Proposed Sale of Jersey Telecom

Advice to the Minister for Economic Development under Article 6(4) of the Competition Regulatory Authority (Jersey) Law 2001

on

The structure of Jersey Telecom which best promotes competition in telecommunications and thereby economic growth as whole

10 January 2007

Contents

Executive Summary		***i-v***
1.	**Introduction**	**1**
2.	**Policy objectives**	**1**
(i)	Competition policy	2
	– to promote consumer welfare, efficiency and economic growth	
	– to regulate as a proxy for competition	
(ii)	Competition policy in telecommunications	4
	– to satisfy business and consumer demand	
	– to focus on high quality services for the finance sector	
3.	**Satisfaction of demand through competition**	**5**
(i)	Facilities-based competition	5
(ii)	Access-based competition	6
(iii)	Resale competition	6
(iv)	Preferred type of competition for Jersey	6
4.	**Satisfaction of demand through regulation**	**7**
5.	**Experience with development of competition**	**8**
(i)	International experience	8
	– wireless competition	
	– fixed-line competition	
(ii)	Regulatory experience in Jersey	11
6.	**The problem: lack of sustainable competition**	**12**
(i)	High capital costs and economies of scale	12
(ii)	Lack of equality of access	13
(iii)	Competition and incentives	14
(iv)	Regulatory tools in general	15
(v)	Regulatory tools not optimal	16
(vi)	Accounting separation	17
(vii)	Experience in Jersey	18
7.	**International responses to the problem**	**18**
(i)	Operational separation	18
	– the UK	
	– New Zealand	
	– Australia	
	– Italy	
(ii)	Structural separation	21
	– possible structure	
	– Europe	
(iii)	Faroes version of structural separation	23

8.	**Benefits of structural separation**		**24**
	(i)	Removal of incentives to discriminate – more competition and demand	24
	(ii)	Less need for regulation	25
	(iii)	Investment incentives	27
	(iv)	Increased value to shareholder	27
9.	**Costs of structural separation**		**28**
	(i)	On-going loss of economies of scope	28
	(ii)	Less synchronisation of demand and supply	29
	(iii)	Loss of welfare-enhancing effects of price differentiation	29
	(iv)	One-off transitional costs	30
10.	**OECD Recommendation**		**30**
11.	**Conclusion**		**31**
	(i)	A unique opportunity	32
	(ii)	Options	33

Appendix A	Terms of reference	**35**
Appendix B	An illustration of on-going problems with behavioural regulation	**37**

Executive Summary

Issue – structure JT so as to best promote competition

In the context of the proposed sale of JT, the JCRA has been asked to advise on what JT structure would best promote competition and economic growth (eg, sold as an integrated company or with its wholesale network and retail service functions separated).

This paper focuses on promoting competition in the local loop of the fixed-line sector since competition in the wireless sector is developing on a sustainable basis under current regulatory rules. Further, the JCRA recognises that there are pan-Channel Islands issues which may need to be addressed in the future as far as the structure of competition in Jersey is concerned. However, the legislation does not allow such issues easily to be taken into account.

Types of competition

Fixed-line competition can be introduced and promoted in three main ways:

- facilities-based competition (ie, competing networks);
- access-based competition (ie, leasing lines from a dominant network operator, otherwise called local loop unbundling (LLU) or Bitstream access); and
- resale competition (ie, where the retailer essentially resells the services of the incumbent with little value added).

The first two forms of competition are considered the most sustainable forms as the operator has, to varying degrees, control over network costs. Resale is the least effective form of competition because the operator is to a large extent dependent on the costs of the network operator upon whom it relies for service delivery.

The problem – lack of sustainable competition

In Jersey, the problem is that the small size of the economy combined with the economies of scale typical of network industries like telecommunications mitigate against the two most sustainable forms of competition. To date, no facilities- or access-based competition has emerged. Newtel, the sole fixed-line competitor to JT, is largely a reseller of JT's network services and provides minimal service differentiation (eg, its bandwidth is the same as JT's).

In the future, Newtel plans to gain more control over network functions (and, therefore, the types of services it can deliver to customers) by investing in network facilities and obtaining Bitstream access to JT's new generation network (NGN) currently being rolled-out.

However, in the circumstances of Jersey's small economy and the industry economies of scale, international experience would strongly suggest that optimal competition is unlikely to emerge in the future under the current structure of JT, even with the current regulatory framework which can compensate to some degree but not totally for the problems inherent in vertical integration.

This is for a number of fundamental reasons:

- the economic self-interested incentives of an integrated company to favour its own downstream businesses when providing access given that providing access to third-parties is providing access to its competitors;

- the fiduciary duty to maximise corporate profits, where legal;

- industry-specific law (including accounting separation) is not optimal in countering incentives to discriminate; and

- general competition law is too broad a tool to compensate for the difficulties in regulating a vertically integrated dominant operator and to deal effectively with the intricacies and dynamics of telecommunications, particularly when it comes to introducing competition (as opposed to promoting existing levels of competition).

Accounting separation is an integral part of Jersey industry-specific law but it is not optimal because of the following problems (which consistently occur internationally where accounting separation has been adopted):

- the accounts are not separated enough to enable separate identification of costs attributable to specific services and to show any below-cost predatory pricing, price discrimination or cross-subsidisation;

- the accounts do not necessarily show full economic costs (being based on historic costs rather then current costs); and

- there are well known arguments over the level of access charges and the most appropriate costing methodology (eg, historic-v-current, long run-v-short run, incremental-v-avoidable, etc).

All of these problems lead to inevitable regulatory cost and delay in progress to more competitive markets. They are already a reality in Jersey, and are likely to continue to be.

Potential solutions

Revising the structure of JT may have a significant influence on how competition develops. Three particular solutions present themselves:

(i) Structural separation

The most clear-cut solution is to remove the incentive to discriminate. This can effectively be done through ‘structural separation’ (ie, the complete ownership and management separation of the wholesale and retail arms so that there is no commonality of interest between the two).

Indeed, under structural separation, and the appropriate price regulation of the wholesale business, there will be incentives to supply network services to as many access-seekers as possible in the interests of maximising profits. In turn, this can lead to increased levels of competition in retail markets and all the benefits that competition brings in terms of lower prices, higher quality and more innovative services.

Furthermore, because of the effective removal of incentives to discriminate, significantly less regulation (and the resources to enforce it) would be required.

Of course, this requires the restructuring of the incumbent and the one-off costs from this need to be factored into the overall analysis. Any economies of scope from vertical integration may be reduced or lost. However, the existence and the extent of these economies should not be taken for granted. Further analysis is required. For example, there may be dis-economies of scope from a lack of management focus on core activities. Further, a company may stay vertically integrated to exploit its 'monopoly premium' and, as such, this should not be considered a legitimate 'economy of scope'.

Another disadvantage of structural separation is that there may be a loss of synchronisation between supply and demand (ie, there is a loss of direct communication between the retailers who have first-hand knowledge of what customers want and the wholesaler who provides the underlying network needed to provide services demanded). However, should 'deep-level' competition (ie, facilities- or access-based competition) develop as a result of structural separation, there is the potential for greater synchronisation between supply and demand as such competition results in greater control over the network and the ability to configure the network to meet the variety of customer demands (for example, greater bandwidth, greater security and reliability, data streaming, data broadcast, always-on point-to-point data connectivity, video streaming, video-on-demand, pay TV, etc).

(ii) The Faroes version of structural separation

To the extent there is concern as to the speed with which competition will develop, there is a variation on structural separation which has been adopted by the Faroe Islands which deals with the incentives to discriminate by providing positions for representatives of retail competitors on the Board of the separated wholesale company.

It is proving successful in providing competitive outcomes at the retail level, in synchronising demand and supply, and in focusing management on their core activities (for example, the retail company has reduced costs and increased revenues). The Director of Telecommunications in the Faoroes has expressed his willingness to meet States' Ministers to discuss the Faroes experience with their version of structural separation.

(iii) Operational separation

The third potential solution is operational separation (ie, separation of the wholesale and retail operations but kept under the same corporate ownership). This option is increasingly being adopted in a number of countries in attempts to overcome the lack of effectiveness with accounting separation in dealing with the economic incentives of incumbents to discriminate.

However, as indicated by the UK experience, there are continuing problems with operational separation, largely because this option does not remove the incentive to discriminate. Furthermore, the option may not replace the burdens of accounting separation but add to them by imposing new regulations on the vertically integrated incumbent (eg, regulations to establish Chinese walls and arms-length transactions). In a Jersey context, however, there would be likely to be less undertakings required.

Conclusions

Pulling together the various and at times complex issues and arguments outlined in the paper:

- the States objective in telecommunications is to meet demand (particularly the demands of the financial sector) for telecommunications services, wherever appropriate by competition;
- competition occurs in the dimensions of price and quality but the States have expressed a preference for quality services in view of the demands of the financial sector and its importance to the Jersey economy;
- resale competition typically results in price competition but it does not always provide for high quality services since it involves minimal investment in the necessary infrastructure (however, such competition may play an important role in facilitating market entry and the transition to more investment-based competition);
- if competition is to result in high quality services, it can only be provided by 'deep-level' investments in network infrastructure such as that afforded by facilities- and access-based competition;
- of the two, facilities-based competition is not economically feasible in Jersey given the small market size, high capital costs and economies of scale;
- access-based competition is the only potentially feasible form of competition in Jersey that will meet the demand for high quality services;
- however, on the basis of international experience and despite the best intentions of regulators, it appears that access-based competition is unlikely to develop on an effective, timely and sustainable basis while JT is structured as a vertically integrated supplier of network and retail services under the current regulatory regime;
- the JCRA notes Newtel's plans to become an access-based competitor;
- if access-based competition is successful, it would be expected to deliver significant on-going benefits for the Jersey economy as a whole in both quality and price of services;
- there may be a one-off loss in States revenue from structurally separating JT rather than selling as a whole but the JCRA understands that there may be market interest in acquiring separated entities; and
- there are also likely to be on-going costs stemming from the loss of vertical efficiencies, reduced synchronisation of demand and supply, and loss of welfare-enhancing ability to price discriminate; but
- there is the likelihood of greater resale competition to keep downward pressure on retail prices.

(i) Unique opportunity

Ofcom has commented on the 'once-in-a-generation' opportunity to restructure BT for the benefit of future competition during its strategic review of telecommunications:

> *This is a once-in-a-generation opportunity to ensure that the fundamental network and regulatory structures are aligned to ensure opportunities for fair competition in future.*[1]

The States of Jersey has, indeed, a greater opportunity than the UK to restructure appropriately JT because it is still in States ownership. Restructuring does not preclude the ultimate sale of JT but, once sold without restructuring, that opportunity is likely to be lost for future generations.

