Competition Assessment Toolkit

Version 1.0

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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Foreword

Increased competition can improve a country's economic performance, open business opportunities to its citizens and reduce the cost of goods and services throughout the economy. But numerous laws and regulations restrict competition in the marketplace. Many go further than necessary to achieve their policy objectives. Governments can reduce unnecessary restrictions by applying the OECD's new "Competition Assessment Toolkit". The Toolkit provides a general methodology for identifying unnecessary restraints and developing alternative, less restrictive policies that still achieve government objectives. One of the main elements of the Toolkit is a Competition Checklist that asks a series of simple questions to screen for laws and regulations that have the potential to unnecessarily restrain competition. This screen focuses limited government resources on the areas where competition assessment is most needed.

The materials can be used by governments in three main ways:

1. In an overall evaluation of existing laws and regulation (in the economy as a whole or in specific sectors)
2. In the evaluation of draft new laws and regulations (for example, through regulatory impact assessment programs at the centre of government)
3. By government bodies engaged in development and review of policies, such as ministries that develop laws or the competition authority in its evaluation of competitive impacts of regulations

The Toolkit is designed for use in a decentralized fashion across government at both national and sub-national levels. The reason for designing the materials with this flexibility is that restrictions on competition can be implemented at many different levels of government and competition assessment can be helpful at all these levels. In fact, one of the most successful examples of pro-competitive reform occurred in a federal system when Australia implemented broad, pro-competitive reforms at both national and state level in the mid-1990s. Since that time, Australia has

experienced strong economic performance, with high and steady growth that has raised Australia's economy from a mid-level performer into one of the top performing OECD economies.

The Toolkit materials are simple enough for use by officials with no specialized economics or competition policy training. Institutionally, potential users could include ministries, legislatures, offices of government leaders, state governments and outside evaluators of policy. The Competition Assessment Toolkit is available in many languages in order to encourage broad use and adoption.

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At the OECD Secretariat, the materials were drafted by Rex Deighton-Smith, Sean F. Ennis, Vivek Ghosal and Marta Troya-Martinez. The competition assessment project is led by Sean F. Ennis of the Competition Division.

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INTRODUCTION TO COMPETITION ASSESSMENT*

1. Introduction

Government action is often vital for promoting and protecting public policy goals. One important and legitimate form of government action is the establishment and enforcement of laws, rules and regulations to achieve desirable policy goals. There are often multiple policy options for achieving a given policy goal, so determining a preferred policy is a difficult task requiring careful analysis. When comparing policy options, it is valuable to assess effects on competition because regulations sometimes affect the nature and degree of competition.[1] Competition between suppliers is beneficial because it fosters innovation and growth in the long-run and results in suppliers providing a greater variety of goods and services at lower prices. If regulations are developed with a focus on ensuring that they do not unduly restrict competition, they are more likely to achieve their objectives and to enhance consumer welfare.

Up until now, little explicit guidance has existed on how to assess the competitive effects of regulations. This briefing paper provides such guidance by outlining a practical method for regulators to identify important competitive restrictions. The method uses a set of threshold questions (a "Competition Checklist") that show when proposed regulations may have significant potential to harm competition.[2] A Competition Checklist can help policymakers focus on potential competition issues at an early stage in the policy development process. For the majority of regulations, no significant

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* This chapter has been prepared by Sean F. Ennis in conjunction with more detailed papers prepared by Rex Deighton-Smith and Vivek Ghosal.

1. The term "regulation" henceforth refers to both primary and subordinate legislation.

2. For a more developed version of the methodology, see DAF/COMP(2007)6 "Competition Assessment: Guidance". For a description of potential institutional options for implementing competition assessment, see DAF/COMP(2007)7 "Institutional Options for Competition Assessment".

harm to competition would be expected. In those situations where harm to competition is most likely, an in-depth competition assessment is warranted, probably involving consultation with the government's regulatory "gatekeeper" and the government agencies with expertise in competition.

To help regulators address potential competition problems, this brief identifies alternatives that may offset or mitigate potential harm to competition while continuing to achieve the desired policy objectives. Note that even when there is a potential competition problem indicated by the Checklist, that does not mean there is necessarily an actual problem; rather, it means that more careful analysis is worthwhile to ensure that *if* there is an undue restriction on competition, policies can be modified.

The rest of this summary explains the three categories of the "Competition Checklist".

2. Limits on the number or range of suppliers

Limiting the number of suppliers creates a risk that market power[3] will be created and competitive rivalry will be reduced. When the number of suppliers declines, the possibility of co-operation (or collusion) between them increases and the ability of individual suppliers to raise prices can be increased. The resulting decline in rivalry can reduce incentives to meet consumer demands effectively and can reduce long-term economic efficiency. While there are sound policy reasons why policy makers may sometimes limit the number or range of suppliers, as discussed below, the policy benefits of entry limits need to be balanced against the fact that ease of entry by new suppliers can help prevent existing suppliers from exercising market power. Market power leads to higher prices, lower quality and less innovation.

3. Market power of suppliers is the ability to profitably increase price, decrease quality, or decrease innovation relative to the levels that would prevail in a competitive market.

Competition Checklist
for the conduct of competition assessments

A competition assessment should be conducted if the proposal has any of the following 3 effects:

(1) Limits the number or range of suppliers

This is likely to be the case if the proposal:

- Grants exclusive rights for a supplier to provide goods or services
- Establishes a license, permit or authorisation process as a requirement of operation
- Limits the ability of some types of suppliers to provide a good or service
- Significantly raises cost of entry or exit by a supplier
- Creates a geographical barrier to the ability of companies to supply goods or services, invest capital or supply labour

(2) Limits the ability of suppliers to compete

This is likely to be the case if the proposal:

- Controls or substantially influences the prices for goods or services
- Limits freedom of suppliers to advertise or market their goods or services
- Sets standards for product quality that provide an advantage to some suppliers over others or that are above the level that many well-informed customers would choose
- Significantly raises costs of production for some suppliers relative to others (especially by treating incumbents differently from new entrants)

(3) Reduces the incentive of suppliers to compete vigorously

This may be the case if the proposal:

- Creates a self-regulatory or co-regulatory regime
- Requires or encourages information on supplier outputs, prices, sales or costs to be published
- Exempts the activity of a particular industry or group of suppliers from the operation of general competition law
- Reduces mobility of customers between suppliers of goods or services by increasing the explicit or implicit costs of changing suppliers

2.1 Grants of exclusive rights

A grant of an exclusive right to produce a certain good or provide a certain service represents the establishment of a regulated private monopoly. Historically, the grant of an exclusive right frequently occurred in the context of a "natural monopoly".[4] The grant of exclusive rights, particularly if given long duration, has frequently been considered a means of encouraging substantial investments in infrastructure that may be unlikely to occur without the incentives provided by the guaranteed market access which the grant of an exclusive right provides.

Exclusive rights are likely to yield monopoly pricing and other problems of market power. Such results may not be fully avoided through regulation because regulators often experience a low level of success in preventing the exercise of market power and protecting consumers. Therefore, such rights should be established only with great care and after careful consideration of alternative ways to achieve the same objectives. If established, the duration of such rights can be limited. In addition, public authorities may consider distributing such exclusive rights through bidding, for example over the prices to be charged, to ensure that they are allocated in the most efficient fashion.

2.2 Establishment of a licence or permit system as a requirement of operation

Licenses or permits required for operation necessarily restrict entry. Qualifications requirements can take the form of minimum standards for formal education and/or experience and may include good character requirements. At times, a "public interest" test may be applied that requires that potential entrants demonstrate the "need" for an additional service to be provided and, in some cases, even that their entry would have no negative impact on the businesses of existing industry participants. In extreme cases, there may be fixed numbers of licensees. While licensing schemes often have well-founded consumer protection objectives, such barriers frequently have the effect of protecting incumbent producers from competition.

License or permit requirements are often stricter than is necessary for consumer protection and can unnecessarily reduce consumer choice and create artificial scarcity that raises prices. A guiding principle is that restrictions do no more than necessary to adequately achieve the regulatory objectives.

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4. A monopoly exists when a good or service can only reasonably be purchased from one supplier. In a "natural monopoly", one supplier can produce desired output more efficiently and at a lower total cost than two or more suppliers.

2.3 Limits the ability of some types of suppliers to provide a good or service

At times, governments seek to promote suppliers from certain regions, small suppliers, or suppliers with other special characteristics by limiting the ability of some types of suppliers to participate in a business activity, particularly with public procurement. Such restrictions are typically excessive because they unduly restrict the number of suppliers participating in procurement, reducing competition between suppliers and resulting in higher prices or less desirable contract terms for the government.

Where regional or small business policy objectives are sought, alternatives include a range of direct subsidies and/or tax benefits, provision of a more favourable regulatory environment in key areas, or the use of publicity/educational campaigns. In some cases, targeted subsidies will enhance efficiency by ensuring that more suppliers can actively seek business.

2.4 Significantly raises the costs of entry or exit

Regulations that raise the costs of entry to, or exit from, a market will tend to discourage some potential entrants and so reduce the number of participants in the market over time. Examples of this kind of regulation include rigorous product testing requirements and requirements to meet unnecessarily high educational or technical qualifications. Governments have sometimes acted to minimise the competitive impacts of such provisions by providing targeted exemptions. For example, low-volume car manufacturers are often exempted from aspects of vehicle testing regulations, or subject to less onerous testing protocols.

2.5 Restricts the intra-national flow of goods, services, capital and labour

Regulations sometimes limit the flow of goods, services, capital and/or labour across jurisdictional boundaries, often as an instrument of regional policy. Such limitations, however, artificially reduce the geographic area of competition for provision of a good or service. This may reduce the number of suppliers and potentially allow suppliers to exercise market power and increase prices.

Potential restrictions should be assessed based on whether there is a clear link between the restrictions and the achievement of specific policy goals, whether the restrictions are the minimum necessary for achievement of the goal, whether a reasoned analysis suggests the policy goal will be

achieved by means of the restriction and whether the restrictions are restricted to a definite and limited time span via explicit regulatory provisions. There is a substantial risk that "temporary" protections develop into quasi-permanent arrangements due to substantial lobbying by the suppliers that benefit from the restrictions. As with the above case of restrictions on access to procurement, there will often be superior alternatives available to achieve the regulatory objective, including direct subsidies and favourable regulatory treatment.

3. Limits on the ability of suppliers to compete

Regulation can affect the ability of suppliers to compete in a variety of ways, not all of which are identified here, including through advertising and marketing restrictions, setting of standards for product or service quality and controls over prices at which goods or services are sold. These limits can reduce the intensity and dimensions of rivalry, yielding higher prices for consumers and less product variety.

3.1 Controls the prices at which goods or services are sold

Governments often regulate prices in traditional monopoly sectors, such as utilities. These types of price controls are probably helpful to consumers and serve as a counterweight to lack of consumer alternatives. However, price controls are also sometimes applied in situations where there are many potential suppliers to the same consumer. When minimum prices are set, low-cost suppliers are prevented from winning market share by providing better value to consumers. Similarly, when maximum prices are set, supplier incentives to innovate by providing new and/or high-quality products can be substantially reduced and suppliers may effectively coordinate their prices around the maximum price.

Minimum price regulation is sometimes a response to extremely vigorous price competition. In these cases, minimum price regulation is generally seen as a means of protecting small suppliers from "unfair" competition. The impacts of such price regulations merit careful evaluation because the result is likely higher prices for consumers or unmet demand. Maximum price regulations are frequently introduced as a necessary corollary to restrictions on entry. An alternative is to permit freer entry to the market.

3.2 Restricts advertising and marketing

Regulations that restrict suppliers' ability to advertise or market goods and services often exist to limit false or misleading advertising. Sometimes advertising restrictions are intended to reduce advertising for products or services that are deemed to have a socially negative value or which are subject to excess consumption. At other times, advertising to certain "vulnerable" groups, such as children, may be restricted. Restrictions of this nature, when circumscribed to ensure they are not overly broad, can have significant social benefits.

In many cases, however, advertising and marketing restrictions are too broad and unduly restrict competition. Restrictions on advertising and marketing are likely to be particularly onerous for potential entrants, as they restrict an entrant's ability to inform potential customers of their presence in the market and of the nature and quality of the goods and services that they are able to offer. Regulations that restrict only false and misleading advertising are often a viable alternative.

3.3 Sets standards for product quality that provide an undue advantage to some suppliers over others or that are above the level that many well informed customers would choose

Regulations setting standards often provide benefits to consumers and can help to promote new types of products by ensuring that new products from different suppliers are compatible. But standard setting can also provide undue advantages to some suppliers over others. One common example is environmental regulations that limit the allowable emissions of a mildly toxic substance. While limiting emissions is often appropriate to protect public health, regulations can be designed in ways that unfairly advantage a small number of suppliers, for instance by requiring a particular technology or by setting unduly strict standards that are difficult or impossible for less well resourced producers to meet. Another example in which standard-setting can have significant anti-competitive impact is setting minimum quality standards for particular product types. There are often sound objectives underlying such standard-setting, such as protection of consumers from risks associated with the use of the product. However, when many consumers prefer lower cost over increased safety, the need for the standard is unclear. Consumer welfare can be reduced by such standards as consumers are prevented from buying cheaper, lower quality goods that they would prefer, even when fully informed of all associated risks.

Alternatives exist to stricter product standards regulations. For example, when minimum standards are pursued for consumer protection reasons, it may instead be possible to require disclosure of certain product

characteristics. Where major changes in emissions standards are contemplated, governments can seek to minimise anti-competitive impact by permitting trading of emission rights or providing temporary assistance to smaller suppliers in order to help them meet the new requirements.

3.4 Raises the costs of some suppliers relative to others

At times, regulations have the unintended effect of raising costs for some suppliers relative to others. One source of cost asymmetry is regulations that unnecessarily require the use of one technology of production over another. Another source is "grandfather clauses" that exempt current suppliers from a regulation but apply the regulation to new entrants. Such arrangements have substantial potential to distort competitive relations within the industry by raising costs to some suppliers to a substantially greater extent than others. This can impede entry, reduce innovation and lower the intensity of competitive pressure in the market. While creating cost differentials can be harmful, that is not to say that regulations should affirmatively seek uniform supplier costs.

