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The Ten Catch-22s:
Regulation of Natural Monopoly Utilities

> *"No alleged 'fact finding' and no armchair speculation can discover another price at which demand and supply would become equal. The failure of all experiments to find a satisfactory solution for the limited-space monopoly of **public utilities** clearly proves this truth."* – *Ludwig von Mises*

Introduction & Background

Almost everyone outside the 'world' of *Austrian School of Economics* (or Austrian Economics), including mainstream free-market economists, unquestionably assumes that the regulation of so called 'natural monopoly utilities' is both fair and necessary as well as efficient and effective. This is (to borrow a buzz word from *the Left*) 'unsustainable', in both theory and practice, as evidenced by the following ten realities or 'Catch-22s' of utilities.[1]

Utilities | 10-for-22
#1 Monopolies are unnatural (not natural)
#2 Markets are undefinable (not defined)
#3 Competition is a process (not a structure)
#4 Value is subjective (not objective)
#5 Prices determine costs (not vice versa)
#6 WACC as interest and return (not)
#7 Incentives are profits and losses (not formulas and benchmarks)
#8 Information is created and decentralised (not given and centralised)
#9 Regulation hasn't worked (in practice)
#10 Regulation can't work (in theory)

As a former mainstream economist myself, these ten Catch-22s (for better or worse … and without necessarily my 'ringing' endorsement of this), can be put in the context of the standard framework of *Industrial Organisation Economics* as follows (which is a subset of *Neoclassical Economics* and by-and-large the basis for *Regulatory Economics*): #1 #2 #3 are 'market structure' related; #4 #5 are 'market conduct' related; #6 #7 #8 are 'market performance' related; and #9 #10 are 'market intervention' related. Structure and conduct are supposed to help address *why*, *where* and *when* there should be regulation. Conduct and performance are supposed to help address *what* and *how* to regulate. Intervention is supposed to help address *if* regulation can (positively or negatively) impact the other areas … usually assuming, unwisely, that regulation had no negative impact previously, and that regardless it can still impact positively going forward.

Market Structure (#1 #2 #3)

#1 Monopolies are unnatural (not really natural)
#2 Markets are undefinable (not really defined)
#3 Competition is a process (not really a structure)

Orthodox economic theories on the 'market failure' of 'natural monopoly' versus 'perfect competition' (along with competition policy and antitrust law approaches to 'market definition') provide most of the rationale for heavy-handed (price, service, etc) regulation of utilities, starting with standard economic

[1] I have worked in and around the regulation of 'natural monopoly utilities' for quite some time now – ie for my whole post-university career by-and-large, almost 20 years now as an economist, regulatory analyst and project manager. At first, I believed that such regulation was fair and necessary as well as efficient and effective. The 'cracks' in this belief first started to appear for me in the late 1990s (when I was working for a state utility regulator in Australia). These 'cracks' continued to widen for me as I experienced more-and-more utilities regulation (and more-and-more life) around Australia and then in the UK from 2008 to 2010. My time in the UK (plus my frequent travel to the US during that period) blew these growing 'cracks' wide open, along with my eyes … as it was in the UK that a rediscovered the Austrian School of Economics through the Institute of Economic Affairs and shortly thereafter discovered the Ludwig von Mises Institute.

theories of 'market structure'. Even though many mainstream economists acknowledge that 'natural monopoly' and 'perfect competition' are 'blackboard' ideals, at the end of the day they are still the benchmarks for whether to regulate or not … and to continue to do so, or not.

In both Austrian Economics theory and real-world practice, 'markets' are just a convenient and aggregated description of the constant flux of exchange opportunities created and discovered by suppliers and consumers with 'skin in the game'. And, of course, "[d]efining a market narrowly enough will always yield market power; defining a market broadly enough may always yield perfect competition" thus "[a market] cannot be independently established as such apart from consumer preference on the market".

As to 'perfect competition', perhaps economics Nobel Laureate Friedrich von Hayek said it best: "… competition is by its nature a dynamic process whose essential characteristics are assumed away by the assumptions underlying static analysis" thus "… 'perfect' competition means indeed the absence of all competitive activities."