(ii) Options

The Economic Development Minister has requested the JCRA to advise him on the structure of JT that the JCRA believed would best serve the States policy of promoting competition in telecommunications and thereby economic growth as a whole.

The JCRA concludes from the information presented in this paper that the current regulation (in particular, accounting separation) is not optimal from the point of view of promoting effective and sustainable competition.

The JCRA does not conclusively recommend any particular option for the structuring of JT because it is aware that there are other policy objectives in addition to the promotion of competition (such as maximising returns to the shareholder) as well as the possible disadvantages outlined earlier to be put into the equation.

However, it has pointed out the benefits and costs of both operational and structural separation. The costs of structural separation include the productive efficiency losses from separating a vertically integrated enterprise. But the benefits could be significantly greater because, by allowing for more effective and sustainable competition to develop, allocative and dynamic efficiencies are spread throughout the economy, including essential high quality telecommunications services for the finance sector.

The JCRA particularly points to the version of structural separation adopted in the Faroes Islands which is proving successful in operation by largely removing the incentives for discrimination but does not have the downside of wholly losing economies of scope from vertical integration. As mentioned, the Director of Telecommunications in the Faroes has expressed his willingness to meet States' Ministers to discuss the Faroes experience.

In conclusion, it should be emphasised that the payoffs in terms of consumer welfare, efficiency and economic growth are likely to be far greater in small economies from getting JT structurally right in the interests of promoting competition. We conclude with Michal Gal:

> *Even small economies that enjoy some unusual comparative advantage must have the capacity to benefit from these hazards of fortune and to make them a basis for sustained economic development. Moreover, in small economies the importance of an appropriately structured and efficiently enforced competition policy may be greater than in large economies.*[2]

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[1] *Strategic Review of Telecommunications*, Phase 2 consultation document, Ofcom, 18 November 2004, para 1.57.

[2] *Competition Policy for Small Market Economies*, Michal S. Gal, Harvard University Press, 2003, p5.

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1. INTRODUCTION

On 13 July 2006, the Minister for Treasury and Resources (the Treasurer) issued a Discussion Paper proposing the sale of Jersey Telecom (JT).[3] As noted in the Paper, the Treasurer is legally obliged to maximise the value of the States shareholding in JT and exercise the States interest in the company solely on a commercial footing.[4]

Apart from providing an opportunity to maximise returns to the shareholder, the Treasurer and the Minister for Economic Development (the Economics Minister) both subsequently agreed that the proposed sale of JT would also provide a valuable and perhaps unique opportunity to achieve an industry structure which maximised the benefits to the Jersey economy through competition and economic growth.

Accordingly, on 2 October 2006, the Economics Minister requested the Jersey Competition Regulatory Authority (the JCRA) to advise him on the structure of JT that the JCRA believed would best serve the States policy of promoting competition in telecommunications and thereby economic growth as a whole. A copy of the full Terms of Reference may be found at Annex A.

2. POLICY OBJECTIVES

Given the competition focus of the Terms of Reference, the JCRA considers it appropriate to commence this paper with an outline of the objectives of competition policy in telecommunications and the nexus with economic growth. For, somewhat counter-intuitively, competition may not always be the best means of achieving its policy aims.

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[3] *Discussion Paper Issued by the Minister for Treasury & Resources on the Proposed Sale of Jersey Telecom* (the 'Privatisation Discussion Paper'), States of Jersey, 13 July 2006.
[4] ibid., p11.

(i) Competition policy

To promote consumer welfare, efficiency and economic growth

The first point to note about competition policy is that competition is not an end in itself. Rather it is a means to other ends, in particular the ends of consumer welfare, efficiency and, ultimately, economic growth. As was noted during the passage through the States of the Competition (Jersey) Law 2005:

> *International experience demonstrates that the enactment and enforcement of competition law helps create and promote conditions for healthy competition and promote consumer welfare by increasing efficiency … as well as several other effects and consequences including -*
>
> *(a) a reduction in prices for businesses and consumers alike because the forces of competition usually tend to reduce prices - this will help to reduce inflation;*
>
> *(b) an increase in service levels for businesses and consumers alike because suppliers are stimulated to compete on the basis of the service offered;*
>
> *(c) an increase in innovation within an economy because of the stimulus of competition;*
>
> *(d) an increase in productive efficiency within the economy because only those goods and services for which there is a demand will be purchased (this eliminates inefficiency or wasteful production);*
>
> *(e) an increase in allocative efficiency within the economy because resources will be allocated to only those goods and services for which there is a demand.*[5]

Given its focus on economic ends, competition policy has been recognised internationally as a key element of economic policy.

To regulate as a proxy for competition

The second point to note is that competition may not always be the most effective way of achieving the ultimate ends of consumer welfare, efficiency and economic growth. This may particularly be the case in small island economies like that of Jersey where small markets and economies of scale may combine to make monopolies the most efficient way of meeting demand. As Michal Gal has commented:

> *A critical feature of small economies is the concentrated nature of many of their markets, resulting from the presence of economies of scale and high entry barriers. Smallness has adverse implications for domestic market structure and performance. The size of some industries is sub-optimal to the extent that limited demand constrains the development of a critical mass of domestic productive activities necessary to achieve the lowest costs of production. But even when productive efficiency can be achieved, small economies cannot support more than a few competitors in most of their industries. Competition is*

[5] *Competition Law*, Progress Report of Industry Committee presented to the States, 3 September 2002, p1.

often characterized by monopoly or oligopoly protected by high entry barriers. These market conditions have an adverse impact on prices and output levels of many goods and services, that may carry over to vertically inter-connected industries.[6]

Accordingly, in its broadest sense, competition policy not only seeks to promote competition but also accommodates situations where competition is not economically feasible by regulating as a proxy for competition in the interests of consumer welfare, efficiency and economic growth. The States of Jersey have recognised this and the recognition is implicit in the title and powers of the JCRA.[7]

Michal Gal also recognises that the size of a market necessarily affects the competition policy it should adopt.[8]

> *… finding the balance between productive efficiency and competitive conditions in small economies is challenging. In the presence of scale economies, a balance should be struck between firms large and integrated enough to enjoy these economies and firms numerous enough and with sufficient opportunity for effective rivalry.*
>
> *These salient characteristics require small economies to devise appropriate endogenous policies that offset at least some of the adverse effects of their small size. Competition policy can either increase or reduce the disadvantages of small size. To reduce them, competition policy has to be designed to deal effectively with the unique obstacles to competition that are inherent in an economy, including those that stem from small size.* ***Even small economies that enjoy some unusual comparative advantage must have the capacity to benefit from these hazards of fortune and to make them a basis for sustained economic development. Moreover, in small economies the importance of an appropriately structured and efficiently enforced competition policy may be greater than in large economies****.*[9] *[emphasis added]*

A good illustration of the points emphasised in the quotation above is the Jersey finance sector, its key role in Jersey's economic development and the importance of an appropriately structured competition policy in telecommunications for that sector. This paper now turns to a discussion of telecommunications policy in Jersey and how it is particularly focused on ensuring that high quality telecommunications services are provided to the finance sector in the interests of promoting Jersey's economic development.

[6] *Competition Policy for Small Market Economies*, Michal S. Gal, Harvard University Press, 2003, p 4.
[7] *A Competition Law for Jersey*, Report of the Industry Committee presented to the States, 8 January 2002, para 7.
[8] *Competition Policy for Small Market Economies*, op.cit., p1.
[9] ibid., pp 4-5.

(ii) Competition policy in telecommunications

To satisfy business and consumer demand

The primary duty of the JCRA under the Telecommunications (Jersey) Law 2002 (the 'Law') is to ensure that demand for current and prospective telecommunications services is met so far as is reasonably practicable.[10] In seeking to meet this demand, the JCRA has a secondary duty to promote competition wherever appropriate:[11]

> *… the JCRA … should have the duty to exercise [its] relevant functions in the manner best calculated to ensure the provision of … telecommunication services for the Island. Subject to this primary duty, the JCRA should have a secondary duty to act in a manner best calculated to further the interests of customers, wherever possible by promoting competition between service providers.*[12]

It also has another secondary duty to promote efficiency when seeking to meet demand.[13] In deciding whether demand is satisfied, either through competition or otherwise, the JCRA must have regard to whether the services are affordable, innovative, of high quality and reliable.[14]

A critical issue here is what sort of demand is sought to be met? Is it demand for affordable low prices services or demand for quality services? A reading of the extrinsic materials associated with the passage of the Law would indicate that there is a strong preference for quality services given the demands of the financial sector and its key role in the economic welfare of Jersey.

To focus on high quality services for the finance sector

It is clear from the following statement by the Treasurer that quality is to be preferred over price given that the economic interests of Jersey are to a large extent the economic interests of the finance sector:

> *As an international **finance centre** operating from an Island location, the provision of resilient and reliable telecommunications networks across which **world-class services** are available is **fundamental to the continued success of Jersey**. Business and residential consumers alike demand, and have come to expect, the availability of these services, and telecommunications companies in Jersey **must invest heavily** to ensure that they remain the provider of choice.*[15] *[emphasis added]*

And further:

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[10] *Telecommunications (Jersey) Law 2002*, Article 7(1).
[11] ibid., Article 7(2)(a).
[12] *Incorporation of Jersey Post and Jersey Telecoms: Revised Approach*, Report of Policy and Resources Committee, lodged au Greffe, 6 June 2000, para 7.
[13] *Telecommunications (Jersey) Law 2002*, Article 7(2)(b).
[14] ibid., Article 7(3).
[15] *Privatisation Discussion Paper*, op.cit., p5.

> *The continued need for investment in essential infrastructure to ensure the provision of all current and prospective demands for* ***high-quality services*** *to residential and business consumers is a key feature of the Telecommunications (Jersey) Law 2002.*[16] *[emphasis added]*

Competition largely occurs in the dimensions of price and quality. A further critical issue is therefore what type of competition can satisfy demand for quality services (rather than just low-price services) or whether regulatory intervention is required to meet that demand?

3. SATISFACTION OF DEMAND THROUGH COMPETITION

States policy is that demand in telecommunications is to be met wherever appropriate by competition, and that the demand to be satisfied is for high quality services in view of the demands of the finance sector. This section discusses how demand can be met through competition. If it cannot be met through competition, we discuss later how it may be met though regulation.

Discussed first in general terms are the forms of competition in telecommunications and whether they can deliver on quality services. In telecommunications, whether fixed-line telecommunications or wireless, competition typically occurs in three main ways:

- facilities-based competition (ie, competing network infrastructure);
- access-based competition (ie, leasing lines from an incumbent network operator and co-locating transmission and switching/router equipment in the incumbent's exchanges to transmit services over those lines); and
- resale competition (ie, where the retailer essentially resells the services of the incumbent under another brand name with limited value added).