For occupational qualifications, grandfather clauses are often implemented based on the belief that extensive practical experience of long established practitioners is an adequate substitute for a higher level of formal qualification. In relation to productive technologies, grandfather clauses are often implemented to ensure adequate time exists to amortise the sunk costs of previous investments. The anti-competitive impact of grandfather clauses can be minimised by ensuring that they are time-limited, rather than permanent. More generally, a sceptical approach is appropriate for arguments in favour of grandfather clauses, as the clauses often defend vested interests from potential competition.

4. Reductions in the incentives for suppliers to compete vigorously

Regulations can affect supplier behaviour not only by changing the suppliers' ability to compete but also by changing the incentive of suppliers to act as vigorous rivals. Two of the main reasons why suppliers may compete less vigorously are first, that some regulations may have the effect of facilitating co-ordination between suppliers and, second, that some regulations may have the effect of reducing the willingness, ability or incentive of customers to switch between different suppliers. Other reasons suppliers may compete less vigorously exist, such as profit or market share

limits that restrict the potential reward to competing. Cartel-like behaviour[5] may be more readily generated under self-regulatory or co-regulatory regimes, by increasing the sharing of supplier output and price information or by excluding an industry or sector from the reach of competition law. Cartels are harmful because they restrict output and raise prices, making consumers worse off.

4.1 Self-regulation and Co-regulation

When an industry or professional association takes full responsibility for regulating the conduct of its members, without government legislative backing (often at the urging of government) the term "self-regulation" is used. However, when government provides legislative backing to rules that are developed at least in part by the industry/professional association, the term "co-regulation" is used. Self-regulatory and co-regulatory structures can yield substantial benefits by ensuring that technical standards are appropriate and that standards advance with technology.

However, these structures can have significant anti-competitive impacts. In particular, industry/professional associations often adopt rules that reduce incentives or opportunities for vigorous competition between suppliers of goods or services, such as advertising restrictions and rules that prevent discounting. In addition, unduly strict qualifications requirements may reduce entry to the market. Government should retain powers to prevent attempts by the industry/professional association to use regulatory powers in an anti-competitive manner. This may include ensuring that the relevant government authorities have the right to approve, or refuse to approve, association rules and, as required, to substitute their own should the association continue to propose unacceptable rules.

4.2 Requirements to publish information on supplier prices, outputs or sales

Regulations that require market participants to publish information on their prices or output levels can significantly assist in the formation of cartels, since a key requirement for cartel operation is that participants in the cartel can effectively monitor their competitors' (or co-conspirators') market behaviour. Cartels are more likely to arise where there are fewer participants in the market, where entry barriers are high, where suppliers' products are

5. A cartel exists when competitors make an agreement with a goal of increasing their collective profits by restricting competition, for example by setting a price, limiting supply, sharing profits or rigging bids.

relatively homogeneous and where information about price or output changes is available either before or soon after the price or output changes.

Regulations requiring the publication of information such as price and output levels may be adopted to improve consumer information and, at times, can improve the efficiency of markets. However, when cartel formation is likely, such requirements are more likely to have a net negative impact. Alternatives exist to publishing all collected data. When the information is gathered primarily for government policy making, there may be no need to publish it at all. When the purpose is to aid consumers or provide general statistics, aggregate statistics support cartels less than supplier-specific statistics.

4.3 Exemptions from general competition laws

In many countries, particular suppliers or economic sectors benefit from exemptions from the general competition law. In some cases, these sectors are subject to their own, sector-specific competition laws. In other cases, no restrictions exist on anti-competitive conduct in these sectors. Where a substantial derogation from the general application of competition law exists there is a clear risk of cartels, pricing abuses and anti-competitive mergers[6] resulting.

Where a specific rationale for the continued existence of exemptions has been identified, consideration should be given to the means by which their scope can be minimised. For example, a legislated monopoly requiring all producers of a particular commodity to sell to a licensed intermediary may be inferior to a system that allows producers to engage in cooperative selling arrangements, but does not compel them to do so.

4.4 Reduces the mobility of customers by increasing the costs of changing suppliers

Regulations can make consumers more willing to switch suppliers by affecting "switching costs" – the explicit and implicit costs borne by a consumer in changing from one supplier to another. Switching costs may arise for various reasons, including unduly long contract terms or tying of assets to suppliers in a way that makes switching inconvenient, as with tying a phone number to a given service provider. When consumers face high switching costs, suppliers can charge higher prices for their goods or services. Suppliers therefore often seek to create high switching costs, sometimes through promoting policies that will ensure high switching costs.

6. A merger is a combination of two (or more) previously independent suppliers to form one larger supplier.

The pro-competitive impact of reducing or eliminating switching costs can be large so policymakers should seek to avoid policies that raise switching costs for consumers. Where there is a clear risk of switching costs being imposed, the inclusion of provisions in the regulatory structure that will limit or prohibit their use may be advisable. Due care should be taken to ensure that legitimate costs of consumer switching are considered.

5. Proportionality in undertaking competition impact assessments

Identifying regulations that may unduly restrict competition is an important step for improving quality of regulation. The categories in the Competition Checklist provide a reliable initial basis for identifying regulations that may give rise to an anti-competitive impact. The sub-points of each category indicate the main but not exclusive ways in which regulations may unduly restrict market rivalry.

The relative importance of different anti-competitive impacts can vary substantially. The extent of the competitive effect analysis to be undertaken should be commensurate with an initial assessment of the likely extent of the anti-competitive impact identified. In making this assessment, a clear view needs to be developed about the nature and extent of the affected goods, services and consumers. A primary issue is the ability of consumers and suppliers to substitute between different goods or services, including those that are not covered by the regulation.

Only a minority of regulations actually have the potential to unduly constrain market activity, but when an initial assessment using the Checklist suggests that there is a potentially excessive constraint on market activity, a full competition assessment is worth performing and merits serious attention. A full competition assessment includes (1) clearly identifying policy objectives, (2) stating alternative regulations that would achieve the policy objectives, (3) evaluating the competitive effects of each alternative and (4) comparing the alternatives. To the extent that the competition assessment identifies significant potential for a weakening of competitive rivalry within the affected industry or related industries, policymakers should seek the least anti-competitive alternative that would achieve the policy goal.

In circumstances where an alternative, less anti-competitive regulatory approach for achieving the identified policy objective cannot be found, the benefits and costs of such a regulatory approach should be weighed against each other. The analysis should conclude the regulation is justified only if the benefits from the adoption of the anti-competitive regulation exceed the costs, including the costs of the anti-competitive impact.

INSTITUTIONAL OPTIONS FOR COMPETITION ASSESSMENT*

1. Introduction

Competition assessment is a process of evaluating government regulations, rules and/or laws to (1) identify those that may unnecessarily impede competition and (2) aid in their redesign so that competition is not unduly inhibited.

The goal of competition assessment is to increase beneficial competition, the process of rivalry in which suppliers challenge each other in order to gain customers. In this process, suppliers attempt to improve their position by offering better deals to customers, through, for example, lowering prices, increasing quality or making their offerings closer to the customer desires. Customers benefit from such rivalry. Suppliers take a number of actions in this process, such as advertising their products, investing in new and better productions capabilities, offering discounts to select customers, and developing new, better and more varied products through research and development.

Because government policies may unnecessarily or unintentionally hinder the competitive process, it is important to review policies to identify those that may hinder the process of competition and to improve such policies so that competition is not unnecessarily prevented.

Up until now, a broad guide and set of principles for performing competition assessment has not existed at an international level. The Competition Assessment Toolkit provides such a guide. With the Toolkit in hand, a major question still remains: How should a competition assessment approach, such as that of the Toolkit, be fitted into government operations and institutions? This paper seeks to provide suggestions as to the main alternatives that may be pursued and, when possible, provides examples from actual government practice.

This paper will focus on the following topics:

- Which policies merit a competition assessment?

- When should a competition assessment be performed in the policy development process?
- Who would be responsible for drafting and reviewing a competition assessment?
- How can policymakers without responsibility for regulatory quality or competition be given incentives to prepare an appropriate assessment?
- What resources are required for competition assessment?

There is no simple recipe for institutional implementation of competition assessment. The feasible solutions in a given jurisdiction may be based on a number of characteristics that are distinct, such as the extent to which there is a federal system, the staffing strengths of different parts of government and the political environment. Feasible institutional solutions are likely to vary substantially across jurisdictions. Involving government officials with competition experience in the process of implementing competition assessment will help both to ensure that assessments are performed within a strong analytical framework and that the assessments adequately address all likely competitive effects. While this paper will draw on existing experience to identify potential options, those options identified are by no means exhaustive.

2. Which policies merit a competition assessment?

Most individual laws or regulations do not have significant potential to unduly harm competition. Consequently, most would not require a detailed analysis from the perspective of competition effects. To simplify the process of identifying policies with the potential to unduly harm competition, the Competition Assessment Toolkit includes a Competition Checklist that permits a quick screening of policies so that those with the potential to unduly impact competition can be identified for further assessment. The depth of a competition assessment can be proportional to the extent of the potential negative competitive effects of a policy.

Laws, regulations and rules. Policies that may be subject to competition assessment would include laws, regulations and rules that implement laws or regulations. Not all jurisdictions would consider laws as potentially subject to competition assessment. However, it is worth noting that the jurisdiction with the greatest success in competition assessment is also one that applied competition assessment broadly, including to laws. (See Box 1.)

New and existing policies. Some governments have approached competition assessment both by looking at new and existing policies. This is the most effective way to broadly improve the competitive atmosphere across many sectors, but requires substantial political will. Other governments have implemented a form of competition assessment focused exclusively on new policies.

National, regional, local. Competition assessment is relevant to all government policies that may create substantial and undue restrictions on competition. Policies that create such limits are sometimes implemented at a national level, but are also implemented at a regional or local level. For example, taxi policies are often implemented at a local level. Professional regulation often occurs at a regional level. There is a strong economic case for suggesting that competition assessment be performed at both a national and a regional level.

Box 1. **Australian National Competition Policy Reforms**

Following the completion of the Hilmer Committee's report in 1993 that urged greater microeconomic openness with a focus on pro-competitive reforms, Australian governments agreed in 1995 to a programme of reviewing and revising legislation that limited competition and that was not in the public interest. This reform program resulted in the identification of 1700 laws that needed review. The national government offered funding to aid state and territorial governments with adjustment costs that might arise from revisions of legislation. Legislation was reviewed at a national and state or territorial level, with most reviews being completed by 2001. The program was notable because it systematically identified existing laws and regulations that merited review and because, since the implementation of the programme, Australia's economic performance has been among the strongest in the OECD.

3. When should a competition assessment be performed in the policy development process?

New policies. Competition assessments can positively contribute to the design of new policies. It is therefore important that, for new policies, competition assessments be performed *early* in the policy development process before a determination has been made by policymakers about exactly how they prefer to approach a given policy challenge. This permits

the competition assessment to serve as a valuable analytical tool for identifying potential problems and addressing them early.

When a policy has the potential to unduly restrict competition, it is valuable to consult government competition experts or regulatory gatekeepers as early in the policy development process as possible, in order to develop alternatives for achieving the regulatory objectives with less harm to competition. Government competition experts or regulatory gatekeepers have substantial expertise in developing policy alternatives so they can often provide valuable input to a complex policy development process.

Existing policies. Most existing policies have not been subject to a competition assessment. Yet there are some existing policies that are more likely to merit review than others. In Australia, at the time of the National Competition Reviews, hundreds of existing government policies were identified that limited competition. These policies were prioritized for review and, if problems were found, revision occurred in almost all cases.

4. Who would be involved with drafting and reviewing a competition assessment?

In order to ensure that competitive effects are considered by policymakers, it is valuable to ask the governmental bodies preparing a policy to complete a competition assessment of that policy. The process of completing the competition assessment helps to ensure that policymakers will ask relevant questions early and will initially develop policies while taking due account of competitive effects. However policymakers may not take the process of competition assessment seriously unless an external party reviews their work. Reviews can be performed either by the regulatory gatekeeper, by officials with competition expertise such as those located in competition authorities or by some combination of the two. In the United Kingdom, for example, the Office of Fair Trading (OFT), a competition authority, was given the responsibility to develop guidelines for competition assessment and to review competitive impacts of new policies.[1] The OFT took up these responsibilities in conjunction with the regulatory gatekeeper, the Better Regulation Executive (BRE). In order to promote common working methods and understanding, a small number of officials from the OFT split their working time between the OFT and the BRE.

1. The 2006 OFT guidelines closely follow those of the OECD. See: http://www.oft.gov.uk/NR/rdonlyres/BFD72799-03BD-428D-AB43-30408F794ACB/0/oft876.pdf.

Completing a competition assessment involves competencies related to competition analysis and market definition. For this reason, in some countries, new laws or regulations with an economic impact are reviewed by competition authorities. In Mexico, for example, new secondary legislation with effects on competition require a mandatory review by the competition authority. In Korea, the competition authority has responsibility for reviewing selected new regulations. In Hungary, the competition authority was required to submit its comments on new regulations. Many other countries hold horizontal consultations prior to the adoption of new regulations. Such consultations work better when competition reviewers can enter the process early and are not required to submit their comments on all policies, but only on those were the competition reviewers believe there may be a significant potential problem.

In Australia, a new body was created in 1995 for overseeing the National Competition Policy reviews of national and state or territory laws and regulations. This body, the National Competition Council, was distinct and independent both from the regulatory oversight office for reviewing new regulations and from the competition authority.[2]

The degree of independence of the reviewing body merits consideration. Independent bodies may be particularly valuable for reviewing laws and regulations. But the more an independent body designs laws and regulations, as opposed to reviewing them, the more the independent authority may appear to be acting as a direct implementer of the current government agenda.

