained effectiveness of both sets of institution.

In consequence, we note that it is rare to find countries with independent telecom regulatory agencies that do not also have independent central banks operating monetary policy. Further, the independent central bank usually preceded the independent regulatory agency, often by many years (viz Germany). The UK is a rare exception - OfTEL was established in 1984 but the Bank of England only received the responsibility for operating monetary policy in 1997.

The history of national monetary institutions, often with some considerable degree of independence, goes back several hundred years. The history of telecom and other utility service regulation – particularly by independent regulatory agencies is much more limited. This may help explain why by no means all countries with independent central banks operating monetary policy also have independent telecom regulatory or similar agencies (viz New Zealand).

In consequence, both the historical understanding and formal testing of the effects of independent central banks and monetary policies (and their governance arrangements) on macro-economic outcomes is much better established than for independent telecom and other utility service regulatory regimes. The results uniformly show that independent central banks operating monetary policy are associated with lower and less variable inflation and that independent central banks with better governance arrangements out-perform banks with less good governance arrangements. However, whether the relationship is causal or related to underlying policy choices is more debatable.

These results are encouraging for the supporters of independent regulatory agencies for telecoms and other utility service industries, but, as yet, the historical experience has not produced enough evidence to be able clearly to demonstrate the gains from effective regulatory governance. We can show the disasters that result from regulatory arrangements with poor governance, including the bad outcomes arising from wide, non-accountable discretion, particularly in developing countries.

The theoretical arguments and the central bank literature suggest strong potential benefits from well-founded regulatory arrangements with proper and transparent procedures that will support limited and accountable discretion. The next task is to define and estimate the
benefits, in practice, in the field of telecom regulation.

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REFERENCES