(i) Facilities-based competition

Facilities-based competition allows for complete control (either through ownership or long-term interconnection contracts) over the necessary network infrastructure and its associated costs. In particular, network ownership allows for the installation of the latest and most efficient technology and the supply of new services or increased bandwidth in response to shifts in demand. This is particularly important in telecommunications because of the range and complexity of service offerings and their dynamic nexus with technological progress.

[16] *Privatisation Discussion Paper*, op.cit., p8.

(ii) Access-based competition

Access-based competition allows for varying degrees of control – but not complete control – over the underlying network depending on the type of access acquired. In general, local loop unbundling (LLU) offers greater control than Bitstream access because it essentially involves the leasing of un-configured local lines which are then configured to satisfy demand. With Bitstream access, the access provider still provides the underlying transmission service and the access-based competitor is constrained by the specifications of that basic service.

(iii) Resale competition

On the other hand, resellers do not have any meaningful degree of control over the quality and type of telecommunications services they re-supply. This is because they rely largely on retail margins being maintained above the wholesale rate at which services are acquired (ie, they rely on arbitrage opportunities). Sometimes limited value is added to these basic wholesale services (such as billing and customer support) but because resellers have little control over the network and its associated costs, they are ultimately circumscribed in the competitive services they can offer in response to shifts in demand.

As a result, resale competition occurs largely in the dimension of price competition but it can play an important role in facilitating 'quality' market entry and the transition to the more effective and sustainable form of facilities- and access-based competition.

(iv) Preferred type of competition for Jersey telecommunications

We have noted that there is a strong preference in Jersey for competition which delivers high-quality services. However, only facilities- or access-based competition can satisfy demand for such services as it is only those two which allow for the necessary degree of control over service quality and innovation. As Ofcom has noted:

> *Our market research and consultation suggested that businesses and consumers want much more than basic, reliable telecoms services at low prices: they also want choice, and rapid innovation and introduction of new services. Our assessment was that the most effective way of delivering this is through competition at the deepest level of infrastructure where competition will be effective and sustainable.*[17]

In other words, the aim is not simply 'low-level' price competition but rather 'deep-level' quality competition which is effective and sustainable. To quote further from Ofcom:

> *… whilst downward pressure on pricing can be achieved by a combination of regulation and arbitrage-based services competition, we concluded that the choice, diversity, and innovation required by consumers in today's much more diverse and fast-moving market*

[17] *Strategic Review of Telecommunications*, Final Statement, Ofcom, 22 September 2005, para 1.3.

could not be achieved in this way. Innovation in particular cannot be imposed on a market as a regulatory requirement. Services-based competition does encourage innovation in relation to branding, billing, and packaging of services, but much of the innovation that consumers value in telecoms stems from the ability to combine both network and service capabilities.[18]

4. SATISFACTION OF DEMAND THROUGH REGULATION

Should competition not satisfy demand for high quality telecommunications services, the JCRA is required to regulate:

> *The Law provides that if demand for a certain service, in terms of quality or type, is not being met by licensed operators in the industry, the JCRA is legally required to take steps to deal with this issue. To do so, it has the powers to require licensed operators to make or contribute to investment in any infrastructure that is required for the purposes of ensuring that these current and prospective demands for telecommunications services are provided for.*[19]

However, it is problematical whether the JCRA can require such investment. Regulators cannot create investment, nor are they well placed to micro-manage such investment. That is for the industry and the market.[20] In the words of Michal Gal:

> *Competition is also trusted because there is little basis for faith that regulators possess the knowledge and the motivation required to fine-tune business behaviour on behalf of consumers.*[21]

As discussed later, it may be that a regulated monopolist at the network level is the most efficient way to meet demand, particularly if that demand is for high quality network services which require significant upfront investments that may be stranded if market entry fails.[22] The reason that it may be the preferred option is the evidence of international experience that effective and sustainable competition is proving difficult to introduce at the network level. First discussed is international experience generally, followed by the experience in the UK and then Jersey.

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[18] ibid., para 3.11.

[19] *Privatisation Discussion Paper*, op.cit., p8.

[20] This is not a flippant disregard of regulation in this area. Refer Alfred Kahn, one of the foremost figures on the process of deregulation in *Letting Go: Deregulating the Process of Deregulation - Temptation of the Kleptocrats and the Political Economy of Regulatory Disingenuousness*, Alfred E. Kahn, MSU Public Utilities Papers, 1998, pp 92 and 102: 'The [regulator] has in effect declared: "We will determine not what your costs are or will be but what we think they ought to be. Why should we bother to let the messy and uncertain competitive process determine the outcome when we can determine at the very outset what those results would be and prescribe them now?"… if regulators are wise enough to be able to prescribe the results competition would produce, there is no need for competition.'

[21] *Competition Policy for Small Market Economies*, op.cit., p13.

[22] Described in economics as 'sunk' costs. High sunk costs create barriers to entry as, by their nature, sunk costs cannot be recouped in the event of failed entry (eg, it is difficult to literally dig up sunk networks and resell them).

5. EXPERIENCE WITH DEVELOPMENT OF COMPETITION

(i) International experience

Internationally, competition has tended to develop differently in the two broad telecommunications sectors: the wireless (including mobile telephony and wireless broadband access such as Wi-Max) and the fixed-line sectors.

Wireless competition

In wireless (particularly the mobile sector), competition is emerging on an effective and sustainable basis.[23] This is largely because wireless networks are not as capital intensive as fixed-line networks, thus making it economically feasible to roll-out competing vertically integrated networks on a sustainable basis.

Jersey is a good example in respect of mobile telecommunications where there is already one new competitive operator with a second about to enter the market. The new mobile entrant, Cable & Wireless Jersey operating under the brand name 'Sure', obtained a market share of approximately 9 per cent by 1 December 2006. It is a vertically integrated company providing mobile services over its own network (and JT's mobile network through an interconnection arrangement negotiated under the auspices of the JCRA).

The second entrant is Bharti trading as 'AirTel'. As for Cable & Wireless, Bharti intends to enter the market on a vertically integrated basis with its own mobile network but when current environmental problems over the placement of transmission masts are resolved.

As both Cable & Wireless and Bharti will have control over their own networks and associated costs, effective and sustainable competition appears most likely to emerge in the mobile sector under the current regulatory rules. Accordingly, the JCRA sees no apparent reason to change those rules to facilitate greater levels of competition in this sector.

In relation to broadband wireless access, the technology is still largely at a developmental stage internationally and it would be premature to intervene in this market, particularly given that the economics may be similar to that of the other wireless sector, mobile. In Jersey, broadband wireless access has not been introduced.[24]

As competition in the mobile sector is developing (or indeed, has developed) on an effective and sustainable basis and it is too premature to consider regulatory intervention in the broadband wireless sector, the rest of this paper focuses on promoting competition

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[23] For example, see conclusion of Ofcom in *Strategic Review of Telecommunications*, Final Statement, 22 September 2005, para 4.13: 'Mobile telecoms networks lack the enduring economic bottlenecks that we found to exist in fixed networks. Competition has been sustainable between a sufficient number of networks, each providing end-to-end services to customers, to constitute effective competition.'

[24] Newtel, a local licensee currently providing fixed-line services, has Wi-Max licences for Jersey.

in the fixed-line sector of telecommunications. Discussed first is how the different forms of fixed-line competition have developed internationally. Then we discuss the situation in the UK and then in Jersey.

Fixed-line competition

In fixed-line telecommunications, a distinction should be made at the outset between core networks and the customer access network (otherwise known as the 'local loop' or the 'last mile' from the local exchange to the customer).[25]

Core networks have better economics than local loops (largely because of the amount of traffic they carry) and competition internationally has developed on a sustainable basis in this area.[26] However, Jersey's small economy and industry economies of scale have tended to preclude that form of competition locally. As core networks have not in themselves raise competition issues under the existing regulatory framework in Jersey, the rest of this paper focuses on the development of competition in the customer access network.

Turning to international experience with the development of competition in the customer access network, that experience tends to show that competition has not developed in the local loop on an effective and sustainable basis. This is the general outcome in both large and small economies.

With respect to facilities-based competition in the local loop, 'cherry-picking' in premium markets (typically CBD markets serving high value business customers) has occurred but ubiquitous network roll-out is rare.

The JCRA is aware of only two instances where facilities-based competition in the local loop has occurred on an effective and sustainable basis: the US and Hong Kong. In both cases there are specific factors responsible. In the US, it is the existence of urban cable networks originally designed for pay TV which can now, with technological developments such as IP telephony, compete strongly with the networks of the incumbent telecommunications companies. In Hong Kong, it is the economies of density which have enabled multiple network roll-out.

In relation to access-based competition in the local loop, there are on-going problems with equality of access that make development of this form of competition difficult. As Ofcom, the UK telecommunications regulator, commented during its Strategic Review of Telecommunications conducted over 2004 and 2005:

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[25] Core networks connect the hierarchy of exchanges in a network and connect to other networks locally, nationally and internationally. Depending on their status in the hierarchy, they can carry vast amounts of telecommunications traffic.

[26] Ofcom has also come to this view in *Strategic Review of Telecommunications*, Phase 2 consultation document, Ofcom, 18 November 2004, p5: 'Understandably, fixed infrastructure competition has followed the margin in the system, with competition to BT focused on core and backbone networks.' Indeed, in the international sector, there is an over-supply of core networks.

… despite twenty years of regulatory intervention, competition in fixed line telecoms remains fragile…[There is] an unstable market structure in fixed telecoms, dominated by BT and with alternative providers that are, in the main, fragmented and of limited scale.[27]

The reasons are discussed in the next section but, combined with the lack of facilities-based competition, it would appear that the local loop remains a natural monopoly so far as effective and sustainable competition is concerned.[28]

Resale competition has emerged but, as discussed, this is not an optimal form of competition. Indeed, even this form of competition appears to be diminishing. This is an important point with much relevance to Jersey so it is worth quoting extensively from Ofcom on this point:

… the degree of competitive pressure exerted on BT by alternative carriers and service providers today may even diminish in the medium term if the regulatory status quo is maintained. Much of the competition that has emerged has done so because of the existence of high prices resulting from BT's historic monopoly position. Competitors have been able to enter the market and make returns by competing against those high prices. But as prices fall, the inherent advantages accruing to BT as a result of its scale and its ability to exploit its vertical integration will become increasingly important. This problem has been compounded by entry focusing on short-term arbitrage opportunities which result from the structure of pricing…. As prices fall and arbitrage opportunities diminish, entrants must develop the scale to compete with BT and the ability to overcome the inherent advantages of vertical integration. At the moment, neither of these conditions exist in the market, which we believe is one reason why so many of BT's competitors are currently experiencing very difficult trading conditions.[29]

There is an issue of whether wireless networks, particularly 3G and the new breed of broadband wireless networks such as Wi-Max, will increasingly become close substitutes for fixed-line local loops because of technological convergence. However, in the JCRA's opinion, wireless networks are not sufficiently close substitutes so as to constrain the pricing power of dominant fixed-line local loop network operators.[30] Nor is it considered that they are likely to be in the near future given the current advantage of fixed-line networks in providing reliable and resilient broadband telecommunications services to customers who demand those types of high quality services (eg, banks and other financial institutions).