The involvement of a competition authority or other government body in forming a prediction about competitive effects should not preclude later government legal action under competition laws, as predictions may turn out to understate competitive harms or overstate competitive benefits.

5. How can policymakers without responsibility for regulatory quality or competition be given incentives to prepare an appropriate assessment?

The policymakers who develop a new regulation may have an incentive to under-report potential competition problems with a proposed regulation. They may perceive that identifying a potential competition problem or consulting with an outside agency, such as a regulatory gatekeeper or a competition authority, simply creates more work for them without a

2. For more details, see http://www.ncc.gov.au/articleZone.asp?articleZoneID=136.

substantial benefit. It is therefore important to emphasize that competition assessment improves the policy output.

A number of options exist for improving incentives and abilities of policymakers with respect to competition assessment. These include:

- Including competition assessment in Regulatory Impact Analysis (RIA);
- Financial rewards; and
- Best-practice training.

Including competition assessment in RIA. RIA is a formalized process for reviewing new regulations to ensure that they achieve the given policy objectives. In general the objective of the RIA process is to ensure that the benefits of a regulation will exceed its costs. Both competition assessment and the RIA process itself can benefit from the inclusion of competition assessment as one part of the RIA process. This inclusion has the benefit of ensuring that dynamic, market-oriented considerations inherent in a competition assessment are dealt with analytically in the entire RIA and that competition assessment is widely performed by policymakers. Giving the competition authority some responsibility in this area can help to avoid the need for regulatory agencies or gatekeepers to retrain staff.[3]

Financial rewards. Because Australia is a federal system, implementing the National Competition Policy (NCP) at the state or territory level required agreement of the states. The Australian government made significant payments to states and territories, consisting of per capita payments based on the extent to which reviews and revisions of legislation were completed. "The NCP payments are the means by which gains from reform are distributed throughout the community. The payments recognise that, although the states and territories are responsible for significant elements of NCP, much of the direct financial return accrues to the Australian Government via increases in taxation revenue that flows from greater economic activity."[4]

The payments to states and territories have been significant. Table 1 states NCP payments since the introduction of the NCP.[5]

3. For more details on how to include competition assessment in RIA, see DAF/COMP/(2007)8/REV1 "Integrating competition assessment into regulatory impact analysis".

4. See http://www.ncc.gov.au/articleZone.asp?articleZoneID=40.

5. See http://www.ncc.gov.au/articleZone.asp?articleZoneID=40.

Table 1. **Annual NCP payments received by jurisdictions**
(AUD million)

Jurisdiction	1997-98 (a)	1998-99 (a)	1999-00 (a)	2000-01 (a)	2001-02 (a)	2002-03 (a)	2003-04 (a) (b)	2004-05 (a) (b)	2005-06 (b) (c)
New South Wales	126.5	138.7	148.6	155.9	242.5	251.8	203.5	233.6	292.5
Victoria	92.8	102	109.2	114.7	179.6	182.4	178.7	201.6	197.9
Queensland	74.2	81.6	81.5	73	147.9	138.9	87.9	143.3	178.7
Western Australia	38.4	42.4	43.2	45.5	71.1	72	33.6	53.5	71
South Australia	34.3	38.4	34.5	35.9	55.7	57.1	40.7	50.4	54.3
Tasmania	12.6	13.9	10.8	11.2	17.4	17.7	17.2	19.8	19
ACT	6.2	7	7.2	7.5	11.6	12.4	11	13.6	12.7
Northern Territory	11.2	13	4.5	4.5	7.6	7.5	5.9	8.4	8
Total	**396.2**	**436.9**	**439.5**	**448**	**733.3**	**739.9**	**578.5**	**724.2**	**834.1**

Source: National Competition Council

(a) From Final Budget Outcome documents.

(b) Each jurisdiction's payments reflects the application of permanent deductions and suspensions.

(c) Costello, the Hon. P (Treasurer) 2005, 'National Competition Payments to States and Territories for 2005', Media release, 15 December 2005.

Note 1: Totals may not add due to rounding Note 2: Figures up to and including 1999-2000 include Financial Assistance Grants

While the payments appear large, the Australian government has estimated the annual benefits to the economy of 2.5% of GDP, or 20 billion AUD, from productivity improvements and price rebalancing in many different sectors where NCP and related reforms have occurred.[6]

6. See Productivity Commission (2005) *Review of National Competition Policy Reforms*, Productivity Commission Enquiry Report No. 33, 28 February. Available at http://www.pc.gov.au/inquiry/ncp/finalreport/ncp.pdf. The review notes that direct causal links are difficult to establish empirically.

Best practice. Training to policymaking officials on best practice for competition assessment is of great importance if policymakers are to take account of competitive effects when preparing their policies. Many policymakers are specialized in a domain that does not relate to competitive effects or economics. Such officials could not reasonably be expected to address competition issues appropriately without training.

Best-practice training could potentially be provided by competition authorities, regulatory gatekeepers or the OECD.

6. What resources are required for competition assessment?

The minimum resources required for competition assessment can be relatively limited. For example, when the United Kingdom implemented competition assessment two staff members from the OFT played a very active role and only a small percentage of the roughly 400 regulations per year received detailed scrutiny. The rest were reviewed through a competition filter that permitted officials to quickly diagnose whether there was a significant chance that competition problems would materialize from new policies.

The OECD's Competition Toolkit includes a Competition Checklist that is likewise designed to limit the need for detailed scrutiny of existing or new government policies.

Competition assessment can benefit from high levels of resource commitment. The Australian example illustrates a far-reaching and resource intensive approach that has promoted a very strong economic performance since the microeconomic reforms related to the NCP began. The payments from the national government to state and territorial governments should not be construed directly as expenses, moreover, since the payments were used for the provision of government goods and services. Even so, the expected benefits from improved productivity and rebalanced prices likely exceed these payments by a substantial amount.[7]

7. See OECD (2006) Economic Survey of Australia, Policy Brief. "Recent macroeconomic performance continues to be impressive: gross domestic product (GDP) growth since the turn of the millennium has averaged above 3% per annum and, including the terms-of-trade gains, growth in real gross domestic income has averaged over 4%, among the handful of OECD countries achieving such rapid growth; the unemployment rate has fallen to around 5%, its lowest level since the 1970s; inflation has remained within the target range; and, following a long stretch of fiscal surpluses, Australia is now one of the few OECD countries where general government net debt

Resource requirements will be highest at the initial implementation stage. A detailed program of best practice training, for example, would require one-time resources. Training in later years would not need to be as substantial as a system would be better functioning and personal relationships between relevant policy officials would have been established. However, due to staff turnover, ongoing training would still be needed after the initial implementation.

7. Conclusion

The introduction of competition assessment into government has the potential to yield strong economic benefits by identifying areas where market activity is unduly restricted and suggesting policy alternatives that will continue to meet policy goals while promoting competition as much as is possible.

This paper has identified a number of different institutional options for introducing competition assessment. Given that the institution, legal and federal environment of OECD jurisdictions differ substantially, the most effective institutional structures will likely vary from one jurisdiction to another. But a few points stand out. Competition authorities are ideally suited for performing selective competition assessments, advising on assessments or providing training for competition assessment. Regulatory gatekeepers are also well-suited to performing such assessments, particularly when competition assessments are implemented as one part of a RIA process.

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has been eliminated. Living standards have steadily improved since the beginning of the 1990s and now surpass all G7 countries except the United States. *Wide-ranging reforms, particularly to promote competition, were instrumental in this respect.* They promoted productivity growth, most notably in the second half of the 1990s. The greater flexibility engendered by these reforms, together with the introduction of robust monetary and fiscal policy frameworks, has also bolstered the economy's resilience to a series of major shocks over the last decade: the Asian crisis in the late 1990s, the global downturn at the turn of the millennium, followed by a major drought, the ending of a house price boom and currently, the commodity price boom." (Emphasis added)

INTEGRATING COMPETITION ASSESSMENT INTO REGULATORY IMPACT ANALYSIS*

1. Introduction

Regulatory Impact Analysis (RIA) is now applied to most or all new regulation[1] in the majority of OECD Member countries. The use of RIA has expanded rapidly throughout the OECD membership in the last decade in particular. Explaining this rapid expansion in the use of RIA as part of the regulatory decision-making process, the OECD has commented:

> *High-quality regulation is increasingly seen as that which produces the desired results as cost effectively as possible. There is a developing understanding that all government policy action involves trade-offs between different uses of resources, while the underlying goal of policy action - including regulation - of maximising social welfare is increasingly being explicitly stated and accepted*[2].

RIA is based on benefit/cost analysis disciplines, applied in a comparative context that weighs the relative performance of all feasible policy interventions identified as being capable of achieving the underlying policy objective.

As RIA has expanded, much of the OECD membership has moved toward broadening the scope of competition policy and general competition law, with increasingly effective enforcement undertaken in this area. This trend arises from an increasing recognition that maximising the degree of effective competition throughout the economy is fundamental to the

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* This chapter has been prepared by Rex Deighton-Smith.

1. In this paper of the term "regulation" is used generically to refer to all kinds of legislative instruments, including both primary and subordinate legislation.

2. *Regulatory Policies in OECD Countries*: *from Interventionism to Regulatory Governance*. OECD (2002), p44.

achievement of the broad objectives of maximising economic growth and, consequently, of social welfare.

Clearly, there are very strong links between competition policy analysis and RIA: the objectives of the two policy instruments reflect a high degree of congruence. The OECD Guiding Principles for Regulatory Quality and Performance state that consideration of the impacts on competition should be incorporated within the process of reviewing new and existing regulations. However, in practice, responsibility for the conduct of RIA and of competition policy analysis often resides in different parts of the government administration. As a result, there is often insufficient coordination in the conduct of these two, interconnected forms of analysis.

In a few countries, attempts are underway to integrate RIA and competition policy analysis. For example, in the United Kingdom, assessment of competition impacts has been a mandatory part of RIA since 2002. In the European Commission, competition assessment has been part of the RIA process since 2005. In the United States, RIA guidance documents explicitly require consideration of market impacts. Similarly, the Australian National Competition Policy requires that all RIA documents state whether the proposed regulation complies with the terms of the National Competition Policy agreements, and include analysis to support this conclusion. Mechanisms such as these can help to ensure that competition policy principles are considered at early stages of the broader policy development process.

This paper aims to provide an understanding of the key concepts and issues involved in competition policy analysis to policy officials who have responsibility for the conduct of RIA. In so doing, its objective is to assist policy officials to use competition policy analysis as one component of RIA. In most cases, competition analysis would be a minor component of RIA. In some cases, however, it would be more significant and this paper seeks to identify key situations that may merit a thorough competition assessment.

The paper proceeds by, first, contrasting in general terms the different features of RIA and competition policy approaches, to identify the potential benefit for RIA from explicit inclusion of competition assessment as an element of RIA. Second, the paper proposes a competition checklist to help identify the types of regulations that are most likely to involve unnecessary restrictions on competition. Third, the paper discusses negative impacts on competition that regulation often imposes. Fourth, the paper identifies the broad outlines of a potentially useful approach to the process of competition assessment.

2. RIA and competition policy analysis

The benefit/cost analyses undertaken within RIA generally compare likely outcomes based on the existing economic and regulatory environment and may not make an allowance for changes in the major parameters affecting these environments. In comparison, the focus of competition policy analysis is often more future-oriented. Competition policy analysis is concerned with the impact of particular changes to market conditions on the intensity of competition and, hence, on the likely outcomes for economic efficiency and consumer welfare.

While the above points to general differences in approach, the increasing trend for RIA guidance materials to require assessment of competition impacts to be undertaken as part of RIA is inevitably narrowing these differences in many countries. This paper is intended to contribute to this process.

It is the focus on dynamic market efficiency[3] that makes competition assessment most useful as an element of overall regulatory assessment. This element can help to avoid regulations that unduly restrict market activity. A further benefit of competition assessment is that it assists in identification of all parties likely to be affected by regulatory proposals, especially those that will be affected indirectly. This can assist in ensuring that RIA-based consultation is sufficiently inclusive and, thus, more effective.

One practical approach for implementing competition assessment is through a set of threshold questions (or a "checklist") that helps identify when proposed regulations may have the most potential to unduly reduce competitive pressures. In those situations where reductions in competitive pressures are most likely, an in-depth competition assessment would be justified. However, for most regulations, an in-depth competition assessment would not be needed.

3. Conducting competition policy analysis as one element of RIA

As the following section will demonstrate, a number of the key issues in terms of potential anti-competitive impacts of regulation arise at the level of the design of the broad regulatory structure being considered. This suggests that policy officials should attempt to undertake competition policy analysis at an early stage in regulatory development. Similarly, long-standing OECD

3. Dynamic efficiency focuses on efficiency over time, with changes in efficiency resulting potentially from innovation, technological developments, the ability of firms to respond flexibly to new market conditions and of successful suppliers growing.

advice is that "*RIA should be integrated with the policy-making process, beginning as early as possible*"[4]. Thus, there is a consistent message that both of these forms of analysis should be seen by policy makers as integral components of the policy development process, rather than being "add-ons" or tasks that can be considered in isolation from the larger issues of policy development.

Of course, while at times there is a significant likelihood that a given regulatory intervention could yield anti-competitive impacts, it is equally true that much regulation has little, if any effect on competition within a given sector or market. Thus, a fundamental task is to determine via a "Competition Checklist" whether there is a strong likelihood that a particular regulation under consideration could have a significant anti-competitive impact and, as a result, require a more detailed and technical analysis to be undertaken.

The "Competition Checklist" presented below has been developed as a tool for aiding officials with an initial assessment. The checklist provides a simple test that can be applied to proposed regulations to determine whether an analysis of their impact on competition is likely to be required. If one or more of the three basic types of restriction on competition identified in the checklist exists, a full competition assessment is warranted. The details of the full assessment may be in proportion to the size of the potential competitive harm. Thus, a judgment may be warranted to determine the apparent scale of the identified restriction on competition and thus inform decision-making on the scale and scope of the full competition assessment that is required. If, considering the circumstances and past experience, there is little likelihood of a significant restriction of competition resulting from the regulatory proposal, the full competitive effects assessment can be short and concise.