More importantly, the little known history of 'natural monopoly' (in the US, at least) teaches that there was plenty of effective competition (and its attendant decreasing prices, and increasing service quantity and quality, etc) prior to the less effective competitors lobbying for market protection regulation in exchange for utility oversight regulation. Plus, if a utility monopoly were natural (ie could produce at a lower total cost than all others, actual and potential) it would not be in need of all of the other types of regulations (intentionally and unintentionally) preventing 'market entry'. In fact, the regulation of 'natural monopolies' started well before the theory of 'natural monopoly'. It first started federally in the USA with rail in the 1870s, and at state level with utilities from 1907 (in my home state of Wisconsin). The most modern forms of utility regulation were much later adopted in the UK from the 1980s and Australia and elsewhere from the 1990s … the former starting with telecommunications and the 'temporary' '**RPI-X**' approach founded by UK Professor Stephen Littlechild (who is no 'stranger' to Austrian Economics).

Market Conduct (#4 #5)

#4 Value is subjective (not really objective)

#5 Prices determine costs (not really vice versa)

All the different approaches to 'market conduct' under utility regulation are all founded on the (explicit or at least implicit) assumption that value (particularly costs) are objective and that they do (or should) determine prices. Firstly, costs are prices too, just from another's point of view. Secondly, causation largely flows the opposite way from prices to costs, not costs to prices. Thirdly, all values (that determine opportunity costs and prices through exchange) are subjective not objective. Fourthly, pricing and other value related decisions are made at the margin … margin meaning 'what happens next', not necessarily one additional unit of output and certainly not an infinitesimal change as per the calculus. Not understanding this, led *Classical* economists and Karl Marx to get stumped by the 'diamond water paradox'.

All of this was established by one of the 'founding fathers' of the 'marginal revolution' in economics (for both *Austrian* and *Neoclassical* schools), Carl Menger, who said: "Value is ... nothing inherent in goods, no property of them. Value is a judgment economizing men make about the importance of the goods at their disposal for the maintenance of their lives and well-being. Hence value does not exist outside the consciousness of men ... [T]he value of goods ... is subjective in nature." Another way of putting this is: "Marx would say pearls have value because people dive for them (thus supplying labor). Menger would retort that people dive for pearls because people value them."

It is also worth noting that in real-world free-markets, prices are determined in exchange by Eugen von Böhm-Bawerk's marginal pairs, often between extremely narrow margins of: "the valuations on the one hand of the marginal buyer and those of the marginal offerer who abstains from selling, and the valuations on the other hand of the marginal seller and those of the marginal potential buyer who abstains from buying."

Market Performance (#6 #7 #8)

#6 WACC as interest and return (not really)

#7 Incentives are profits and losses (not really formulas and benchmarks)

#8 Information is created and decentralised (not really given and centralised)

In terms of 'market performance' under utility regulation, the focus in orthodox theory *should be* on monopoly versus competitive prices, but in practice it *is* on monopoly versus competitive costs, profits, returns, as well as other incentives and information. The omission of losses, shut downs and bankruptcy are of in themselves enough to virtually guarantee sub-optimal utility performance over time (in terms of entrepreneurial innovation, efficiency/productivity, prices, quantity, quality, customer service, etc).

In the earlier days of the operation of utility regulation outside of the US (such as in the UK, Australia, NZ, etc), the regulatory debates tended to center around the scale and scope of the current regulated asset base (and its depreciation and return, reasonably expected going forward) plus those operating expenditures (opex) and capital expenditures (capex) reasonably expected going forward (and its depreciation and return). In more recent times, the debates tend to center around returns only. In addition such returns, unlike in the US for example (where broader commercial and fairness factors are more important and explicit), are very much focussed around finance theory rather than finance practice … almost always the weighted average cost of capital (WACC) and the capital asset pricing model (CAPM), plus increasingly financeability.

As per Frank Knight (and unlike WACC & CAPM), the real-world of free-markets is more about dealing with unquantifiable uncertainty rather than semi-quantifiable risk. Interest is the less uncertain reward to capitalists (including management), whilst profit is the more uncertain reward to entrepreneurs.

It is important to understand that interest is more fundamental than just bank money interest. As Hayek's contemporary Murray Rothbard said, interest is: "… the pure exchange ratio between present and future goods. This rate of return is the rate of interest." He furthermore stated: "… the capitalists are … providing present goods to the owners of labor and land and thus relieving them of the burden of waiting until the future goods are produced and finally transformed into consumers' goods."