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[27] *Strategic Review of Telecommunications Phase 2 Proposals*, News Release, Ofcom, 18 November 2004.

[28] A natural monopoly occurs where, because of economies of scale deriving from large upfront investments, a single firm can supply an entire market more efficiently than two or more firms in competition with each other. The belief that telecommunications was no longer a natural monopoly due to technological developments fed most telecommunications liberalisation policies (see, for example, para 6 of *Draft Telecommunications (Jersey) Law 200-*, Statement of Industries Committee, lodged au Greffe, 3 July 2001). However, the local loop in particular is proving to be an intransigent natural monopoly.

[29] *Strategic Review of Telecommunications*, Phase 2 consultation document, Ofcom, 18 November 2004, para 4.98.

[30] Ofcom drew the same conclusion. Refer para 4.5 in its *Strategic Review of Telecommunications*, Final Statement, 22 September 2005. See also Lehr and Hubbard in *Economic Case for Voluntary Structural Separation*, William H Lehr and R Glenn Hubbard, paper prepared for 31st Annual Telecommunications Policy Research Conference, George Mason University, 15 September 2003, p6.

(ii) Experience in Jersey

Jersey is no different to the international trend. Understandably, no facilities-based competition has developed in the provision of fixed-line services over the local loop given the small size of the market, high upfront capital costs and the resulting economies of scale.

A local independent licensee, Newtel, does own and operate a cable TV network which it acquired from Jersey Cable (a subsidiary of Channel TV). It currently supplies cable TV services to social housing estates over this network.[31] However, it is not of a suitable grade for the delivery of modern digital telecommunications. Further, the costs of upgrading its network (involving upgrading all its nodes and reconfiguring its customer access lines) would far outweigh the economic returns from its limited location and likely customer base. Accordingly, this cable network is unlikely to develop as an effective and sustainable source of competition to JT's network (nor its planned next generation network or NGN).[32]

Further, there is no access-based competition in the local loop. While the JCRA has the power to require JT to provide local loop access, a consultation in 2005 proved inconclusive as JT at the same time announced its intention to roll out a NGN which could affect the way that access may be achieved. Even so, there has been no market demand for such access (ie, there has been no requests made to the JCRA for it to use its powers to order access). Presumably this is because access-based competition, while not involving the high upfront capital costs of rolling-out a network, still requires significant investments in transmission and routing equipment and backhaul links to its core network.

As discussed below, Newtel's current business is largely as a reseller of JT's Internet access services with plans to provide voice telephony over the Internet (VoIP) services. However, it does have plans to invest in network facilities and obtain access to JT's NGN so that it can gain more control over the type and quality of services it supplies, particularly in relation to VoIP which requires a high standard of quality to be competitive with the traditional voice telephony services provided by JT.[33]

However, even if access is achieved, international experience would strongly suggest that effective and sustainable competition is unlikely to emerge in the future under the current

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[31] Newtel also provides direct off-island backhaul for SME's using its upgraded core fibre network which forms a ring around the CBD in St Helier. However, as discussed, this network is not directly relevant.

[32] There is a similar situation in the UK where cable networks did not develop as effective and sustainable competitors to BT's ubiquitous network. In the UK, this was primarily due to the fact that they never became the default distribution platform for pay TV and its geographic spread remains limited. Indeed, one cable operator, NTL has announced its intention to provide telecommunications services over BT's unbundled local loop. Refer *Strategic Review of Telecommunications*, Phase 2 consultation document, Ofcom, 18 November 2004, para 4.92.

[33] Newtel has advised the JCRA that it would prefer Bitstream access over LLU as the latter may not be economical on JT's new NGN, which extends closer to buildings and thus requires more nodes and more equipment per capita.

structure of JT and with the current regulatory rules. The reasons are central to this paper and are discussed at length in the next section.

The only current form of competition in Jersey is resale competition. Newtel's current business is largely as a reseller of JT's network services. In particular, it currently provides broadband access services (eg, Internet access) using JT's network and retail broadband service as a base. It currently has around 4,500 broadband customers. However, because it relies on JT for service delivery, there is minimal service differentiation (eg, its bandwidth is the same as JT's).

In addition, Newtel and Cable & Wireless currently provide legacy pre-select national and international voice telephony services. However, their customer numbers are relatively insignificant: Newtel's customer base has dwindled from several hundred down to about 120, of which 20 are business users, while Cable & Wireless has about [confidential] customers of which around [confidential] are business users. Moreover, as discussed, resale competition is not the most effective and sustainable form of competition because resellers have minimal control over their service quality and costs.

6. THE PROBLEM: LACK OF SUSTAINABLE COMPETITION

The strong conclusion from the preceding overview of international experience is that competition in the local loop has not developed on an effective and sustainable basis in most jurisdictions where liberalisation of telecommunications has been undertaken. The reasons for this are now discussed.

(i) High capital costs and economies of scale

In relation to facilities-based competition, international experience demonstrates that it is generally not economically feasible for local loop networks to be duplicated or overbuilt because of the high capital costs involved. Combined with economies of scale, these upfront costs constitute formidable barriers to entry. Indeed, they often prove insurmountable when the incumbent also:

- has a ubiquitous and operational network;
- is vertically integrated reaping economies of scope;
- has advantages of incumbency; and
- benefits from customer inertia and high switching costs.

When the small market size in Jersey is added to the list, it becomes clear that they may well constitute an absolute barrier to facilities-based competition in Jersey.

And if further reason is needed, the shift to NGNs and the necessary investments required will make it more difficult still:

> *The technology shift to IP-based networks requires new investment, to supply what are likely to be products with lower margin than was available in the legacy products and services. There is little appetite for new investment to compete with BT Group plc at the local access level, and in some areas even in backhaul from the Local Exchange to the core network. This is a challenge.*[34]

Accordingly, the remainder of this paper will focus on access-based competition as a means of satisfying demand for high quality services in telecommunications.

(ii) Lack of equality of access

International experience also demonstrates that access-based competition is proving an elusive object. Put simply, for access-based competition to develop on an effective and sustainable basis, there must be equality of access (sometimes called 'equivalence') but regulation has failed fully to ensure such access. In the UK, for example, Ofcom has made the following comments on regulatory failure in that country:

> *We believe that UK telecoms regulation has yet to overcome the problems of enduring economic bottlenecks combined with lack of equality of access to these parts of the network. The problem of enduring economic bottlenecks is that the economies of scale and sunk costs of telecoms networks, especially for fixed access networks, are particularly hard for new entrants to overcome. Yet if new entrants do not build their own fixed access or backhaul networks, they are reliant instead on BT to provide wholesale access to its network. They then face the problem of inequality of access. Those who rely on BT to provide such access have experienced twenty years of:*
>
> - *slow product development;*
> - *inferior quality wholesale products;*
> - *poor transactional processes; and*
> - *a general lack of transparency.*
>
> *While individually each issue might seem immaterial, cumulatively they make the reality of competing against a vertically-integrated player an economically unattractive proposition.*[35]

In attempting to provide equality of access, jurisdictions around the world have resorted to increasingly complex and detailed regulatory rules which, in several respects, result in micro-management of the incumbent's commercial activities by the regulator. This is not optimal for any of the interested parties. In another example from the UK, Ofcom comments on this point:

[34] *Strategic Review of Telecommunications*, Phase 2 consultation document, op.cit., p5.
[35] ibid., paras 1.19 – 1.20.

This outcome [complex and detailed regulatory rules] is not optimal for citizens and consumers, for BT's competitors nor for BT itself. It is restrictive and costly to all parties, and at this stage of network and technology development it is potentially damaging to our long-term competitiveness as a nation. This will become an even more critical issue with the deployment of next generation technologies, where current rules of interconnection and many of the related wholesale products will no longer apply.

For all of these reasons a continuation of the status quo is neither acceptable nor desirable.[36]

(iii) Competition and incentives

Economics is the science of incentives and it is no more true than in the area of competition economics. In economics, incentive is the pursuit of self-interest. As Adam Smith points out, self-interest is no bad thing because it is ultimately in the public interest, absent any market failure. Michal Gal comments:

The economic theory underlying competition laws is based on the belief that the market's invisible hand is, potentially at least, a far more powerful guardian of the social welfare than any other form of regulation. Competition draws competitors into the market to remove excess profit. It stimulates incumbents to greater productive and dynamic efficiency. It weeds out the inefficient by the objective test of market survival, and it assures the optimal allocation of resources in productive activities.[37]

In addition, there is an additional legal incentive created by fiduciary duty where public companies are involved:

- publicly-owned companies are under an obligation to its shareholders to maximise profits, provided that they do so by legal means; and

- it is a breach of fiduciary duty for a company's directors to knowingly manage a company in a way that reduces profits.[38]

Telecommunications is an almost unique industry in that, to achieve the necessary 'any-to-any connectivity', competing telecommunications network companies must reach agreement on the terms and conditions of interconnection to each other's networks.[39] However, to do deals with competitors is likely to raise issues under general competition law and, more self-interestedly, it may not be in a company's commercial interest to willingly reach agreement with its competitor because it may mean lost customers and lost profits.

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[36] ibid., paras 1.22 – 1.23.
[37] *Competition Policy for Small Market Economies*, op.cit., p13.
[38] Henry Ford was once sued for breach of fiduciary duty for granting his workers a pay rise.
[39] 'Any-to-any connectivity' is the ability of a customer connected to one network to call a customer connected to another network. It is necessary because a customer will not normally connect to a particular network if customers of other networks cannot be reached.

Here lies the crux of the problem in telecommunications:

- there is a need for regulations requiring access to be granted on 'fair and reasonable' terms to overcome commercial incentives and override fiduciary obligations; but

- like leading a horse to water, incumbents will have a strong incentive to favour its own at the expense of new entrants when forcibly obliged to grant access against its own commercial interest.

In the words of Alfred Kahn, if one was the Almighty and in full possession of the facts, one may regulate to successfully overcome such incentives.[40] However, mortal regulation has simply not been up to the task. This has amply been demonstrated by the above discussion of international experience in respect of local loop access over fixed-line networks.

The particular reasons why regulation has been sub-optimal in developing access-based competition first needs a discussion of the broad range of regulatory tools available to regulators.