4. Review of major forms of restrictions on competition

The following section provides further detail on the importance of each of the main types of restriction on competition identified in the Checklist. It is intended to provide guidance to policy officials on undertaking an initial "competition assessment" should the "Competition Checklist" indicate that is necessary. An important focus of the discussion is on identifying the policy objectives governments usually seek to achieve via each of the identified types of anti-competitive regulation. In general, a range of policy alternatives which are likely to achieve these objectives while being less

4. See *Regulatory Impact Analysis*: *Best Practices in OECD Countries.* (OECD, Paris, 1997), p215.

restrictive is identified. Cases in which regulations with particular types of anti-competitive effects may be justifiable are also identified and guidance included on how these anti-competitive effects may be minimised.

The checklist organises the range of specific restrictions on competition identified under three broad headings that reflect the main general categories of restriction on competition. However, it should be recognised that some of the specific restrictions can relate to more than one of these broad categories. For example, the creation of a self-regulatory or co-regulatory regime may lead to limits on the number or range of suppliers or limit the ability of suppliers to compete. Thus, the placement of each type of restriction on competition under a particular category heading has been made according to the most common result of the use of that restriction. Analysts nevertheless need to consider all of the possible anti-competitive impacts associated with each type of restriction.

This section of the paper identifies a range of common regulatory provisions that have the potential to result in major anti-competitive impacts on a given market. It discusses the nature and extent of these likely anti-competitive impacts and considers their acceptability and potential alternative means of achieving the regulatory objectives that often underlie their use. The discussion included here is a general one that is intended to introduce these concepts to generalist policy officers. Further guidance is available in a longer companion paper.

Competition Checklist
for the conduct of competition assessments

A competition assessment should be conducted if the proposal has any of the following 3 effects:

(1) Limits the number or range of suppliers

This is likely to be the case if the proposal:

- Grants exclusive rights for a supplier to provide goods or services
- Establishes a license, permit or authorisation process as a requirement of operation
- Limits the ability of some types of suppliers to provide a good or service
- Significantly raises cost of entry or exit by a supplier
- Creates a geographical barrier to the ability of companies to supply goods or services, invest capital or supply labour

(2) Limits the ability of suppliers to compete

This is likely to be the case if the proposal:

- Controls or substantially influences the prices for goods or services
- Limits freedom of suppliers to advertise or market their goods or services
- Sets standards for product quality that provide an advantage to some suppliers over others or that are above the level that many well-informed customers would choose
- Significantly raises costs of production for some suppliers relative to others (especially by treating incumbents differently from new entrants)

(3) Reduces the incentive of suppliers to compete vigorously

This may be the case if the proposal:

- Creates a self-regulatory or co-regulatory regime
- Requires or encourages information on supplier outputs, prices, sales or costs to be published
- Exempts the activity of a particular industry or group of suppliers from the operation of general competition law
- Reduces mobility of customers between suppliers of goods or services by increasing the explicit or implicit costs of changing suppliers

4.1 Limits on the number or range of suppliers

Regulation that limits the number of producers that can supply a market creates a risk that market power[5] will be created and the strength of competitive forces will be reduced. Where numbers of suppliers decline, the possibility of co-operation (or collusion) between them is increased. The resulting decline in competitive pressures will tend to reduce innovation and incentives to meet consumer demands effectively. Thus, there is a detriment to economic efficiency in the dynamic sense. As well, reduced price competition results in transfers from consumers to producers. Grants of exclusive rights, the establishment of licence and permit schemes and restrictions on participation in public procurement schemes constitute three very common forms of regulatory limitations on the number of suppliers. Regulations that significantly raise the cost of entering or leaving a market and those that geographically restrict the flow of goods or services can also effectively limit the number or range of suppliers of a given market. Moreover, other forms of limitation on supplier numbers also exist and, where identified, should lead to a competition review. Where a restriction reduces competition in one market, it may also have "flow-on" effects in markets for complementary goods, as well as those for substitutes. Competition analysis must also attempt to identify these flow-on effects.

4.1.1. Grants of exclusive rights

Expected benefits of these provisions

The grant of an exclusive right frequently occurs in the context of a "natural monopoly". That is, the situation in which the marginal cost of producing an additional unit of the good continues to decline right up to the point at which the scale of production is such that an individual supplier can meet the entire demand arising from the relevant market. In such cases, governments have sometimes provided exclusive rights in order to ensure that consumers are supplied at the lowest possible cost while regulating the behaviour of the supplier granted this exclusive right in order to prevent the exploitation of its market power, so far as possible. However, the scope of natural monopoly, which tended to be defined broadly in the past, has been refined in recent times and is now often defined much more narrowly.

The grant of exclusive rights, particularly if it extends over a long period, has also frequently been considered a means of underwriting, or

5. Market power of suppliers is the ability to profitably increase price, decrease quality, or decrease innovation relative to the levels that would prevail in a competitive market.

encouraging, substantial and/or strategic investments in infrastructure areas. Governments have frequently reached the view that such investments will be unlikely to occur without the incentives provided by the guaranteed market access that the grant of an exclusive right provides. However, at times the result of these policies has been over-investment.

Nature and extent of anti-competitive impacts

A grant of an exclusive right to produce a certain good or provide a certain service obviously constitutes the extreme case of a "barrier to entry". In effect, the grant of an exclusive right represents the establishment of a regulated private monopoly. This form of regulation necessarily has a substantial anti-competitive impact. Recent technological developments have significantly altered the nature of some previously monopolistic activities and potentially allow formerly regulated monopolies to be disaggregated into competitive and monopolistic elements.

Indications for use and potential policy alternatives

A fundamental problem with long-term grants of exclusive rights is that technological change can render the initial rationale for the granting of the right redundant long before the right itself has lapsed. Moreover, a State-sanctioned monopolist is likely to find itself in a strong position vis-à-vis the regulator that seeks to prevent it from exercising its market power. This, plus the need for a highly sophisticated regulatory approach to be taken in such contexts, often means that regulators experience a relatively low level of success in preventing the abuse of market power and in protecting consumers.

That said, there may be circumstances in which the grant of an exclusive right constitutes the only means of ensuring that a particular service will be brought to market. However, regulators should satisfy themselves that other alternatives that are less restrictive of competition are impracticable before considering the grant of such a right. If there are no other alternatives, regulators may wish to consider auctioning the exclusive right. Where such a right is granted, particular attention needs to be paid to regulatory design. For example, issues need to be addressed such as the relative appropriateness of "cost plus" pricing regulation versus "rate of return regulation" versus "price cap" regulation. Moreover, in many cases, the splitting of the exclusive right between two or three parties can conserve competitive dynamics to some degree while reaping the benefits sought.

4.1.2. Establishment of a licence or permit system as a requirement of operation

Expected benefits of these provisions

Licences are generally used as a means of ensuring with a high degree of certainty that only suppliers who meet set standards are able to enter an industry. Licence conditions typically include minimum qualifications requirements, for example minimum standards for formal education and/or practical experience applied to members of certain occupational groups, such as various health professionals. They are often implemented in pursuit of well-founded consumer protection objectives. In particular, where consumers are not easily able to make judgements as to the competence of practitioners, qualifications requirements can help prevent harms due to incompetent practice. Other common requirements include minimum insurance requirements, which may have important consumer protection benefits where there is the possibility of substantial consumer losses in the event of business failures, incompetence or fraud (e.g. property transfers, travel agencies).

Nature and extent of anti-competitive impacts

Where regulation results in barriers to entry that are more restrictive than necessary to adequately achieve the regulatory objectives, it can have the effect of promoting "producer protection" and will often be sought by existing producers on grounds of the need to promote "market stability". In the context of a requirement for a licence to practise, the extent of the restriction effectively imposed on entry is likely to be high, as qualifications requirements are often supplemented by additional elements, such as character assessments. These character tests can also be applied to the directors of a company where the licence requirement applies to corporations, rather than individual practitioners. Common corporate licensing requirements include the need for certain insurances to be held or minimum working capital requirements to be met. Commonly there are "soft limits" on the number of firms or practitioners allowed to participate in the industry. These may be implemented through the application of "public interest" tests, which require that potential entrants demonstrate the "need" for an additional service to be provided and, in some cases, even that their entry would have no negative impact on the businesses of existing industry participants.

Some regulatory requirements may have the effect of increasing pressure on some suppliers to leave the industry due to the suppliers' being in a relatively poor position to comply and may thereby have a negative impact on competition if there are already significant barriers to new entry

in place. Exit restrictions are less readily identifiable and are arguably less prevalent than entry restrictions. Exit restrictions may include overly onerous requirements to pay separation benefits to former staff or the loss of certain non-refundable performance bonds.

Indications for use and potential policy alternatives

The pursuit of "market stability" generally constitutes a poor reason for imposing regulatory restrictions on entry to an industry, as effective competition is a dynamic concept that necessarily encompasses the possibility of suppliers failing and, equally, requires that there be a steady flow of new entrants to an industry (or at least the possibility of new entry) if high standards of innovation and responsiveness to consumer demand are to be maintained.

As suggested above, qualifications requirements for professionals are likely to be legitimate in cases in which consumers are ill placed to make their own judgments as to practitioner competence and where the consequences (i.e. the potential harms to consumers) of making a poor choice are serious and irreversible. As in numerous areas of regulation, a fundamental principle is to ensure that the restrictions applied are no more restrictive than necessary to achieve the regulatory objectives. Ever higher qualifications requirements can substantially benefit producers, at the expense of consumers, by reducing entry and, therefore, competition. Product quality standards should be set no higher than necessary to ensure consumer safety. Restrictions on, for example, supplier size should not be set a level that creates substantial anti-competitive impacts.

When considering the need for compulsory insurance requirements, performance bonds and the like, consideration should be given to the nature and extent of the consumer harms that can potentially result from either poor practice or from the failure of a service provider. Furthermore the ability of consumers to inform themselves of these potential harms and to protect themselves by making informed choices of providers is also a relevant consideration, while policies that can enhance consumer capacities in this area need to be considered as an alternative approach.

4.1.3. Limits on the ability of some types of suppliers to provide a good or service

Policies limiting the ability of some types of suppliers to participate in public procurement often require that a certain degree of preference (which may, or may not, be stated explicitly) be accorded to suppliers established in a certain region, state or country. Alternatively, they may give preference to suppliers that exhibit other characteristics held to be desirable, for example establishing a quota on procurement participation for small suppliers, or

those that implement particular employment policies. In extreme cases, these policies may completely preclude suppliers other than those conforming with the favoured characteristics from any participation in government procurement.

Expected benefits of these provisions

The objectives sought via limitations on what types of suppliers may participate in government procurement can be several. Perhaps the most common kinds are national and/or State preference schemes, which seek to encourage economic activity in the favoured area, often in respect of particular industries thought to be of "strategic" significance. Thus, preference schemes can be used to support general protectionist policies, or as an element of regional policy, industry policy or small business policy, among others. Their effectiveness derives from the powerful market position of governments as major purchasers of many kinds of goods and services.

Nature and extent of anti-competitive impacts

Limiting participation in procurement tends to increase the costs of government purchasing by limiting competition in that market. Given the overall size of government procurement budgets, the importance of such restrictions in relative terms is likely to be high. Moreover, there is significant potential for conflict between these preference arrangements and other areas of policy. For example, preference given to suppliers from a particular region may conflict with other policies favouring small business.

Indications for use and potential policy alternatives

Preference schemes can have significant impacts due to the powerful position of governments as purchasers. However, there is substantial potential for such policies to conflict with other objectives of government policy. Perhaps in recognition of this, over time many preference schemes have shifted from absolute exclusion of non-favoured groups to relative preferences for favoured groups. Moreover, many have disappeared as a result of conflict with obligations under international trade agreements.

Alternative means of pursuing the underlying objective sought via preference schemes exist in many areas. For example, where regional policy objectives are sought to be promoted, alternatives include a range of direct subsidies and/or tax expenditures, provision of a more favourable regulatory environment in key areas, or the use of publicity/educational campaigns. Where the promotion of small businesses is an objective, temporary tax/subsidy options and more flexible regulatory approaches may also constitute appropriate alternatives.

4.1.4. Significantly raises the costs of entry or exit

Expected benefits of these provisions

One common example of regulations that raise entry costs is that of regulations that impose more stringent product testing standards. Another example is the imposition of minimum capital requirements or, more generally, requirements to demonstrate "financial capacity". Regulations that raise exit costs include those that set more stringent cleanup requirements in relation to former industrial sites. These forms of regulation may be used to pursue several regulatory objectives. These include consumer and environmental protection goals. In many cases, there may be few feasible alternative means of pursuing these objectives. For this reason, governments have sometimes acted to minimise the competitive impacts of such provisions by providing targeted exemptions or assistance to suppliers to help bring them into compliance. For example, low-volume car manufacturers are often exempted from aspects of vehicle testing regulations, or are subject to less onerous testing protocols.

Nature and extent of anti-competitive impacts

Regulations that raise the costs of entry to, or exit from, a market will tend to reduce the number of participants in that market. Higher gross revenues are required, in such circumstances, in order to achieve a given rate of return on entry. Moreover, higher exit costs will increase the risks involved in entry. Consequently, there is a high risk that less vigorous competition will be observed in the market.

Indications for use and potential policy alternatives

Regulations that set strict product-testing standards are likely to be justified where significant risks of serious consumer harms associated with the use of the product exist. Similarly, other regulations that raise entry costs by requiring certain insurances or the demonstration of financial capacity are likely to be justifiable where substantial financial risks to consumers may result from business failure, incompetence or fraud on the part of suppliers.

In some circumstances alternatives such as greater information provision or product disclosure requirements can be considered. In other cases, regulation may be required even though it raises entry costs and the focus should be on minimising anti-competitive potential by ensuring that the requirements set are the minimum necessary to achieve an adequate degree of consumer protection.