Returns are, of course, profits and losses compared to assets and liabilities. Accountants primarily determine what these were historically, and that is a very important source of information. Based on this and many other factors, entrepreneurs, savers, investors and others react to this and other information and thus set their expectations going forward for future returns. In this regard, Rothbard stated: "… there is no sense whatever in talking of a going rate of profit. There is no such rate beyond the ephemeral and momentary. For any realized profit tends to disappear because of the entrepreneurial actions it generates." He importantly added that: "A grave error is made by a host of writers and economists in considering only profits in the economy. Almost no account is taken of losses. … [from] when an entrepreneur has made a poor estimate of his future … ."

As for entrepreneurs, Spanish Professor Jesús Huerta de Soto reminds: "… entrepreneurship is a distinctive phenomenon of the real world, which is in a perpetual state of disequilibrium and cannot play any role in the equilibrium models that absorb the attention of *Neoclassical* authors. Moreover *Neoclassical* theorists view entrepreneurship as an ordinary factor of production which can be allocated depending on expected costs and benefits. … their thinking involves an insoluble logical contradiction: to demand entrepreneurial resources based on their expected costs and benefits entails the belief that one has access today to certain information (the probable value of future costs and benefits) before this information has been created by entrepreneurship itself. … until this process of creation is complete the information does not exist nor can it be known … ."

Market Intervention (#9 #10)

#9 Regulation hasn't really worked (in practice)
#10 Regulation can't really work (in theory)

In terms of 'market intervention', there have been few comprehensive empirical studies, but these show a poor performance for utility oversight regulation. This is not surprising, given the lack of economic and political incentives to do so.

Hayek and Rothbard's mentor Ludwig von Mises would not be surprised by such studies, as he said a long time ago regarding government central planning (of which regulation is just one form) that: "Where there is no free market, there is no pricing mechanism: without a pricing mechanism, there is no economic calculation." In addition: "Economic calculation makes it possible for business to adjust production to the demands of the consumers." And: "Economic calculation can only take place by means of money prices established in the market for production goods in a society resting on private property in the means of production."

Thus, as Hayek once lectured other economists: "… the effects on policy of the more ambitious constructions have not been very fortunate … [due] to a pretense of exact knowledge that is likely to be false."

Conclusion & Policy

In light of all this, it seems that is about time that some significant reform paths to genuine free-markets (or at least more free ones) were more seriously considered in my two homes of the USA and Australia (and in the UK, NZ and elsewhere). Pro choice and competition reforms not only need to take genuine

steps in the right direction towards free-markets (without offsetting steps backwards, at the same or over time), but should also focus on the 'main game' of removing government's own barriers to market entry (along with it's other barriers to buyers, capital, complements, cooperation, rivalry, substitutes, suppliers, etc).

There are an almost infinite number of creative ways to undertake such reforms. To date they have mainly included (third party) access regulation, lighter-handed (monitoring) regulation, deregulation, privitization and/or others … but unfortunately have not yet included the only real solution which is the ultimate liberation of 'natural monopolies' and their potential competitors, consumers and economies. One largely successful practical reform from my own experience (particularly re so called 'monopoly rents') is the decade-plus price (and service quality) monitoring regulation of major airports in Australia. Some other practical reform ideas include those written about by Professor Littlechild such as customer engagement and negotiated settlements.

Admittedly, like most other economists and others, my predictions on exactly when something is going to happen (or the quantum thereof) hasn't always been the best. That is however not the case when it comes to the expected qualitative consequences from less regulatory intervention versus more. Overall and over time, the former are largely positive, foreseen and intended, whilst the latter are largely negative, unforeseen and unintended. Free-market 'friendly' reforms, even when just small steps, deliver net (and almost exponentially growing) returns to the most individuals possible in terms of entrepreneurial innovation, economic growth, sustainable jobs and consumer welfare. So, given that 'time is money', let's get started!

> *"The very term 'public utility', furthermore, is an absurd one. Every good is useful 'to the public', and almost every good, if we take a large enough chunk of supply as the unit, may be considered 'necessary'. Any designation of a few industries as 'public utilities' is completely arbitrary and unjustified." – Murray Rothbard*

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Market view

The lowdown down under

Australia and the UK have followed different models when it comes to regulating utilities and competition, but both are currently reviewing their systems. Darren Nelson compares and contrasts.

Two roughly parallel reviews of competition have been taking place in recent months, and will most likely continue into next year. One is in the UK and is focused on the energy industry, the second in Australia and includes energy, other utilities and virtually all other industries as well.