(iv) Regulatory tools in general

Of course, the ultimate regulatory tool is the market itself. However, as mentioned, there are clear incentives to inhibit the free working of the market for private gain. Adam Smith in an oft-quoted passage spoke about the tendency for competitors to agree amongst themselves in a conspiracy against the public:

> *People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices.*[41]

Similar tendencies are equally true with respect to the unilateral exercise of market power by, for example, leveraging it into downstream markets for private gain.

The States of Jersey have adopted a number of regulatory tools to promote competition in telecommunications where there is market failure or the potential to create market failure:

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[40] *Whom the Gods Would Destroy, or How Not to Deregulate*, Alfred E. Kahn, First Distinguished Lecture, AEI-Brookings Joint Center, AEI Press, 2001, p2: '… "unregulation" has provided the occasion for pervasive demonstrations of the very propensities of regulation that are the principal reasons for its abandonment – propensities to micromanage the process; to prescribe the results that, it is anticipated, the Almighty would have produced if He or She were in full possession of the facts; to handicap the competitive process to produce visible competitors; and, opportunistically, to produce visible price reductions'.

[41] *Wealth of Nations*, Adam Smith.

- the Competition (Jersey) Law 2005 which prohibits *ex post* anti-competitive arrangements, abuse of dominance (such as leveraging of market power, refusal to supply, price discrimination and predatory pricing) and anti-competitive acquisitions and mergers; and
- the Telecommunications (Jersey) Law 2002 which prohibits *ex ante* certain conduct (such as unfair cross-subsidisation, undue preference and unfair discrimination) and imposes certain obligations (such as requirements to provide network access, to separate accounts).[42]

These laws may be referred to as 'behavioural' rules in that they attempt to deal with market conduct. Another form of regulation which is discussed later as a possible option to behavioural regulation is structural regulation.

(v) Regulatory tools not optimal

The current regulatory framework in Jersey can compensate to some degree but not wholly for the issues inherent in vertical integration. First, in relation to the Competition (Jersey) Law 2005, this general competition law is not optimal for the following reasons:

- it is designed to promote and protect existing levels of competition in industries across-the-board but it cannot guarantee an introduction of competition into previously monopolistic markets such as telecommunications; and
- being *ex post* in nature, it deals with conduct after the event and may encourage a 'cheat and chase' mentality in interests of getting away with it or, if not, delay.[43]

In relation to the Telecommunications (Jersey) Law 2002, this industry-specific law is not optimal for the following reasons:

- in requiring access to be granted on 'fair and reasonable' terms, it has to deal with the incentives not to grant such access (as discussed above);
- the accounting separation provisions, which are an integral part of the Law, are not wholly sufficient to guarantee equality of access (for the reasons discussed below); and
- in general, industry-specific regulation is *ex ante* in nature which necessarily is

[42] *Ex post* regulation may be characterised as taking action after the event while *ex ante* regulation requires pre-approval before implementation. The latter is clearly more interventionist and is typically imposed to pro-actively introduce competition into previously monopolistic industries. When competition becomes established, it is generally wound-back with full reliance placed on *ex post* competition law.
[43] The merger and acquisitions provision of the law are *ex ante* in that they require pre-merger notification, but these provisions are not directly relevant to this paper.

heavy-handed despite the States policy of light-handed regulation.[44]

(vi) Accounting separation

Initially, most jurisdictions (including Jersey's) required incumbents to 'separate their accounts' so that any unfair cross-subsidisation or undue preference would become transparent and be dealt with swiftly by the regulator. Accounting separation has become an integral part of telecommunications law (including Jersey's). However, it has proven to be particularly problematical for the following main reasons:

- given the multiplicity of telecommunications services that can now be provided by one telecommunications company (sometimes marketed as 'triple play' or 'quadruple play' packages), it is extremely difficult to properly allocate the joint or common costs (such as network rollout and maintenance costs, corporate overheads, etc) between the various services;

- it imposes substantial regulatory burdens on both the regulator and the regulated because the costs sought to be identified are 'economically efficient' costs (eg, they include 'opportunity costs') which have little bearing on commercial decision-making and require the creation of a new set of accounts in addition to 'management accounts' (for company budgeting and strategic planning purposes) and 'statutory accounts' (eg, for tax purposes) – partly because of this, the JCRA temporarily waived last year the requirement for JT to update their accounts on a current cost basis;[45]

- the accounts are not sufficiently separated so as to enable separate identification of costs attributable to specific services and to show any below-cost predatory pricing, anti-competitive price discrimination or unfair cross-subsidisation;

- there are well known arguments over the level of access charges and the appropriate costing methodology (eg, should it be historically based, current cost or forward looking; what should be the time frames, long run or short run; should it be incremental cost or avoidable cost; etc?); and

- in respect of enforcement, the incumbent has clear informational advantages over the regulator on the most relevant costs and levels of demand.

To give a flavour to the on-going and well-known problems associated with accounting separation in particular and behavioural rules in general, at Appendix B may be found extracts from a commentary on a judgment in Australia involving their application.

[44] *Competition Law*, Progress Report of Industry Committee presented to the States 3 September 2002, p4.
[45] JT confidentially estimated to the JCRA that the annual costs of performing current cost accounting is unlikely to be less than £ [confidential] per annum.

(vii) Regulatory experience in Jersey

There have been a large number of complaints received by the JCRA about alleged anti-competitive conduct by JT since the introduction of fixed-line competition in 2003 and mobile competition in September 2006. Confidentiality prevents the JCRA from divulging the particulars of these complaints but many can be traced back to JT's control of the ubiquitous local loop in Jersey and the market power that derives from it.

From the JCRA's experience with dealing with these complaints, the regulations have not always been optimal largely for the reasons discussed above. Further, dealing with these complaints is proving demanding of the JCRA's resources and, presumably, those of JT too.[46] For example, JT in its last Annual Report estimated that its costs of regulatory compliance were in excess of £1 million per annum.

7. INTERNATIONAL RESPONSES TO THE PROBLEM

Telecommunications laws initially designed to introduce competition were, as discussed, generally of the 'behavioural' type. However, as demonstrated by international experience, this form of regulation has not been fully successful in introducing access-based competition.

Apart from behavioural regulation, another form of regulation is structural regulation. This regulation attempts to restructure markets or market participants so as to make them more structurally competitive. It may initially be more interventionary than behavioural regulation but the underlying rationale is that restructuring is a one-off intervention designed to remove the incentives for anti-competitive behaviour and be less reliant on behavioural regulation and the high on-going costs it necessarily entails.

There are two broad forms of structural regulation – operational separation and structural separation – designed with the aim of making the telecommunications industry more structurally competitive. These are discussed in general terms before turning to a discussion of how they have been adopted in a number of countries in an effort to make access-based competition more effective and sustainable.

(i) Operational separation

Operational separation involves the separation of the wholesale and retail operations of a dominant telecommunications company but the separated entities remain under the same corporate ownership. This option is increasingly being deployed in a number of countries in attempts to overcome the lack of effectiveness of behavioural regulation in dealing with the incentives of incumbents to discriminate in favour of their own.

[46] A confidential example is provided in confidential version of this paper.

The UK

One example is the UK where operational separation was adopted following the Strategic Review of Telecommunications conducted during 2004 and 2005 by Ofcom. A singular feature of operational separation as it has been adopted in the UK is that it is more regulatory intensive than the old behavioural regulation it replaced. For example, it involved:

- the drafting of more than 230 separate legally-binding undertakings with British Telecom (BT);

- the development by Ofcom of indicators to measure compliance with the undertakings and the publishing by Ofcom of regular updates on implementation of the undertakings;

- the drafting of new codes of practice and building of Chinese Walls within BT; and

- the creation of an Equality of Access Board (EAB) to monitor compliance with the undertakings.

The regulatory intensiveness of operational separation has been acknowledged by Ofcom:

> *In local access and other wholesale access products, efficient and sustainable competition is likely to require some continuing regulation to secure genuine equality of access, right through from product design to customer handover. Such regulation needs to be focused on a more limited range of wholesale products than to date – where there are real bottlenecks that are likely to endure. However, where it is focused, it also needs to be more intensive than hitherto.*[47]

Furthermore, one year after been put in place, there are still problems in introducing effective and sustainable access-based competition:

> *… the actual implementation, particularly of equivalence, has raised a number of issues, for instance in the way in which equivalence was applied and the quality of the equivalence management platform used to deliver equivalence. In addition, during the implementation of the Undertakings over the last 12 months, service performance across a range of wholesale products has at times been poor, and promised improvements have not always been fully delivered, or maintained.*
>
> *There is clearly a significant amount of work still to do both in terms of addressing outstanding issues as well as on the delivery of upcoming milestones.*[48]

New Zealand

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[47] *Strategic Review of Telecommunications*, Phase 2 consultation document, op.cit., p6.
[48] *Evaluating the impact of the Telecoms Review: an interim report one year on*, Ofcom 18 October 2006, paras 1.5 and 1.7.

The New Zealand Government has recently introduced legislation to require Telecom New Zealand to operationally separate its retail and wholesale business activities in the interests of promoting competition and efficiency for the long term benefit of users:

> *In order to ensure that all the competitors in the telecommunications markets have equivalent access to Telecom's key network services, the majority recommend that Telecom create an operationally separate network access services unit with an independent oversight group. The majority are concerned that Telecom would still have the ability and incentives to favour its own retail units over its competitors if its network access services were not operationally separate from its other wholesale units and its retail units. In our opinion, it is difficult to guarantee a Chinese wall between entities that are not operationally separate.*[49]

As the enabling legislation was only introduced in November 2006 and has yet to pass through Parliament, it is too early to judge the New Zealand version of operational separation.

Australia

In 2005 the Australian Government passed legislation for the operational separation of Telstra's retail and wholesale businesses to promote equivalence in the supply of network services. However, despite the Government's approval of Telstra's operational separation plan, implementation is still problematical and resource intensive:

> *… the implementation of operational separation is not yet complete. Telstra is now required to implement the strategies for service quality, information equivalence, information security and customer responsiveness, which relate to Telstra's wholesale services generally, and notional internal contracts, key performance indicators and the price equivalence framework, which relate to designated services.*[50]

It is interesting to note that structural separation of Telstra had been originally recommended by a Committee of Inquiry as part of the telecommunications liberalisation process in Australia in the 1990's:

> *… the preferred response to this concern [the incentive of vertically integrated owners of essential facilities to inhibit competitors' access to the facility] is usually to ensure that natural monopoly elements are fully separated from potentially competitive elements through appropriate structural reforms. In this regard it is important to stress that mere "accounting separation" will not be sufficient to remove the incentives for misuse of control over access to an essential facility. Full separation of ownership or control is*

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[49] *Telecommunications Amendment Bill*, Report of the Finance and Expenditure Committee, 27 November 2006, p4.