4.1.5. Restrictions on the inter-state (or intra-national) flow of goods, services, capital and labour

Expected benefits of these provisions

Many regulations have historically limited the flow of goods, services, capital and/or labour across jurisdictional boundaries. These limitations can be considered to be a specific subset of the general category of "restrictions on entry" discussed above. Regulatory restrictions on the flow of goods and services, or capital and labour, have often been implemented as a tool of regional policy. That is, governments have implemented these restrictions in an attempt to maintain or enhance the viability of regional economies. Other related goals that may be pursued via such policies (particularly when considered at the national level) are those of self-sufficiency or the protection of "national champions", whether for prestige or other reasons.

A particular context in which such protective restrictions may be proposed is that of "infant industries"[6]. That is, these restrictions may be promoted as being a temporary necessity in order to ensure the development of local industry in the context of relative under-development. However, the risk is that such "temporary" protections develop into quasi-permanent arrangements due to substantial lobbying by the local suppliers that benefit from the continued existence of the protections.

Nature and extent of anti-competitive impacts

Limitations on the geographical flow of goods and services, imposed where trade would otherwise be technically and economically feasible, have the effect of artificially reducing the effective size of the market for the good or service in question. By reducing market size, several potential anti-competitive effects arise. First, the probability that the degree of concentration in the market may rise to a point at which market power can be exercised by producers necessarily rises. Second, a smaller and more isolated market is likely to be associated with lower levels of innovation, product differentiation and the like. Thus, consumers are likely to be less well served. It is also likely that the rate of entry may be slowed, to the extent that potential new entrants face greater difficulties in establishing themselves in what has become, due to regulatory factors, geographically and economically smaller markets.

6. Infant industries are industries that may not be strong enough to survive open competition.

Indications for use and potential policy alternatives

In recent years, there has been increasing recognition of the potential harms to competition of restricting flows of goods, services, capital and labour. Indeed, in the European context, the free movement of goods, services, capital and labour have been described as "the four freedoms" which constitute a pillar of the Single Market Program, pursued since 1992.

In general, there are relatively few contexts in which such restrictions are likely to pass a benefit/cost test. Therefore, policymakers should adopt the generally sceptical view of proposed regulation that includes such restrictions. Where restrictions are imposed they should be assessed in terms of a number of factors including whether there is a clear link between the restriction in question and the achievement of a specific, identified public policy goal, whether the restrictions are no more restrictive than necessary for achievement of the goal, whether a rational analysis supports the probability that the policy goal will be achieved by means of the restriction and whether the restrictions are restricted to a definite and limited time span via explicit regulatory provisions.

4.2 Limits on the ability of suppliers to compete

The existence of large number of competitors is not a sufficient condition for the development of strongly competitive markets. There must also be strong incentives for competition between suppliers of goods and services. Regulation, in the form of the general competition law, has a significant role to play by outlawing a range of anti-competitive conduct (e.g. price-fixing, market sharing). However, regulation can also substantially reduce the ability of suppliers to compete. Most obviously, such restrictions can take the form of price controls. Alternatively, regulation may restrict the way that products can be sold or advertised or it may set product standards that are difficult for some suppliers to meet. A wide range of other regulations restricting the ability to compete has also been observed, including restrictions on profits, or market share, production quotas and the like.

4.2.1. Controls on the prices at which goods or services are sold

Expected benefits of these provisions

Maximum price regulations are frequently introduced as a necessary corollary of restrictions on entry to the market. For example, entry to the taxi market is highly restricted in most countries, leading to substantial excess demand for taxi services developing over time. In a market characterised by significant excess demand, substantial price increases

would be expected to result. In this context, maximum price regulation is generally introduced with the intention of protecting consumers. Conversely, when minimum price regulation has been used, it has sometimes been a response to extremely vigorous price competition and concerns that "predatory pricing"[7] has been employed. In these cases, minimum price regulation is generally seen as a means of protecting small producers, or local producers, and/or less efficient producers from "unfair" competition.

Nature and extent of anti-competitive impacts

Controls on the prices at which goods are sold directly impede the operation of normal market forces and disciplines. When minimum prices are set, lowest cost suppliers are prevented from winning market share by providing better value offerings to consumers. Similarly, where maximum prices exist, incentives to innovate by providing new and/or high-quality products can be substantially reduced. Again, the dynamic ability of the market to respond to consumer preferences is substantially limited. Minimum price laws may also allow inefficient producers to remain in the market, thus preventing the redeployment of resources to alternative, more productive uses. In this way price controls reduce economic efficiency.

Indications for use and potential policy alternatives

Price regulation rarely constitutes the most effective or efficient means of achieving the above objectives. For example, in the case of the taxi market, a better means of protecting consumers is to address the restrictions on supply in the market. In the case of "predatory pricing" concerns, the use of the general competition law is also likely to be a superior alternative. Thus, regulation proposing to control prices should be subject to especially rigorous scrutiny.

4.2.2. Restrictions on advertising and marketing

Expected benefits of these provisions

Regulations sometimes restrict the ability to advertise or market goods and services. Such regulations often exist to prevent false or misleading advertising, while at the same time recognizing the positive role that

7. Predatory pricing occurs when a supplier temporarily sets prices that are substantially below its costs with an expectation that other suppliers will then exit or change their behaviour. The supplier would then later recoup its lost profits.

advertising and marketing play in conveying information to consumers and helping them to make choices in the marketplace. Prohibition of misleading or deceptive advertising ensures that the choices that a competitive market creates will not be undermined by deception and maintains consumer confidence in the market. Certain ancillary restrictions, such as requirements that sellers possess competent and reliable substantiation for claims that they make, are necessary to effectively prevent deception, especially in cases where evidence of falsity may be difficult to obtain. In a few cases, where products or services may be harmful under certain circumstances, general disclosure requirements are helpful in order to educate consumers about the potential harm. Common examples include the disclosure of the linkage between cigarette smoking and cancer in tobacco advertisements and detailed disclosures that accompany pharmaceutical advertising in most countries that permit such advertising. While some have advocated advertising restrictions as an indirect means of seeking to limit consumption of goods or services that are deemed to have a socially negative value or which are subject to excess consumption, these restrictions have generally been ineffective in reducing the use of these products. In such cases, advertising restrictions simply reduce information available to consumers, reduce choice, reduce competition, and increase price and profits.

At other times, advertising targeting certain groups (e.g. children) may be restricted in recognition that advertising may be perceived differently by members of those groups than by others. A common approach is to judge deception through the eyes of members of the group to whom advertising is directed. In some cases, such as advertising of tobacco and alcohol directed towards children, especially where the sale of alcohol or tobacco to minors is prohibited, the harm to public health may completely outweigh any consumer benefit to advertising, and such advertising may be prohibited altogether. Restrictions of this nature, when circumscribed to ensure they are not overly broad, can have significant social benefits.

Nature and extent of anti-competitive impacts

In many cases, advertising and marketing restrictions are too broad and have the impact of unduly restricting competition. Restrictions on advertising and marketing are likely to be particularly onerous in their impact on potential entrants to markets, as they restrict substantially an entrant's ability to inform potential customers of their presence in the market and of the nature and quality of the goods and services that they are able to offer.

A particular area of concern is that of restrictions on comparative advertising, particularly in relation to the making of price comparisons. As price is a substantial element in the consumer choice equation, restrictions

on the ability of consumers to inform themselves of relative pricing at minimal cost have the clear potential to reduce market efficiency.

Many sectors have successfully shielded themselves from competition by restrictions on advertising and marketing. This has particularly been the case with the liberal professions. With regulation of the professions traditionally resting with members of the profession themselves, members of these sectors have claimed that advertising can be seen as "unethical" and that members of the professions are motivated by altruism in large part, with financial gain a secondary consideration. These claims have not withstood scrutiny. Studies have shown that restrictions on the commercial practices of professions do little or nothing to protect consumers, but act to significantly reduce consumer choice and access, and significantly increase costs.

Indications for use and potential policy alternatives

General consumer protection laws almost invariably contain prohibitions on misleading and deceptive advertising practices. These promote efficient markets and are effectively pro-competitive. There may also be limited circumstances in which additional restrictions are justified in relation to specific goods or services. However, these need to be carefully considered on benefit/cost grounds. The potential for advertising restrictions to contribute to the continuation of information asymmetry problems that disadvantage consumers and reduce economic efficiency must also be weighed. Alternative policy tools where there is a need to discourage "over-consumption" include information campaigns and consumption taxes. These constitute more direct means of treating the identified policy issue.

4.2.3. Setting product standards that provide an advantage to some suppliers over others or that are above the level that many fully informed customers would choose

Expected benefits of these provisions

Minimum product standards are usually set to achieve consumer protection objectives in the presence of market failures, notably information asymmetry. However, if set at an excessively high level, they can reduce consumer welfare by preventing consumers from choosing a cheaper (but lower quality) market offering. Thus, product quality standards should not be set at a level above that which is required to ensure a necessary minimum level of consumer safety. Emission standards in relation to productive processes clearly aim to pursue broad social objectives. Such objectives are clearly legitimate goals of regulation. However, the potential for anti-

competitive impacts identified above highlights the need for a careful balance between regulatory costs and benefits in this area as well.

Nature and extent of anti-competitive impacts

Regulations setting standards that are significantly different from current practices can significantly restrict the ability of suppliers in the market to compete. A common example is environmental regulations that set limits on the allowable levels of emissions of various kinds of toxic substances. While such regulations are often entirely appropriate and necessary as a means of providing highly valued protections to public health and amenity, they can be set at levels that unfairly advantage small numbers of incumbent suppliers that have proprietary access to certain kinds of technologies.

Another area in which standard setting can have significant anti-competitive impact is setting minimum quality standards for particular product types. Again, there can be sound regulatory objectives underlying such standard setting, commonly protection of consumers from risks associated with the use of the product. However, where the standard is set at a level that is very much higher than current market practice, some market players may find it difficult or impossible to meet the standard. This may occur, for example, where only certain productive technologies (which may be subject to patent protection) are capable of meeting the new minimum quality standards.

Where other suppliers are unable, technologically, to meet the legislative requirement, significant exit from the industry may result and important anti-competitive impacts may occur. Where the only feasible means of reaching the standards are patent protected, patent holders may have incentives to refuse licences to potential competitors, in order to obtain competitive advantages in the market. Alternatively, even where patent protection is not an issue, smaller suppliers, or those that are less well resourced, may not be able to afford the major capital investment that may be required in order to install new technology to enable them to meet new product standards.

Indications for use and potential policy alternatives

Movements in regulatory standards relating to products, or productive processes, tend to occur in incremental steps over time, reflecting progressive changes in social preferences and in the wealth of the society. Very substantial one-off changes in the standards are far more likely to have anti-competitive impacts than are more moderate changes.

It may often be the case that alternative instruments can achieve the benefits sought through the implementation of minimum standards. For

example, when minimum standards are pursued for consumer protection reasons, it may be possible to act instead by providing information directly to consumers regarding product risks or by requiring disclosure of certain product characteristics. Where major changes in emissions standards are contemplated, governments have sometimes sought to minimise possible anti-competitive impact by providing financial, technical or other assistance to smaller suppliers in particular, to make them better able to meet the proposed new requirements.

4.2.4. Raising the costs of some suppliers relative to others

Expected benefits of these provisions

Perhaps the most common form of regulation that raises the costs of some suppliers relative to others is that which includes "grandfather clauses". These are arrangements that require new entrants to the industry to comply with the new, higher standards, while incumbents continue to be subjected to the lower, pre-existing standards. Several arguments are made in favour of the need to impose grandfather clauses in particular circumstances. In relation to occupational qualifications, it is often argued that the extensive practical experience of long established practitioners is an adequate substitute for a higher level of formal qualification. In relation to productive technologies, it may be argued that adequate time must be granted to amortise the sunk costs of investments made in plant that complied with relevant environmental and other standards at the time that it was commissioned.

Nature and extent of anti-competitive impacts

"Grandfather clauses" have substantial potential to distort competitive relations within the industry by raising costs to some suppliers (i.e. new entrants to the market, or those implementing new processes) to a substantially greater extent than others. This is likely to impede entry and thereby reduce innovation as well as the intensity of competitive pressure in the market.

Indications for use and potential policy alternatives

The anti-competitive impact of grandfather clauses can be minimised by ensuring that they are time-limited, rather than permanent, and that the duration of the exemption given is strictly proportionate to the underlying rationale for its being granted in the first place. More generally, however, a sceptical approach needs to be taken to arguments in favour of the need for grandfather clauses, as they are frequently a reflection of attempts to defend vested interests from potential competition.

4.3 Reductions in the incentives for suppliers to compete vigorously

The previous section highlights the ability of regulation to reduce the *opportunities* for suppliers to compete. Regulation can also act to reduce the *incentives* for competition. In general, suppliers of a product or service who can coordinate amongst themselves to share a given market are able collectively to maximise potential monopoly profits. Thus, regulation that facilitates or encourages cooperation between producers will reduce incentives for vigorous competition. This is most likely to occur where regulation facilitates the sharing of information on market sensitive variables such as prices, costs and outputs. Moreover, regulation that reduces the effective ability of customers to switch between competing suppliers also reduces competitive pressures. The danger of regulation developing with this effect is greatest when producer groups have a significant role in the development and implementation of regulation.

4.3.1. Self-regulation and Co-regulation

Expected benefits of these provisions

Governments may choose to take full responsibility for designing and implementating a regulatory structure or, alternatively, they may choose to involve an industry or professional association in aspects of the design or implementation of the regulatory structure. Where an industry association takes full responsibility for regulating the conduct of its members, without government legislative backing (often at the urging of government) the term "self-regulation" is used. However, where government provides legislative backing to rules that are either developed by the industry/professional association, or else jointly developed with government, then the results can be considered to be an example of "co-regulation".