The British one is being conducted by an independent body, the Competition and Markets Authority (CMA), while the Australian one is being carried out by a government-appointed independent review body.

Australian minister for small business Bruce Billson MP provides some specifics of the competition review taking place in Australia: "The utilities, groceries and the automotive fuel markets will be some of the sectors of the economy which will come under scrutiny of the federal government's 'root and branch' review of competition law... The system we are aiming for is one where competitive and efficient businesses – big and small – are able to flourish and prosper and engage in the commercial contest on merit and not on muscle."

However, when it comes to the main source of "muscle", Ron Manners, chair of West Australia's Mannkal Economic Education Foundation, points the finger at the government itself.

He says: "Governments, at all levels, have lost track of the legitimate functions for which governments were set up in the first place. Government's role is to protect its citizens' lives and property against external forces and internal criminals, and to act as a referee. Not much else beyond that."

How is the lack of competition manifest? It may come as a surprise to some, but the land of Oz has even bigger cost of living pressures than the UK. Billson remarks: "A key election commitment of the Abbott government was to put in place a broad and far-reaching review of competition policy to drive innovation and lower the cost of living."

However, once again Manners holds the government responsible – in this case, for stifling competition and worsening living costs. He says: "Unfortunately, our governments have allowed themselves to be suckered into all sorts of vote-buying exercises to the point that the cost of government sits heavily on our shoulders and prevents us from being competitive and productive."

In a recent interview in *Utility Week*, Martin Cave of the CMA remarked: "There seems to be a fair consensus that there is an opportunity, via a market reference, to really get to the bottom of what is going on."

A CMA spokesman fleshes out the background detail: "Recently Ofgem conducted a competition assessment into the retail energy market. The assessment identified sufficient concerns for Ofgem to provisionally conclude that a full market investigation by the CMA would be warranted."

He adds: "Ofgem will make a final decision in the summer. Should Ofgem decide to refer, the CMA will conduct the investigation with a new team and appoint independent panel members, who will carry out an in-depth comprehensive analysis of the market and approach the job with the 'fresh pair of eyes' that a Phase 2 investigation requires."

According to Ofgem, competition in the energy market is not working well enough in the retail sector, and some problems may have worsened in recent years. Thus a spokesman says: "Our duty is to protect consumers' interests, which is why we now propose referring the market to the CMA to ensure there are no further barriers to effective competition."

Ex-energy regulator Stephen Littlechild, of Cambridge Judge Business School, says: "Regulators have been continually trying to discover new forms of regulation that better achieve their statutory objectives, while these objectives themselves have also been evolving." However, he notes: "Until now, this rivalrous discovery process among alternative forms of regulation has been almost entirely a single-buyer model of competition." Meaning regulators dictate the rules.

However, Institute of Economic Affairs (IEA) editorial and programme director Philip Booth observes that regulators are not entirely in control of competition rules. He says: "The first objective of any regulator should be to remove impediments to competition. Often the regulator will find that these are erected by government." He adds: "There is a real danger that regulators will be captured by the industry and actually work against the promotion of competition."

The UK's world-leading competition and regulation economists, professors Cave, Littlechild and Yarrow, are certainly no strangers to Australia and the cross-fertilisation of ideas between the two nations. In this regard, Littlechild points out: "There have been many and far-reaching changes in utility regulation since 1983. Except in the baleful case of Australia, where the regulator is not allowed to make changes in the form of regulation, these changes can be seen as reflections of a rivalrous discovery process."

Former member of Ofgem's supervisory board and current chairman of the Regulatory Policy Institute George Yarrow takes a different view. "What has struck me most in working in both Australia and Britain over recent years is the greater attention and effort devoted in Australian policy to improving the institutional structure that underpins competitive markets and market economies.

"In Britain by contrast, the policy emphasis is increasingly on quick fixes, prescribed by politicians or regulators and intended (usually unsuccessfully) to achieve specific and relatively qucik economic outcomes."

As has often been said in the context of such reforms, competition is not an end in itself, but a means to an end. So, in the words of the minister responsible for the Australian review (and this applies to the UK as well): "It is essential we get our competition settings right to not only allow businesses of all sizes to prosper but to drive innovation and productivity to support higher wage growth and increased living standards."

There are certainly interesting times ahead on both sides of the planet when it comes to greater competition in energy and other industries.

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