[50] *Telstra's operational separation plan approved*, Media Release 062/06, Minister for Communications, 23 June 2006.

required. In fact, failure to make such separation despite deregulation and privatisation is seen as a major reason why infrastructure reform in the UK has been disappointing.[51]

However, that opportunity has been largely lost with the subsequent privatisation of Telstra. The Government's only practical option has been operational separation. There may be lessons for Jersey given the proposed sale of its incumbent telecommunications company, JT.

Italy

In June 2006, the President of the Italian communications regulator, AGCOM, announced that he was currently investigating the operational separation of Telecom Italia's network and commercial operations.[52]

(ii) Structural separation

The most clear-cut solution is to remove the incentive to discriminate. This can effectively be done through structural separation (ie, the complete ownership and management separation of the wholesale and retail arms so that there is no commonality of interest between the two).

Possible structure

There are many ways to structure the separation of wholesale and retail operations but, as a working model for the purposes of analysis (ie, a possible model but not necessarily a recommended model in the detail), the JCRA adopts the example of a wholesale arm (referred to as 'NetCo') which would own all local loop fixed network assets and infrastructure on the island of Jersey.[53]

In addition to the local loop, NetCo might also own and operate the core network as there is a strong economic case for keeping the two networks together:

Telecommunication networks are complex systems consisting of many components, which require close coordination in their design and operation, which plausibly can give rise to

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[51] *National Competition Policy*, Report of the Independent Committee of Inquiry (the 'Hilmer Report'), August 1993, p241.

[52] *Italy regulator favours separating Telecom Italia network, commercial ops*, AFX (via Finanz Nachrichten) 9 June 2006.

[53] NetCo could be a legally incorporated entity operating under a separate brand. Apart from network assets and infrastructure ownership, it could also possibly control all relevant rights-of-way and easements, and the international gateway (and associated interconnection, transit and peering arrangements). NetCo could develop products in response to specifications from retail service providers (and supply these to other retail service providers on an equivalent basis, potentially with a lag for the innovator to harvest their innovation). It might have a large procurement function. All services provided to retail service providers could be clearly defined and tariffed. As a separate legal entity, NetCo would have self-standing finance, legal and human resource functions.

significant coordination economies if these networks are owned and operated as a single entity.[54]

In the example, the retail business (referred to as 'RetailCo') might initially be an asset-light entity focusing on sales, marketing and customer care of retail telecommunications services to business and residential users in Jersey. RetailCo could initially develop service requirements and specifications for NetCo but, in the interests of promoting 'deep-level' competition, it would not be precluded from developing its own network infrastructure (eg, LLU co-located equipment).[55]

Under structural separation, and with the appropriate price regulation of the wholesale business, there would be incentives to supply network services to as many access-seekers as possible in the interests of maximising profits. In turn, this could lead to increased levels of competition in retail markets and the benefits that competition brings in terms of lower prices, higher quality and more innovative services.

The JCRA is not aware of any jurisdiction that has yet adopted pure structural separation. The option was actively considered by Ofcom but ultimately it accepted as a more proportionate measure operational separation undertakings that were offered by British Telecom (BT) in lieu of structural separation:

> *Ofcom believes that it would not be proportionate to break up BT at this time, because we think the package of undertakings that we have accepted is sufficient to address the problems that we identified in the market. Ofcom accepts that there are certain benefits to BT's vertical integration. It is important to note that Ofcom does not have the power to break up BT; Ofcom would have to refer the issue to the Competition Commission. If the issue was referred, the Competition Commission might or might not think that break-up was a suitable remedy.*[56]

Europe

While the option of operational separation was ultimately accepted in the UK, the European Commission is currently actively inquiring into structural separation as an option in the context of its current review of EU electronic communications regulatory framework in view of the continuing problems it is experiencing with other measures in promoting competition:

> *I believe that the policy option of structural separation could answer many competition problems that Europe's telecom markets are still facing today. Perhaps we have to be as*

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[54] *Economic Case for Voluntary Structural Separation*, William H Lehr and R Glenn Hubbard, paper prepared for 31st Annual Telecommunications Policy Research Conference, George Mason University, 15 September 2003, p13.

[55] RetailCo would maintain its own billing and customer service systems. It would also have its own separate IT systems as it is particularly important that there be no sharing of any commercially sensitive information or any process advantage. Like NetCo, it would operate as a separate legal entity and would have self-standing finance, legal and human resource functions. It would also maintain a small procurement function.

[56] *Strategic Review of Telecommunications*, FAQs, Ofcom, 22 September 2005, para 8.

radical as regulators were in the US in the 1980s to make real progress? Of course, we will have to find our own European solutions, adapted to the needs of our continent. But "a European way of structural separation" is certainly a policy option that needs to be discussed intensively in the forthcoming months.[57]

(iii) Faroes version of structural separation

The Faroe Islands has a population of nearly 50,000. In June 2005, it implemented a version of structural separation in the light of continuing competition complaints from new entrants about gaining access to the fixed-line network and basic infrastructure of the incumbent, Føroya Tele.

The Faroese version does not separate the ultimate ownership of the wholesale and retail divisions as would occur under full structural separation but it effectively deals with the incentives to discriminate by providing positions for representatives of retail competitors on the Board of the wholesale network company and by making the wholesale and retail companies 'sister' companies rather than having them in a parent/subsidiary relationship. Both companies remain in government ownership. This form of structural separation is also proving successful in synchronising demand and supply.

In view of its potential relevance for Jersey, the Faroese version of structural separation is now described in more detail from information provided to the JCRA by the Faroe Islands national telecommunications agency, Fjarskiftis Eftirlitiđ.

The process leading to adoption of structural separation was commenced with the establishment of a working group following complaints about access to Føroya Tele's network. The working group comprised representatives from the relevant Government policy department, the regulator, the incumbent Føroya Tele and the new entrants.

The group put forward three proposals: operational separation (by Føroya Tele), full structural separation (by the new entrants) and a version of full structural separation (by the regulator). The Government adopted the regulator's proposal in June 2005. It has the following key elements:

- Føroya Tele kept in government ownership (privatisation was being considered at the time but not proceeded with as it was recognised that if privatised, the opportunity would be lost to structurally separate Føroya Tele);

- Føroya Tele became the 'parent company' with two 'sister companies' at the same level (ie, neither is a subsidiary of the other) created underneath it: FT Net as the network company and FT Samskifti as the retail services company;

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[57] *The 2006 Review of EU Telecom rules: Strengthening Competition and Completing the Internal Market*, Speech by Viviane Reding, EU Information Society Commissioner, Brussels, Bibliothèque Solvay, 27 June 2006.

- Føroya Tele, FT Net and FT Samskifti have separate boards, separate Chairmen and separate external audits; and

- the Chairman of FT Net is independent of Føroya Tele (ie, he comes from outside the company group) and representatives from downstream competitors have postions on the Board of FT Net;

The Director of Fjarskiftis Eftirlitið, Jógvan Thomsen, has informed the JCRA that this form of structural separation 'works very well' in providing equal access to service providers. In addition he has informed the JCRA of the following benefits:

- there is a sychronisation of demand and supply of telecommunications services with having a representative on the Board of FT Net

- FT Samskifti has become more cost-focused and productively efficient by concentrating on its core activities of retail service provision and, as a result, its net revenue has increased;

- Kall the new entrant is doing better in terms of market share than before structural separation;

- there are fewer complaints about access (complaints are more to do with the complaints typically made under general competition law, eg bundling); and

- there is no need for resource intensive accounting separation.

Jógvan Thomsen has also expressed his willingness to meet States Ministers to discuss the Faroes experience with their version of structural separation.

8. BENEFITS OF STRUCTURAL SEPARATION

The benefits of structural separation are now discussed in more detail.

(i) Removal of incentives to discriminate – more competition and demand

The primary advantage of structural separation is that it removes the incentive of a vertically integrated incumbent network provider to lessen competition in downstream retail markets by discriminating in favour of its own downstream operation when providing access to its essential network facilities.

Removing the incentive to discriminate through structural separation would be likely to encourage a profit-maximising monopoly network provider to supply as much of its

network services as possible *provided* the access prices of the monopolist are regulated to allow for recovery of economic costs but no more.[58]

With access openly encouraged across-the-board, competition in the downstream market would, in principle, be enhanced as existing competitors compete on a more level playing field and potential competitors seek to enter the market in the knowledge that they will not be discriminated against.[59] Positive feedback loops could be created as the increased level of competition would be likely to enhance demand for network services and, in turn, expand the market.

By promoting competition, allocative and dynamic efficiencies are promoted for the ultimate benefit of the economy. While the enforcement of competition law can result in trade-offs between allocative and productive efficiencies, with structural separation there may well be a symmetry of interest: the Faroes example indicates that productive efficiencies can well increase in concert with allocative efficiencies as the separated entities concentrate on their core activities.[60]

(ii) Less need for regulation

With the removal of the incentive to discriminate, there is obviously less need for regulation designed to prevent such conduct.[61] The Organisation for Economic Co-operation and Development (OECD) has commented on the easing of the regulatory burden in the following way:

> *The regulation of an integrated firm must overcome the incentive of the incumbent to deny access. This form of regulation is therefore an* ***on-going battle*** *against the actions and information advantage of the incumbent as it seeks to use whatever means it has available to it to restrict access to its rivals. In contrast, by eliminating the incentive to deny access, vertical separation permits a lighter-handed form of regulation (such as price cap*

[58] Structural separation still requires regulation of prices but, as discussed later, regulation of such prices is generally less burdensome when incentives to discriminate have been removed. Regulation of network prices is still necessary because a profit-maximising monopolist in an unregulated environment would find it more profitable to restrict supply of network services and increase prices.

[59] This is an in-principle statement. As discussed later, small markets combined with economies of scale may limit the potential for competition to develop.

[60] A point also noted in *Economic Case for Voluntary Structural Separation*, William H Lehr and R Glenn Hubbard, paper prepared for 31st Annual Telecommunications Policy Research Conference, George Mason University, 15 September 2003, p15.