Co-regulatory structures can have substantial benefits for governments seeking to regulate behaviour, particularly in the context of an industry or profession that has not previously been subject to regulation. The involvement of the industry or professional association can tend to lend credibility to the regulatory structure in the eyes of those who will be regulated. This credibility derives in part from the fact that the government is seen as utilising the high level of specific expertise and understanding of the industry in question that the practitioners undoubtedly possess. This can be attractive from the point of view of government, avoiding the necessity of developing internally a high level of specific expertise in issues relating to the market involved and the qualifications and duties of the relevant practitioners.

Governments may be able to develop co-regulatory structures at substantially lower cost than would be required to develop a fully government-based solution. This may occur to the extent that members of the profession can be persuaded to constitute regulatory and disciplinary bodies that undertake important aspects of the regulatory function but receive limited, if any, funding from government.

Nature and extent of anti-competitive impacts

Regulation that is established by those being regulated can yield substantial benefits from ensuring that technical standards are appropriate and that standards advance with technology. However, there is a strong risk that rules developed by industry or professional associations will have anti-competitive impacts. In many cases, these will be unanticipated effects arising from attempts to pursue legitimate policy goals. For example, strict qualifications requirements may be introduced for consumer protection reasons but may (especially where incumbent practitioners are exempted) indirectly reduce entry to the market. Some "ethics based" rules, such as restrictions on advertising prices, may reduce the ability of producers to compete. Thus, there may be an intention to benefit the members of the profession or industry, with public interest arguments being used to cloak the underlying purpose of the regulation.

The fundamental requirement when conducting competition assessment in these circumstances is to assess the regulation according to its expected effects, rather than focusing solely on its stated purpose or on judgements about the motives of its proponents. When evaluating barriers to competition, a careful analytical approach that considers costs and benefits to consumers and relies on empirical evidence is appropriate. Three questions can assist in the process: (1) What specific harm to consumers is the barrier designed to address? (2) Is the proposed restriction appropriately tailored to address that harm? and (3) Does the consumer harm that the restriction seeks to prevent exceed the consumer loss from the restriction on competition? The third question is an essential part of the analysis in evaluating self-regulatory or co-regulatory restrictions.

Concerns regarding the development of anti-competitive regulations are likely to be particularly significant where the industry/professional association in question has a dominant role in developing the rules of conduct that must be followed. For example, rules governing the operation of the legal profession have historically banned "price cutting", "touting for business", incorporation by specialist advocates or employment of specialist advocates, as well as most forms of advertising. In many cases, such restrictions have been removed following reforms that have led to the government taking a greater role in the regulation of the profession.

Indications for use and potential policy alternatives

A successful co-regulatory structure requires the existence of an industry/professional association with wide membership among the regulated group. The association must be seen by its members as having a relatively high level of prestige if it is to be able to impose effective sanctions (including exclusion from the association) on those who do not comply with regulatory requirements. The existence of effective sanctions is, in turn, necessary to convince consumers of the credibility of the regulatory structure.

Government should act to prevent attempts by the industry/professional association to use co-regulatory powers in an anti-competitive manner. This may include ensuring that the relevant Minister has the right to approve, or refuse to approve, codes of conduct and, as required, to substitute government regulations should the industry body continue to propose unacceptable versions.

4.3.2. Requirements to publish information on company prices, outputs or sales

Expected benefits of these provisions

Regulation requiring the publication of information such as price and output levels is usually adopted as a means of reducing consumer search costs by making this information more readily available. In some circumstances, reducing transactions costs in this way can improve the efficiency of markets by increasing the actual degree of understanding of market offers by consumers in the marketplace.

Nature and extent of anti-competitive impacts

Regulations that require market participants to publish information on their prices or output levels can significantly assist in the formation of cartels, since a key requirement for cartel operation is for participants in the cartel to monitor effectively their competitors' (or co-conspirators') market behaviour. These possible anti-competitive impacts are evidently more likely to arise where there are fewer participants in the market, where entry barriers are high and where products are relatively undifferentiated.

Publication of price information is also more likely to have an anti-competitive effect in industries in which it is common practice to offer or negotiate private discounts on advertised, or "recommended" prices. This is so because competitors would otherwise have substantial difficulty in obtaining information on the actual prices paid to other competing suppliers.

In a context in which actual price information is required to be published, cartel members are able to identify circumstances in which other members are not maintaining the "agreed" price or quantity.

Indications for use and potential policy alternatives

As suggested above, concerns about possible cartel behaviour are unlikely to be relevant in situations in which there are large numbers of competitors and/or relatively low barriers to entry. In these circumstances, the positive effects of such publication requirements in reducing markets search costs may well justify their use. However, in more concentrated markets, such requirements are more likely to have a net negative impact. In markets with few suppliers and a standardized product, the cost of searching among different suppliers may be smaller than when many suppliers are present while the risks of cartel agreements are higher. Thus, the potential benefits of such publication requirements are commensurately lower.

If publishing price or output information is viewed as supportive of cartel formation, alternatives exist that are less supportive of cartels. When the information is gathered primarily for government policy making, there may be no need to publish it at all. When the purpose is to aid consumers or provide general statistics, aggregate statistics are less supportive of cartels than company-specific statistics and historical statistics are less supportive than contemporaneous information. Statistics aggregated across companies will not help cartel members to identify a supplier that is violating the cartel agreement, while company-specific statistics could clearly identify a company that deviated from a cartel agreement over pricing or quantity. Historical statistics provide less useful information for cartels because cartels often need to share current information to decide how allocate output and set price targets and historical information would not help them substantially in this task.

4.3.3. Exemptions from general competition laws

Expected benefits of these provisions

In many countries, particular economic sectors benefit from exemptions from the general competition law. In some cases, these sectors are subject to their own, sector-specific competition laws. In other cases, there may be no restrictions on anti-competitive conduct undertaken in these sectors.

Numerous rationales for such exemptions have been advanced. In some cases, suppliers are permitted to cooperate in order to improve their ability to establish themselves and compete in export markets. In other cases, a market characterised by atomistic producers may be permitted to cooperate

due to the existence of monopsonistic power on the part of the purchasers of its products and the consequent desire by government to create a degree of countervailing power (examples include a number agricultural commodities). Many relatively highly regulated companies have also been exempted from general competition law. In these cases, the view appears to be that the sector-specific regulatory structure constitutes an appropriate substitute for the general competition law.

Nature and extent of anti-competitive impacts

Where a substantial derogation from the general application of competition law exists there is a clear risk of cartels, pricing abuses and anticompetitive mergers resulting. Moreover, there is obviously a significant potential for economic distortions to arise, as different sectors are subject to what may be substantially different regulatory environments. Such distortions can have a major negative impact on economic welfare by distorting consumer decisions as to which products and services they purchase.

Indications for use and potential policy alternatives

The OECD has generally argued that exemptions from the general competition law should be minimised or eliminated:

> *As a general reform strategy, governments should* ***expand the scope and effectiveness of competition policy.*** *The scope and effectiveness of competition law and competition authorities should be reviewed, and strengthened where necessary. Exemptions to competition law should be eliminated, absent evidence of compelling public interests that cannot be served in better ways.*

Where a specific rationale for the continued existence of exemptions has been identified, consideration should be given to the means by which its scope can be minimised. For example, a legislated monopoly requiring all producers of a particular commodity to sell to a particular, licensed export marketer may be an inferior substitute to a system that allows producers to engage in cooperative export selling arrangements, but does not compel them to do so.

4.3.4. Reducing the mobility of customers by increasing the costs of changing suppliers

Expected benefits of these provisions

"Switching costs" can be defined as the costs borne by a consumer in changing suppliers of a product or service.

Examples of switching costs include:

- The use of long-term contracts that "lock in" consumers for lengthy periods and impose significant financial penalties in the event that they choose to change suppliers prior to the end of the period; and
- The absence of telephone number portability, which can make switching service providers relatively unattractive by imposing convenience/administrative costs on the consumer.

Legislative provisions for switching costs to be charged may reflect the existence of real and substantial costs, borne by suppliers, in the event of consumer switching occurring. To this extent, provisions allowing for some switching costs to be charged can be consistent with the application of equitable contract terms. For example, penalties associated with early termination of a fixed-term contract may reflect product "bundling" and the need for the supplier to recover the costs of capital items (e.g. mobile phone handsets) for which only partial payment has been received. Alternatively, some switching costs may be established in an attempt to reduce transactions costs.

Nature and extent of anti-competitive impacts

By raising the costs of changing suppliers, switching costs can substantially reduce the ability of suppliers to compete. Switching costs are likely to be of considerable importance in the context of newly competitive industries, where they can frequently constitute an important barrier to the reduction, over time, of the incumbent supplier's strong position in the marketplace. An example is given by the Nordic electricity markets, which demonstrate substantially different levels of consumer switching activity in different countries. Review of the regulatory arrangements in place indicates the extent to which these observed differences in the level of switching activity are highly correlated with the nature and extent of various switching costs applicable in each country.

In Finland, distribution system operators can charge fees if the customer changes supplier more than once a year. In Finland, Sweden and Norway a consumer can enter into a new supply contract orally or electronically, whereas in Denmark the consumer must physically sign the contract.

Where significant real costs to suppliers are associated with switching, allowing suppliers to pass these costs on to consumers may be unavoidable. However, in the case of switching costs imposed in an attempt to reduce transactions costs, consideration should be given to whether the reduction in transactions costs that may result from introducing the switching cost justifies its likely anti-competitive impact in reducing the actual incidence of switching.

The above is a case in which switching costs are actually set out in regulation. However, another possibility is that regulation may not explicitly impose switching costs but, rather, may fail to take account of either existing switching costs in the industry or those the incumbent suppliers may seek to impose in a newly competitive industry context. The objective of achieving enhanced competition may be substantially compromised if regulation is silent on these issues and allows new or increased switching costs to be imposed by suppliers over time.

Indications for use and potential policy alternatives

Particularly in the case of newly restructured industries, characterised by a dominant incumbent facing competition for the first time from new entrants, ensuring that switching costs remain low is a necessary condition for the development of effective competition. While other conditions must also be in place (e.g. access on fair terms to a monopoly network) the switching costs issue remains fundamental to the competitive outcome.

It follows that, in reviewing proposed regulation that seeks to implement pro-competitive reform within an industry, any provisions explicitly allowing for the imposition of switching costs should receive careful scrutiny and should be regarded as acceptable only where there are strong arguments for their use. These might exist if it can be shown that there are significant costs associated with the particular activities that suppliers are required to undertake as part of the switching process. However, such circumstances are likely to be rare. Moreover, even in such cases, it may be that the pro-competitive impact of reducing or eliminating the switching costs is sufficiently large that the regulator will wish to prevent suppliers from explicitly recovering such switching costs from consumers.

As well, consideration is necessary of the potential for new or increased switching costs to be imposed by current incumbents in response to new competitive pressures. Where there is a clear risk of switching costs being imposed, the inclusion of provisions in the regulatory structure that will limit or prohibit the use of such devices may be required.

5. Proportionality in undertaking competition impact assessments

The checklist proposed in this paper provides a reliable basis for identifying regulations that will give rise to an anti-competitive impact. However, the relative importance of different anti-competitive impacts varies substantially. The extent of the competitive effects analysis to be undertaken should be commensurate with an initial assessment of the likely extent of the anti-competitive impact identified. Conducting extensive competitive effects assessment is costly and such costs should only be incurred where an initial

assessment indicates the potential costs of the anti-competitive aspects of a regulatory proposal are large enough to justify such an assessment.

A key contextual factor is the nature of the current competitive environment in the industries that are being regulated. Competition concerns will generally be less pressing where industries are vigorously competitive, characterised by large numbers of competing suppliers, significant rates of entry and exit and high levels of product and service innovation. Conversely, in relatively static markets, characterised by significant levels of concentration and limited entry, anti-competitive regulatory impacts are likely to be more important.

In assessing the likely importance of anti-competitive regulatory provisions, the focus should be on the likely extent of the regulatory proposal's impact in relation to the main determinants of the strength of competitive pressures in a market. In particular:

- Is it likely that the impact on the number of suppliers in the market will be large enough to reduce the number of market participants to a level at which coordination, or more extensive cartel-like behaviour, becomes feasible?
- Is the proposed regulation likely to have a significant impact on the dynamic aspects of competitive behaviour in the market, for example by significantly reducing entry or incentives for innovation?
- Is the proposed regulation likely to limit the ability of, or incentives for, suppliers to compete vigorously?

In producing an assessment, a clear view needs to be developed of the nature and extent of the market under consideration. A primary issue is the determination of the geographical dimension of the market. Is it local, regional, national, or international? Second, what products constitute the market? To what extent is there substitutability between the product or service that would be regulated and other products and services? Is the market a relatively static market, or is it characterised by high rates of technological change and the frequent implementation of new product types?

6. A Simplified Procedure for Completing a Full Competition Assessment

This section outlines an approach for performing competition assessments within the broader framework of RIA, to provide the analytical framework for competition assessments. As there are various ways that competition

assessment could be incorporated within the RIA process, this is only one of various approaches that could be adopted. A full assessment would generally be conducted only if an initial assessment (based on the Competition Checklist) identified the potential for harm to the competitive process.

The first step in conducting a full competition assessment is to identify from the broader RIA process the underlying objective of the new regulation and ensure its appropriateness. Second, existing restrictions on competition should be identified and analysed as a precursor to the conduct of competition policy analysis of the new regulatory proposal. This necessarily entails the process of "market definition", whereby the relevant market is identified by reference to the degree of substitutability between related products, including the determination of the relevant geographic market. Third, the competitive effects of alternative policy options should be assessed and compared.

6.1 Identifying Competitive Effects

Regulations that restrict competition in order to achieve a public policy objective should first be assessed to ensure that they constitute the least restrictive means of achieving that objective. The expected degree of restriction on competition can be measured by posing the following set of questions and conducting further analysis wherever there is a "yes" response:

6.1.1 Will the proposed regulation affect competition between incumbent businesses?

Will the proposed regulation affect different incumbent suppliers differently and will it, as a consequence, alter competitive relations between these suppliers in a way that would reduce the intensity of competition in the market as a whole?

6.1.2 Would the regulation be likely to discourage the entry of new businesses?

Will the proposed regulation restrict entry for all types of new businesses, or for particular types of businesses? What is the likely degree of this restriction and is it likely to significantly reduce competitive pressures in the industry in the longer term?

6.1.3 Would the regulation have a significant impact on prices or production?

Will the regulation raise prices by imposing new costs on producers? Will it facilitate information exchange among producers, raising the prospect of collusion and increasing prices? Is it likely to lead to the exit of some incumbent suppliers, reducing output and increasing prices?

6.1.4 Would the regulation be likely to affect the quality and variety of goods and services in the market?

Does the regulation include minimum standards requirements that will reduce the range of price/quality combinations available in the market? Is it likely to reduce product variety by restricting the entry of new suppliers?

6.1.5 Would the regulation be likely to have a negative effect on innovation?

Innovation, and therefore responsiveness to consumer needs, can be restricted by regulation in various ways. Regulation may restrict entry by new suppliers, or it may restrict advertising of new products and so diminish pressures on incumbents to innovate. Restrictions on the movement of goods and/or services over borders may reduce the entry of innovative products originating in other markets.

6.1.6 Is the regulation likely to limit market growth?

Regulation may have a negative impact on market growth, if it increases costs to all producers or limits the possibility of entry by new suppliers.

6.1.7 Would the regulation be likely to have a material effect on related markets?

Reductions in competition in a given market may also have anti-competitive effects in upstream markets (those that supply inputs to the market in question), or in downstream markets (those in respect of which the product of the market in question constitutes an input, or intermediate good).

6.1.8 What is the expected total impact of the regulation?

Where any of the above questions have been answered in the affirmative, a summary of the likely effects of the regulation on competition should be prepared, highlighting any impacts on prices, production, product variety and quality, and efficiency and innovation. These impacts should be summarised for both the primary market and for relevant related markets.

6.1.9 What are the available alternatives to the proposed regulation?

As indicated at the outset, the regulation or other policy tool that is able to achieve the objective in the manner least restrictive of competition should generally be employed. Following the completion of competition assessments of feasible alternative policy options, the effects of each option should be compared. Regulators should be satisfied that the policy alternative that is least restrictive of competition has been chosen, or that other benefits to society justify the choice of an alternative that is more restrictive of competition.

7. Integrating the outcomes

Integrating competition assessment into RIA can be particularly valuable in improving the dynamic component of the analysis. In rapidly changing economic and social contexts, the dynamic aspects of a regulation's likely impact can easily constitute the key determinant of its overall effect, considered over the course of the entire effective life of the regulation.

Only a minority of potential regulations is likely to have substantial anti-competitive impacts. However, where competition assessment identifies significant potential for a weakening of competition in the affected industry or related industries, the key elements of the regulatory design should be reconsidered in a comparative context in which alternative means of achieving the regulatory objective that are less restrictive of competition are identified and assessed.

Where such alternatives cannot be identified, the benefits and costs of the anti-competitive regulation must be compared systematically. Only if the adoption of the anti-competitive regulatory approach would yield net benefits, taking into account the costs of the anti-competitive impact identified – should the analysis conclude that the regulation is justified[8].

8. This approach is already explicitly in use in Australia. The "Guiding Legislative Principle", adopted under the National Competition Policy agreements states that legislation that restricts competition should not be adopted unless it can be shown both that the benefits of the restriction to the community as a whole outweigh the costs **and** that the objectives of the regulation cannot be achieved by any other means that is less restrictive of competition. See Competition Principles Agreement, clause 5 (1).

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* This chapter was written by Vivek Ghosal of the School of Economics, Georgia Institute of Technology. Sean Ennis provided guidance and made significant contributions to the development and contents of this document.

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1. Introduction

Governments often intervene in markets to regulate the behaviour of businesses. There are good economic reasons for intervention, such as controlling for market failures arising from the presence of externalities, overseeing common public resources and public goods, limiting market power, and addressing insufficient or asymmetric information. In addition to economic regulation, governments regulate the behaviour of businesses to promote valuable goals in the areas of health, safety and environmental quality. The rich diversity of the economic and social objectives, and the policies for attaining them, are illustrated in the following examples.

- When controlling for market power arising from natural monopolies, governments traditionally used various forms of price and rate-of-return regulation;
- To control for the negative externality generated by pollution, governments imposed taxes, implemented quantity restrictions and permitted innovative schemes such as allowing for trading of pollution credits;
- In industries such as healthcare, governments intervened to set standards for the quality of pharmaceuticals and medical equipment to ensure safety of the consumers;
- Workplace accidents often exacted a considerable toll on human life and governments intervened to set guidelines and safety standards to minimize accidents; and
- In products such as automobiles, governments have intervened to mandate seat belts and airbags to ensure passenger safety.

Despite their diversity, these examples represent only a small indication of the breadth of objectives and policies that actually exist. All of the examples point to the legitimate economic and social objectives being pursued through government intervention. Government action remains vital in protecting and promoting desirable public policy goals.

A difficult question remains for policymakers: Given a particular policy goal, what is the best feasible form of government or private action for achieving that goal? In recent years, many countries have initiated reforms designed to improve the quality of regulations and minimise the extent to which the national economies are subject to the more traditional command-and-control forms of regulation. An important reason for these reforms is

that governments are clearly recognising the benefits of competition.[1] Competition among businesses is expected to deliver improvements in production efficiency and bring newer and better products to the market through innovation, leading to gains in economic growth and consumer welfare. Broadly speaking, one can think of two crucial benefits that competition bestows: lower prices and greater choice. Given this, influences which impede competition are likely to detract from the achievement of this key pre-condition for attaining high levels of economic welfare and growth.

In its 1997 report on regulatory reform, the OECD noted that:

> "Despite the fact that almost all economic activity today occurs in markets where competition can work efficiently, economic regulations that reduce competition and distort prices are pervasive. They take many forms at various levels of government, ranging from legal monopolies that block competition in entire sectors, to a host of less visible restrictions on starting up and operating businesses, such as quotas on business licenses and shop opening hours. Yet economic regulations have often proven to be extremely costly and ineffective means of achieving public interest goals. In the absence of clear evidence that such regulations are necessary to serve public interests, governments should place a high priority on identifying and removing economic regulations that impede competition."

An additional driving-force that has created a pressing need for regulatory reform is the progressive opening up of global markets to the flow of goods, services and capital. As has been noted by many scholars and policy-makers, succeeding in global markets requires competitive and innovative domestic markets. The more traditional command-and-control forms of regulation often impede the flow of goods, services, investment and technology within regions in a country, denying consumers the benefits of competition and innovation. Many have argued that minimizing the restrictions might help the national economies to adapt more quickly to fast-changing global markets, and to shift resources away from declining industries into high-growth and innovative activities. And in industries characterised by rapid technological change or international mobility, failure to remove impediments to competition could disadvantage the industries and

1. In many of the de-regulated industries such as telecommunications, electricity and airlines, one of the benefits of competition that was touted was that it would eventually reduce excess capacity that had been built under regulation, leading to greater efficiency in production and lower prices for consumers. Muris (2002) points to the fact that since many industries are being privatized or liberalized across the world, governments are clearly recognizing the benefits of competition.

the economy. In light of this, a growing number of countries – OECD and non-OECD alike – have, in recent years, embarked on ambitious programs to reduce regulatory burdens and improve the quality and effectiveness of regulations.

Regulatory reform and improvements in regulatory quality have the ability to increase productivity and lead to price reductions along with improvements in the quality and the range of goods and services. Numerous studies, including several conducted by OECD, have documented the beneficial impacts of regulatory reform in specific industries. The OECD (1997) report noted that reform in several sectors in the United States are estimated to be providing annual benefits to consumers and producers of between $42 billion and $54 billion. The replacement of many separate national requirements by single Europe-wide requirements is estimated to have increased European GDP by up to 1.5 percent between 1987 and 1993. And the efficiency gains from deregulation are estimated to have boosted consumer income in Japan by about 0.3 per cent per year, or $36 billion annually. The OECD report noted that evaluation of 15 regulatory assessments in the United States found that they cost $10 million to conduct but resulted in revisions to regulations with estimated net benefits of about $10 billion, or a benefit-cost ratio of about 1 000 to 1. The Canadian Business Impact Test has been judged to be particularly effective in assessing the impacts on small and medium enterprises. In other, more recent, estimates, the implementation of competition-minded reforms is credited by the Australian government to have delivered benefits to an average family of about 4,000 EUR per year.

While governments enact regulations to pursue a wide range of legitimate social and economic interests, it is important to keep in mind the benefits that might accrue to national economies and consumers from greater competition. A conclusion one can draw is that since competitive markets are expected to yield high economic welfare in most circumstances, assessing the impact of rules and regulations on competition will provide significant benefits. As the OECD (1997) has noted before:

> "Economic and social policies should be mutually supportive. Restrictions on competition – such as limitations on entry, price, output, or production methods – are very costly ways to promote such public interests; [and] have often been ineffective … There may be lower-cost approaches such as market incentives or approaches that are competition-neutral that work better within competitive markets. Whatever approach is taken should be evaluated for effectiveness. Reasonable standards applicable to all producers, based on benefit-cost

analysis, scientific criteria, and risk assessment techniques, and underpinned by effective enforcement, are crucial to sound regulation."[2]

The bigger picture that emerges is that assessing the impact of rules and regulations on the extent of competition in the markets can provide additional insights into understanding the functioning of markets, make more transparent the relevant factors for making decisions, and provide an important tool to help policymakers make the right choices when assessing the pros and cons of regulations. With this objective in mind, this document is designed to provide a general framework for policy-makers and government officials who are decision-makers on how to assess the competition impacts of various rules and regulations. An important contribution of this document is that it utilises the framework and concepts used in competition law enforcement to assess the impact of rules and regulations on competition. Towards this end, the document:

1. Presents the key concepts used by competition authorities in their conduct of competition law enforcement. The concepts relate to market power, structure of markets, barriers-to-entry, entry and exit of firms, efficiency and innovation, and the behaviour of incumbent firms, among others. The primary objective here is to familiarise officials conducting competition assessments with the key concepts that can be used to evaluate the harm to competition that may be caused by various rules and regulations. This discussion appears in section 3;
2. Provides a compendium of the myriad rules and regulations with an impact on competition, such as those related to entry, advertising, grandfathering clauses, product content and quality, flow of goods and services, exclusive rights, among others. For each type of rule or regulation, this guidance document briefly discusses their justifications, highlights the potential competition issues they raise and presents selected examples from different countries. These details are presented in section 4;
3. Outlines a general framework as well as a step-by-step methodology the regulatory officials can follow to assess the impact of various rules and

2. Much earlier, Engman (1974) argued that U.S. federal transportation regulations by the Civil Aeronautics Board and the Interstate Commerce Commission lowered price competition, impeded entry and led to higher transportation costs which contributed to lower economic growth. MacAvoy wrote (1992, p. 1): "Not only is there concern that regulation is failing in the goal of protecting certain groups of consumers, there is also an impression that it may be a leading cause of reduced economic growth rates."

regulations on competition. The assessment of competitive effects are to be carried out in two steps, with the "initial assessment" stage conducting a simple review followed by a more detailed "full assessment" if significant competition concerns emerge during the initial assessment. These details are outlined in sections 5 and 6.

The next section briefly discusses the OECD's initiatives in regulatory reform and the role that competition assessments might play in improving the quality of regulations.

2. Competition Assessments

OECD's initiatives over the years have added rigor, structure and transparency to the process of regulatory reform and have been used to assess the benefits and costs of regulations, the distributive impacts of regulations, alternative approaches to attain the stated objectives and the disproportionate impacts on small businesses. Since regulations enacted by governments have diverse and important social and economic objectives, it goes without saying that any reform or assessment of regulations must contain a balanced evaluation of all the social and economic benefits and costs to reach a fair and objective judgement. Recently, an important initiative relates to the *competition assessments* of regulations where the specific aim is to examine the potential harm that might be caused to competition by some of the rules and regulations imposed by governments as well as various restrictions imposed by professional organizations.

The majority of the OECD governments have some form of competition assessments in the process of evaluating regulations (OECD, 2004) and this is consistent with the recommendations outlined in OECD's (2005) report on regulatory quality and performance that new and existing rules and regulations be reviewed to assess regulatory quality, the impact on competition and the openness of markets.[3] While there is general consensus

3. In June 2005, for example, the European Commission as part of its Better Regulation Agenda adopted revised *Impact Assessment Guidelines* covering all legislative and policy initiatives included in the E.C's Annual Work Programme. The Impact Assessment Guidelines recognise that *"vigorous competition in a supportive business environment is a key driver of productivity growth and competitiveness"*. Competition screening forms an integral part of impact assessment. In other examples, in 2005 the Mexican Federal Competition Commission (CFC) and Federal Commission on Regulatory Improvement (COFEMER) signed a collaboration agreement to foster the joint work between competition and regulatory improvement authorities. The agreement established an "early alert" mechanism to be

that competition assessments would improve regulatory quality and economic performance of nations, there is significant variation among countries in the approach they have followed. It is fair to say that the concepts, methods and framework that need to be utilized for conducting competition assessments have not been fully spelled out and analysed in detail, and the area of competition assessments of rules and regulations lacks a rigorous and transparent framework for implementation.

It is useful to briefly compare the standard Regulatory Impact Analysis (RIA) approach with the new initiatives on competition assessments. One can note two potential differences. First, the typical RIA analysis will have a more quantitative focus and evaluate the benefits and costs of regulations. Competition assessments on the other hand will generally be designed to provide more qualitative judgments about the likely adverse effects on competition. Second, RIA as typically conducted does not aim to study the behaviour of market participants and changes in them. Rules and regulations may alter the incentives for the market participants, and an important aspect of competition assessments will be to understand what impact regulations might have on the behaviour of market participants and the likely effects on competition. Overall, it is important to understand that competition and the benefits that may result from it are inherently dynamic in nature. Benefits related to greater efficiency and innovation, lower prices, and greater variety of goods and services are generally not attained instantaneously but become more transparent over time. In this sense, the objectives of the competition assessments, which are designed in part to evaluate changes in behaviour of market participants and forecast the longer-term benefits and costs, constitute an indispensable tool to the assessment of regulations. In this respect, the more traditional RIA evaluations and new initiative on competition assessments can be seen as complementary inputs into improving the quality and efficiency of regulations and, more generally, economic performance and welfare.