[61] Structural separation is essentially concerned with the removal of incentives to *vertically* foreclose downstream competition in order to advance the competitive position of a downstream subsidiary (such as by leveraging upstream market power into downstream markets through such conduct as anti-competitive bundling, margin squeezing, cross-subsidisation and refusal to supply). Upstream and downstream products are generally complementary products (ie, one is needed to supply the other). However, structural separation does not directly address incentives to *horizontally* foreclosure competition (ie, conduct designed to damage competitors who supply substitute products in competition with your products). Therefore, the need for regulation will not completely go away as there still remains the potential for anti-competitive conduct at the horizontal level, particularly the potential for abuse of market power if the retail arm of the incumbent is in a dominant position.

regulation, or regulation of baskets of prices), which allows greater discretion to the regulated firm, allowing it to use the information that it has more efficiently.[62] *[emphasis added]*

The 'on-going battle' occurs in respect of both *ex ante* regulation and *ex post* competition law enforcement. As the OECD has commented in respect of *ex ante* regulation:

> *An integrated firm, in contrast to a separated firm, benefits from any action which delays the provision of, raises the price or lowers the quality of access.* ***An integrated firm will therefore use whatever regulatory, legal, political or economic mechanisms are in its power to delay, restrict the quality or raise the price of access****. Furthermore, the integrated firm has strong incentives to innovate in this area, constantly developing new techniques for delaying access. Although the regulator can address these techniques as they arise, it is likely to always be "catching up" with the incumbent firm. Regulation, despite its best efforts, is unlikely to be able to completely offset the advantage of the incumbent.*[63] *[emphasis added]*

And as the OECD has commented in respect of *ex post* competition law enforcement:

> *In most countries the competition authority will also have a role to play in controlling the ability of the incumbent to restrict competition in the non-competitive activity. But, for the same reasons (the information advantage of the incumbent, the slowness and imperfection of competition law enforcement processes, the incentives on the incumbent to innovate in anticompetitive behaviour, the incentives of an incumbent to use legal processes to delay enforcement decisions and the competitive disadvantage of the new entrants in the face of delay and imperfect enforcement), antitrust enforcement is also unlikely to be able to completely offset the advantage of the incumbent relative to the new entrants.*[64]

In addition, structural separation makes it relatively easier for the regulator to obtain reliable information about network costs as it reduces the opportunity to shift costs and profits around the enterprise through internal transfer pricing (as would occur with unfair cross-subsidisation, for example). In short, it is easier to regulate a separated monopolist than a vertically integrated one.

The OECD concludes on the regulatory issue:

> *In summary, effective regulation of an integrated firm increases the demands on the regulator and the regulatory regime, requires a tighter control on the behaviour of the integrated firm and is unlikely to be fully successful at offsetting the incentives of the incumbent to act anti- competitively. Vertical separation lightens the demands of the regulator, allows a lighter, more efficient control of the behaviour of the incumbent and is more successful at promoting competition overall.* [65]

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[62] *Restructuring Public Utilities for Competition*, OECD, 17 September 2001, p21.
[63] ibid., p22.
[64] ibid., p22.
[65] ibid., p23.

(iii) Investment incentives

Positive feedback loops can also create incentives for further network investment. For example, while a vertically integrated dominant network provider has an incentive to restrict capacity, an appropriately price-regulated and separated dominant network provider is likely to have an incentive to invest in additional network capacity to cater for any increased demand in downstream markets brought about by intensified retail competition.

(iv) Increased value to shareholder

The JCRA is aware that, should the proposed sale of JT proceed, there may only be interest in purchasing JT on an integrated basis and that that interest may only come from another telecommunications company. However, from a competition perspective, there would appear to be advantages in letting the market decide this issue, particularly since there are economic and commercial reasons why there may be market interest in bidding for separate entities.

Economically, vertical separation may, in some cases, enhance the value of the separated firms. In other words, there may be vertical dis-economies of scope. One possible source of a loss in efficiency from vertical integration is a loss of management focus, as the skills required to operate the two components may be distinctly different. For example, the JCRA is informed that in the Faroe Islands the retail operator has become more cost-focused and efficient by concentrating on its core activities of retail service provision and, as a result, its net revenues have increased since structural separation.

Commercially, the JCRA observes that there are specialist infrastructure investors and operators who, with regulatory oversight, are capable of operating NetCo on an efficient basis. For example, there is Babcock & Brown who have acquired Eircom in Ireland and have indicated that splitting Eircom's wholesale and retail arms was a likely option because of the higher earnings multiples from separating the businesses.[66] Two others are Macquarie Bank of Australia and TPG-Newbridge of the US, both of whom have made separate bids for the infrastructure assets (ie, not retail businesses) of PCCW, the incumbent telecom in Hong Kong.

These firms are driven by returns to investors and have the incentive to operate efficiently. Accordingly, they may view telecommunications infrastructure and its steady cash flows as an ideal addition to its many infrastructure trusts.[67] Although in a different industry, the JCRA understands that, following the separation of British Gas in the UK, the combined value of the separated businesses increased to more than double the value of the integrated business.[68] On the other hand, if the investment is highly geared it might also imply risky equity and a greater likelihood of financial distress.[69]

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[66] *B&B wouldn't rule out Telstra*, Sydney Morning Herald, 28 July 2006.
[67] *MacBank tipped as Li's $7b bidder*, Sydney Morning Herald, 21 June 2006.
[68] *Restructuring Public Utilities for Competition*, OECD, op.cit., p26.
[69] *New assets on the block: the leveraging of grids, docks, pipes and tarmacs*, Agenda, Oxera, October 2006.

9. COSTS OF STRUCTURAL SEPARATION

(i) On-going loss of economies of scope

The primary disadvantage of structural separation is the potential loss of economies that derive from vertical integration (ie, the economies of scope or the productive efficiencies that arise from providing wholesale and retail services together).

There are three main sources of these economies:

- greater availability of demand information allowing for more informed and efficient network investment decisions; and
- reduced transaction costs for the business entity; and [70]
- the consolidation of corporate head office, finance, legal, human resource and IT functions across several business activities.[71]

Economies of scope from vertical integration may be reduced or lost through structural separation. However, the existence and the extent of the economies that may be lost should not be taken for granted. Further analysis is required for, while wholesale and retail operations are co-specialised (ie, neither can exist without the other), they are essentially distinct business activities. The network arm requires particular engineering and technical expertise which is quite distinct from the marketing and sales skills required for retailing.[72] Further, there may be dis-economies of scope from a lack of management focus on core activities. As mentioned, the retail services business in the Faroes became more cost-focused and efficient by concentrating on its core activities following structural separation. Finally, a company may stay vertically integrated to exploit its 'monopoly premium' and, as such, this should not be considered a legitimate 'economy of scope'.

In addition, the advantages of vertical integration can be partially exploited through long-term contractual arrangements between the network provider and retailers. Where there are vertical contractual arrangements which can achieve the same efficiency benefits as integration, the loss of economies of scope may be small.

On the other hand, it is recognised that there are real costs involved in structurally separating a vertically integrated company reaping economies of scope from that

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[70] After Ronald Coase who first suggested in his article *The Nature of the Firm*, Economica, 1937, that firms form in large part to overcome transactional costs incurred by making contracts with suppliers of different inputs.

[71] The JCRA has had preliminary estimates done on a confidential basis of the costs associated with incremental staff from structural separation. The costs are estimated at £ [confidential] per annum.

[72] For example, see on this point *Economic Case for Voluntary Structural Separation*, William H Lehr and R Glenn Hubbard, paper prepared for 31st Annual Telecommunications Policy Research Conference, George Mason University, 15 September 2003, p15.

integration. There may also be some business drawbacks in setting up two smaller organisations because, for example, they may be less attractive to some quality staff. On the other hand, these drawbacks can be alleviated if the acquirers are large companies offering greater career opportunities in Jersey and possibly elsewhere. Of course, actual corporate headquarter costs and other shared costs (eg, IT systems) are not likely to comprise a major component of costs because of the essentially distinct nature of the two business activities (which, in any event, may be subsumed into the overheads of any larger acquiring organisation).

The fundamental issue, as in any cost benefit analysis, is whether the costs of losing economies of scope (which may be limited for the reasons outlined above) outweigh the benefits of structural separation, particularly the wider benefits to the economy as a whole.

(ii) Less synchronisation of demand and supply

Another disadvantage is that there may be a loss of synchronisation between supply and demand (ie, there is a loss of direct communication between the retailers who have first-hand knowledge of what customers want and the wholesale who provides the underlying network needed to provide services demanded).

However, should 'deep-level' competition (ie, facilities- or access-based competition) develop as a result of structural separation, there is the potential for greater synchronisation between supply and demand as such competition would result in greater control over the network and the ability to configure the network to meet the variety of customer demands (for example, greater bandwidth, greater security and reliability, data streaming, data broadcast, always-on point-to-point data connectivity, video streaming, video-on-demand, pay TV, etc).

(iii) Loss of welfare-enhancing effects of price differentiation

Efficient pricing of access to networks may involve quite complex schemes, involving multi-part pricing, peak-load pricing, and differentiation between different classes of customers and demands. Structural separation may remove the ability to engage in welfare-enhancing price differentiation.

However, with any loss of the ability to differentiate, the regulator could allow a degree of discretion to the regulated firm to set its prices efficiently, perhaps through a cap on a basket of prices.

(iv) One-off transitional costs

In addition to the loss of any economies of scope, vertical separation may involve a substantial one-time cost associated with the break-up of the integrated firm. This cost is an important part of the cost-benefit trade-off associated with separation.

The JCRA's preliminary work done on the costs of restructuring JT estimate that the **one-off** costs could be in the vicinity of £ [confidential]. This figure is likely to be much less than the wider benefits to customers and the Jersey economy, particularly the financial services sector, from an increase in effective and sustained competition in the telecommunications sector. The costs of restructuring appear reasonable in relation to JT's estimated annual (ie, **on-going**) regulatory compliance costs in excess of £ [confidential] (plus around £ [confidential] annually if it had been required to adopt current cost accounts) and incremental staff costs of £ [confidential]. They are also relatively small when one takes into account the overall annual revenue of the Jersey Telecom Group of £84.5 million in 2005.[73]

10. OECD RECOMMENDATION

In April 2001, the OECD adopted a recommendation urging member countries to consider separating the monopoly and the competitive parts of public utilities (including telecommunications), especially during the process of privatisation (the Recommendation on Structural Separation).[74]

The Recommendation was adopted after a substantial study and report by the OECD which explored the benefits and costs of structural separation (and which has been quoted from extensively in this paper). This report, entitled 'Restructuring Public Utilities for Competition', concluded that there should be a presumption in favour of separation:

> *An integrated firm has a strong incentive to discriminate against its downstream rivals. Behavioural regulation to overcome this incentive faces an uphill task and is unlikely to be fully effective. Experience shows that the level and quality of competition may be higher under a policy of vertical separation or operational unbundling. The benefits and costs to be balanced include the effects on competition, effects on the quality and cost of regulation, the transition costs of structural modifications and the economic and public benefits that arise from vertical integration, based on the economic characteristics of the industry in the country under review. … Given the benefits of separation in promoting competition and enhancing the quality of the regulation, there are grounds for a presumption in favour of separation. … Such a presumption minimises the risk of inefficiently restricting competition in the competitive activity and enhances the incentives on advocates of integration to produce evidence of the economic efficiency benefits of integration.*[75]

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[73] *Annual Review for 2005*, Jersey Telecom Group, p18.
[74] *Recommendation of the Council concerning Structural Separation in Regulated Industries*, adopted by the Council at its 1003rd session on 26 April 2001, OECD, C(2001)78/FINAL, 6 June 2003.
[75] *Restructuring Public Utilities for Competition*, op.cit., p27.

It should be noted at this point that some proponents of vertical integration look for support to a report written for the OECD Working Party on Telecommunications and Information Services Policy (TISP) which concludes that there is little evidence that the benefits of structural separation of the local loop convincingly exceed the costs.[76] The report was written by an academic, a lawyer and an officer from the OECD Secretariat but it was only written for discussion and was not in any way endorsed by the TISP, members of the OECD or the Council of the OECD.

Moreover, the report for TISP focused on analysing a form of structural separation called 'LoopCo' which separates the local loop assets from core network assets. As mentioned in this paper, the JCRA is using the NetCo model for analysis where both local loop and core assets are combined into the one network company. As the authors of the TISP report themselves acknowledge, LoopCo is not mentioned in the OECD's report on Restructuring Public Utilities for Competition, nor has it been adopted by any member country.[77] Presumably this has been largely for the reason mentioned earlier in this report – there is a strong economic case for keeping different parts of the network together rather than splitting them up into separate entities.

The OECD's official position is set out in its report on Restructuring Public Utilities for Competition (which presumed in favour of separation) and its Recommendation on Structural Separation. Further, the OECD has recently reviewed member countries experience in implementing the Recommendation and concluded that the Recommendation is still important and relevant and should remain in place as it is.[78]

11. CONCLUSION

Pulling together the various and at times complex issues and arguments outlined in this paper:

- the States objective in telecommunications is to meet demand (particularly the demands of the financial sector) for telecommunications services, wherever appropriate by competition;

- competition occurs in the dimensions of price and quality but the States have expressed a preference for quality services in view of the demands of the financial sector and its importance to the Jersey economy;

- resale competition typically results in price competition but it does not always provide for high quality services since it involves minimal investment in the

[76] *The Benefits and Costs of Structural Separation of the Local Loop*, report for OECD Working Party on Telecommunications and Information Services Policy, DSTI/ICCP/TISP(2002)13/FINAL, 3 November 2003, p6.
[77] op.cit., p9.
[78] *Report to the Council on Experiences on the Implementation of the Recommendation Concerning Structural Separation in Regulated Industries*, OECD, C(2006)65, para 6.

necessary infrastructure (however, such competition may play an important role in facilitating market entry and the transition to more investment-based competition);

- if competition is to result in high quality services, it can only be provided by 'deep-level' investments in network infrastructure such as that afforded by facilities- and access-based competition;

- of the two, facilities-based competition is not economically feasible in Jersey given the small market size, high capital costs and economies of scale;

- access-based competition is the only potentially feasible form of competition in Jersey that will meet the demand for high quality services;

- however, on the basis of international experience and despite the best intentions of regulators, it appears that access-based competition is unlikely to develop on an effective, timely and sustainable basis while JT is structured as a vertically integrated supplier of network and retail services;

- the JCRA notes Newtel's plans to become an access-based competitor;

- if access-based competition is successful, it would be expected to deliver significant on-going benefits for the Jersey economy as a whole in both price and quality of services;

- there may be a one-off loss in States revenue from structurally separating JT rather than selling as a whole but the JCRA understands that there may be market interest in acquiring separated entities; and

- there are also likely to be on-going costs stemming from the loss of vertical efficiencies, reduced synchronisation of demand and supply, and loss of the welfare-enhancing ability to price discriminate; but

- there is the likelihood of greater resale competition to keep downward pressure on retail prices.

(i) A unique opportunity

Ofcom has commented on the 'once-in-a-generation' opportunity to restructure BT for the benefit of future competition during its strategic review of telecommunications:

This is a once-in-a-generation opportunity to ensure that the fundamental network and regulatory structures are aligned to ensure opportunities for fair competition in future.[79]

The States of Jersey has a greater opportunity than the UK to restructure appropriately JT because it is still in States ownership. Restructuring does not preclude the ultimate sale of JT but, once sold without restructuring, that opportunity is likely to be lost for future generations.

(ii) Options

The Economics Minister has requested the JCRA to advise him on the structure of JT that the JCRA believed would best serve the States policy of promoting competition in telecommunications and thereby economic growth as a whole.

The JCRA concludes from the information presented in this paper that the current behavioural regulation (in particular, accounting separation) is not optimal from the point of view of promoting effective and sustainable competition.

The JCRA does not conclusively recommend any particular option for the structuring of JT because it is aware that there are other policy objectives in addition to the promotion of competition (such as maximising return to the shareholder) as well as the possible disadvantages outlined in this paper to be put into the equation.

However, it has pointed out the benefits and costs of both operational and structural separation. The costs of structural separation include the productive efficiency losses from separating a vertically integrated enterprise. But the benefits can potentially be significantly greater because, by allowing for more effective and sustainable competition to develop, allocative and dynamic efficiencies are spread throughout the economy, including essential high quality telecommunications services for the finance sector.

The JCRA particularly points to the version of structural separation adopted in the Faroes Islands which is proving successful in operation by largely removing the incentives for discrimination by the monopoly network provider but does not have the downside of wholly losing economies of scope from vertical integration. The Director of Telecommunications in the Faroes has expressed his willingness to meet States Ministers to discuss the Faroes experience should Ministers wish to take this option further.

On the issue of whether the structurally separated network business should be kept in States ownership or privatised, the JCRA is neutral from a competition perspective for it is most likely that the structurally separated network business will remain a monopoly.

On the issue of whether the retail mobile and fixed-line operations of JT should be separated, the JCRA is of the view that there is no clear benefits in doing so, particularly

[79] *Strategic Review of Telecommunications*, Phase 2 consultation document, Ofcom, 18 November 2004, para 1.57.

in view of the previously mentioned trends in telecommunications to supply a multiplicity of services and market them increasingly together as an optional package.

Similarly, there does not appear to be any clear benefits in separating the network and retail mobile operations of JT since competition has developed in this market on a vertically integrated basis.

In conclusion, it should be emphasised that the payoffs in terms of consumer welfare, efficiency and economic growth are likely to be far greater in small economies from getting JT structurally right in the interests of promoting competition. To finish where one starts, we conclude with Michal Gal and her quotation presented at the beginning of this paper:

> *Even small economies that enjoy some unusual comparative advantage must have the capacity to benefit from these hazards of fortune and to make them a basis for sustained economic development. Moreover,* ***in small economies the importance of an appropriately structured and efficiently enforced competition policy may be greater than in large economies****.*[80] *[emphasis added]*

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[80] *Competition Policy for Small Market Economies*, op.cit., p5.

Appendix A

Terms of Reference

for advice on

the structure of Jersey Telecom which best promotes competition in telecommunications and thereby economic growth as whole

It has been proposed that the States sell its shareholding in Jersey Telecom (JT). I have agreed with the Treasury and Resources Minister that I would examine how such a sale (assuming the States decides to proceed with it) could be structured in a way which would maximise the benefits to the Jersey economy.

I refer to the 2001 OECD Recommendation concerning Structural Separation in Regulated Industries, to the effect that, in the context of privatisation, a cost-benefit analysis of structural separation, as compared with other regulatory controls such as accounting separation, should be carried out. After a review of experience with implementing this Recommendation, the OECD only a few weeks ago confirmed that it is still important and relevant. While Jersey is not of course a member of the OECD, I believe that the proposed sale of JT provides the States with a valuable (and perhaps unique) opportunity to achieve an industry structure which maximises the benefits to the economy, in particular through competition and economic growth.

I therefore request the JCRA, under Article 6(4) of the Competition Regulatory Authority (Jersey) Law 2001, to advise me on the following issues:

1. The structure of JT that the JCRA believes best serves the States policy of promoting competition in telecommunications and thereby economic growth as a whole, including:

    a) selling JT in its current form, ie a transfer of ownership in JT as a whole;

    b) retaining JT under State ownership but structurally separating the network (wholesale) business from the fixed retail and mobile businesses;

    c) retaining JT's network (wholesale) business and selling its fixed retail and mobile businesses (separately or together);

    d) selling JT's network (wholesale) business to one purchaser, and its fixed retail and mobile businesses to a second purchaser;

    e) selling JT's network (wholesale) business to one purchaser, its fixed retail business to a second purchaser, and its mobile business to a third purchaser.

2. The economic costs of each of the scenarios in 1(a) to 1(e) above, including:

   i) on-going costs of regulation for both the JCRA and JT;

   ii) one-off transitional costs of structural modifications; and

   iii) the efficiency losses from structurally separating a vertically integrated business.

You will appreciate that I am not asking you to comment on the financial aspects of the proposed sale, on which the States is being separately advised. I am also not asking you to comment on whether the proposed sale may give rise to any issues under the Competition (Jersey) Law 2005: clearly you would only be able to advise on such issues once the identity of any potential purchaser(s) becomes known.

Senator Philip Ozouf
Minister for Economic Development
2 October 2006

Appendix B

An illustration

of

on-going problems with behavioural regulation in telecommunications

To give a flavour to the on-going and well-known problems associated with behavioural regulation (including accounting separation) in telecommunications, quoted below are extracts from a commentary on a judgment of the Australian Competition Tribunal in which the incumbent (Telstra) lost an appeal against a decision by the Australian Competition and Consumer Commission (the ACCC) to reject its proposed charges for network access:

> *The other night I curled up in a comfy chair with some strong black coffee and last week's judgement by Goldberg J, Robin Davey and Professor David Round in the Australian Competition Tribunal on Telstra's appeal against the ACCC's rejection of its undertakings on what is called the line-sharing service (LSS).*
>
> *But before I lost consciousness towards midnight, I couldn't help thinking: Boy oh boy, what a nightmare this all is. How many of the best legal minds in the nation are trying to force Telstra to behave like a happy wholesaler, when it all it wants to do is remain the ruling retailer?*
>
> *Telstra said the cost of supplying LSS totals $11.75, consisting of 77c network costs plus $10.98 LSS specific costs. It generously proposed to charge only $9. This was rejected by the ACCC and then again last week by the tribunal because it involved "levelising" the costs over too short a timeframe (the four years of the undertakings), and loading unreasonable costs on to LSS.*
>
> *That's a gross simplification of the legal equivalent of the General Theory of Relativity. And the result is grossly inferior to the two alternatives: having a network owner that is nothing but a wholesaler and having infrastructure competition.*
>
> *There will now be a similar process with unconditioned local loop (ULL).*
>
> *In a few weeks Telstra will submit a proposal. There will then be eight weeks of public consultation. The ACCC will then reject Telstra's proposal. They will then troop along to Messrs Goldberg, Davey and Round at the tribunal. Sometime next year I will sit down with another cup of coffee and read the judgement.*[81]

[81] *Have mercy, break the telecom loop*, Alan Kohler, Sydney Morning Herald, 7 June 2006.