The role of competition assessments has been appropriately summarised in the "Guiding Legislative Principle" as expressed in the Australian Competition Principles Agreement. The guiding principle is that rules and regulations should not restrict competition unless it can be demonstrated that (Government of Australia, 1996):

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executed by COFEMER when the latter receives a draft regulation submitted for review, and the draft regulation has an effect on competition. Starting 2006 the CFC has the power of issuing binding opinions to the ministries and agencies of the federal government, with respect to their draft regulations, policies and programmes when they might have an adverse effect on competition.

1. The benefits of the restriction to the community as a whole outweigh the costs;
2. The objectives of the legislation can only be achieved by restricting competition.

The OECD report on "Guiding Principles on Regulatory Quality and Performance" (2005) suggests that new and existing rules and regulations should be reviewed for their effects on competition and that one needs to:

> "Design economic regulations in all sectors to stimulate competition and efficiency, and eliminate them except where clear evidence demonstrates that they are the best way to serve broad public interests … Periodically review those aspects of economic regulations that restrict entry, access, exit, pricing, output, normal commercial practices, and forms of business organisation to ensure that the benefits of the regulation outweigh the costs, and that alternative arrangements cannot equally meet the objectives of the regulation with less effect on competition."

While our discussion so far has focused on the need for reforming rules and regulations and making them more efficient and minimizing (or even eliminating) them where necessary, it is important to note that improving the quality and efficiency of regulations and conducting competition assessments should not always be interpreted as minimizing or eliminating regulations. As we discuss in section 4, dealing with issues such as switching costs imposed by formerly regulated incumbent firms – for example, in electricity, natural gas and telecommunications industries – may sometimes call for added vigilance and some new rules and guidance to market participants to minimize the harm caused to consumers and new entrants by the behaviour of incumbents. Another example can be provided from the areas of self-regulation (or co-regulation) where some governments have increasingly relied on market participants to collaborate and develop compatibility, quality and safety standards. Self-regulatory (and co-regulatory) mechanisms are intended to minimize and even eliminate the need for the more traditional (command-and-control) governmental regulations and clearly beneficial to both the governments and market participants in many respects. One aspect that has raised some concerns is that the self-regulatory mechanisms, which allow firms to collaborate in certain areas, may also lead to firms coordinating their activities and engaging in cartel-like behaviour (e.g., price-fixing) and creating barriers to entry for new firms. This concern calls for greater alertness on the part of the regulatory officials and governments and even the need for some carefully crafted checks and balances to minimize the potential adverse effects.

In summary, while there is clear recognition that regulations are designed to achieve important social and economic goals, competition assessments can be viewed as a valuable input into examining the potential harm to competition that may be caused by some of the rules and regulations legislated by governments and imposed by professional organizations. While achieving the desired social and economic policy goals, competition assessments should aim to rank the regulatory options under the principle of maximizing the benefits for competition. The assessments will aim to highlight alternative arrangements that can equally meet the broader social and economic objectives of the regulation with less harmful effects on competition. Given that estimating costs and benefits in a quantitative sense is particularly difficult in the competition area, this report is based on the assumption that the process of evaluation of rules and regulations includes a distinct competition test. In this sense, competition assessments and the RIA process can be viewed as complementary inputs into better decision-making by policy-makers and governments to improve economic well-being.

3. Concepts and Framework to Assess Competition in Markets

The central objective of this document is to provide a framework for assessing the impact of various rules and regulations imposed by governments and professional organizations on the extent of competition in markets. With an eye towards this objective, this section highlights some of the key concepts used by the competition law enforcement authorities to gauge the competitiveness of markets. Since competition policy and its enforcement have a well established tradition in many countries, the concepts used within this framework can offer valuable insights into assessing the effects of various rules and regulations on competition.

Competition policy is a process by which governments attempt to foster competition and create the right environment for competition by prohibiting, or putting restrictions on, certain types of business practices and transactions that unduly limit competition. Broadly speaking, the objectives of competition policy can be thought of as fostering competitive markets and promoting innovation, with implications for prices, welfare and economic growth. The types of conduct scrutinized by national competition authorities include, for example, attempts by businesses and professional organizations to erect barriers-to-entry into markets, raising the costs to the firm's rivals, and coordination (as opposed to competition) among competitors in their pricing and production strategies. Reduced competition resulting from certain types of business conduct going unchecked may lead to higher prices for consumers, loss of product variety and quality and lower innovation.

Why is awareness of the competition concepts and framework useful for understanding the impact of regulations? If we examine the history of rules and regulations enacted by governments and restrictions imposed by professional organizations, they often end up limiting entry into markets and creating a variety of distortions that lead to inefficient market results. Differing views exist regarding the reasons underlying this observation. One view is that the unanticipated impacts of rules and regulations are routinely large and would potentially see these anti-competitive impacts within this context. Another view is that demand for regulation often arises from existing producers within a particular market. From the perspective of these producers, regulatory controls that can reduce the ability of new entrants, or even existing rivals, to compete are of high value and will be pursued vigorously. In section 4 we provide details on the different types of rules and regulations and their likely impact on competition. While rules and regulations are initiated as a result of various social and economic objectives being pursued by governments, the downside is that they may:

- Impose barriers to competition such as restrictions on entry or the flow of goods and services across regions and states;
- Facilitate coordination of prices and production among competitors;
- Impose higher costs on entrants and small businesses as opposed to incumbents or larger firms;
- Partially or completely shelter firms from national competition laws.

Before we discuss the concepts, we comment on one type of business conduct deemed likely to be the most harmful to competition: the formation of *cartels*. Cartels, via their collusive or coordinated behavior, result in higher prices, lower quantities and potentially lower variety and innovation with a clear loss of welfare. Collusion is illegal in most countries today. Collusive behaviour poses interesting challenges in the context of competition assessment of regulations. For example, in some industries businesses collaborate on setting standards, compatibility rules and R&D. Professional organizations in the legal and medical professions govern codes of behaviour and quality of practice. And certain professions and producers of goods and services have historically been given the latitude to engage in self-regulation (or co-regulation) in areas such as product characteristics including quality and safety, coordination of technical standards, ethical standards of professional practice and pollution control. There are of course significant benefits to allowing certain types of cooperation as these potentially result in more efficient market outcomes and reduce the need for more formal regulation and the associated costs. However, a concern is that allowing various types of cooperation may create a fertile ground for

businesses to engage in collusive behavior related to their prices and production. In section 4 we highlight these issues in more detail along with some checks and balances that can be put in place to minimize adverse outcomes.

The remainder of this section discusses the key concepts that can be used for competition assessments. And, in sections 4 and 5, we use these concepts to gain a better understanding of the competition effects of rules and regulations.

3.1 Central concepts in assessing competition issues

3.1.1 Market power

Let us consider some possibilities regarding the extent of competition in a market.

- A market having a single firm – a monopoly – that faces no competition. There are many reasons why a monopoly may occur. For example, a pharmaceutical company could produce the only drug that treats a particular medical condition such as Genentech's new patented targeted therapy drug Avastin for treating lung cancer. Since the pharmaceutical monopolist's product has no effective substitutes, it faces little/no competition. Consequently it will be able to charge high prices and earn significant profits.
- A market may have a large number of firms selling a product. For example, the U.S. has over 15,000 tomato producers. In this market, the product of one farm is a relatively close substitute for another. Each tomato farmer faces significant competition, cannot charge high prices and earns relatively low profits.
- An intermediate market where there are a few sellers, such as the one for large commercial aircraft engines where General Electric, Pratt & Whitney and Rolls Royce are the competitors. This is neither a monopoly, like the pharmaceuticals case nor likely to be as competitive as the tomato case. In this intermediate case, General Electric, for example, has less pricing power and earns less profit than it would as a monopolist due to competition it faces from the other two companies. (In this example issues related to collusion in markets with a small number of firms are not discussed. The issues related to collusion are discussed later in the document.)

Across these three examples, the difference in the extent of competition determines how high the prices are (relative to costs) and how significant are the profits.

Broadly speaking, *market power* is defined as the ability of firms to charge prices above competitive levels and consequently earn significant profits (or above-normal economic profits). In the above examples, the pharmaceutical monopoly possesses significant market power whereas the typical tomato producer does not. The aircraft engine case falls between these two outcomes. Market power can arise due to a variety of reasons and last for a shorter or longer time period. The items below provide some insights. Finally, any assessment of market power will have to be made in the relevant market (for the product or services) under consideration.

Once the relevant (or the affected) market has been clearly defined, we can look at variables that describe the structure of this market. For example:

- *Number of firms:* In general, the larger the number of firms in the relevant market, the lower the concerns about market power.
- *Concentration of output:* This measures the extent to which production is concentrated in the hands of a few firms in the market. Higher concentration of output, in general, is expected to lead to greater likelihood of market power.

A small number of firms or higher concentration is not necessarily bad for competition – it depends on the magnitude of the barriers-to-entry (discussed below) and potentially on the type of competition that prevails (e.g., bidding markets versus regular markets).

3.1.2 Barriers-to-entry

Barriers-to-entry can broadly be defined as those factors that might hinder the entry of new firms into the relevant market. Evaluating the magnitude of barriers-to-entry is important as it provides us with a perspective of the extent of potential competition that the incumbent firm(s) might face. For example, if barriers-to-entry are high, incumbents can engage in anti-competitive behaviour, raise prices and enjoy elevated profits without fearing that new entry will erode their profits. To put it differently, lower entry-barriers give rise to greater potential competition and have a disciplining effect on incumbent firms in the market, restraining the exercise of market power.

In the context of competition assessment of rules and regulations, evaluating barriers-to-entry might be useful in the following sense. Suppose a regulation has the effect of reducing competition in a market. The totality

of the detrimental effects on competition will depend on the extent of barriers-to-entry. If they are high, then one might argue that the new regulation that imposes additional constraints on competition can cause significant harm to competition. If the barriers are rather low or negligible, then the harm to competition may be less material.

Barriers-to-entry can take myriad dimensions and we discuss them below. Here we do not discuss the pros and cons that may be associated with each barrier or which barrier may restrict competition more, but simply note the different types of barriers.

- *Natural barriers:* Barriers-to-entry could arise due to natural factors such as economies of scale arising from high fixed (or overhead) costs. For example:
  - Water treatment plants have high overhead costs. Given this, it is typically optimal to have a single water treatment plant in a given geographic area;
  - Due to high R&D and overhead costs, entry is difficult into the large commercial aircraft engine manufacturing industry.
- *Sunk cost related barriers:* Barriers-to-entry can occur in markets where the sunk costs of entry are high. Sunk costs are defined as the non-recoverable component of cost. That is, costs that a firm is unable to recover if it chooses to exit from a particular industry. Sunk costs essentially reflect the fact that certain productive inputs are highly specialized in nature and, as a consequence, have limited alternative uses. This component can arise due to low resale value of purchased capital, high advertising expenditures, high research and development expenditures, among others.4 Sunk costs could arise in the context of regulations and we look at some examples:
  - In the pharmaceuticals industry, firms have to conduct extensive clinical trials to demonstrate safety and effectiveness of the medication before they are allowed to introduce the product to the market. In the event the firm does not succeed in demonstrating safety and effectiveness, the drug is not

4. Sutton (1992, 1996) provides excellent discussion of various types of sunk costs. Many consumer products industries such as cosmetics, carbonated beverages, for example, have high advertising expenditures (relative to firms' sales). Industries such as biotechnology have inherently high R&D expenditures. These are examples of industries that have been argued to have high sunk costs.

approved. The costs incurred during the regulatory approvals process are sunk costs as they cannot be recovered;

- Due to environmental regulations, manufacturers of paints and dyes have had to alter the chemical composition of their products. New R&D expenditures had to be incurred to ensure safety of the new formulations as well as the new formulations meeting standards of colour, adhesiveness and viscosity. The R&D expenditures incurred would be sunk costs in the event the firm was unsuccessful and had to exit the market.

- *Barriers created by the conduct of incumbent firm(s):* Actions by incumbent firms in the market can have detrimental effects on competition. For example:
  - Companies in industries such as telecommunications, electricity and natural gas offer schemes where the customer is locked-in to the contract for a period of time and there are costs to changing suppliers. These are called switching costs. Since they raise the costs the customers have to bear while changing suppliers, they disadvantage competitors and new entrants.
  - Telecommunications companies in the U.S. have aggressively fought to restrict/deny access to their networks by competitors.
  - In the pharmaceuticals industry, companies often aggressively pursue patent "extensions" and embroil potential generic manufacturers in costly litigation in order to thwart entry.
  - When postal markets were being opened up for competition, incumbent Posts attempted to erect barriers for the emerging competitors by making agreements with foreign Posts to grant them preferential treatment in mail clearance, sorting and delivery at the expense of the private carriers.[5]

- *Regulation induced barriers:* Regulations by government and professional organizations may create barriers-to-entry. For example:
  - Laws in many countries impose restrictions on new entry into the retail sector, particularly the entry of large retail chains;

5. See Ghosal (2002) and the references there for discussion of issues in postal markets.

- Lengthy and costly bureaucratic procedures to start new businesses in many countries dampen entry;
- Grandfathering of landing or gate slots in airports favour incumbent airlines and create barriers for new start-up airlines;
- In many countries the practice of law or medicine in a state or region requires the lawyer or doctor to pass the local board's certification exams, creating barriers-to-entry of professionals into a given state and their mobility across states.

Overall, an evaluation of the extent of barriers-to-entry into the market will be a key component of the competition assessment of rules and regulations.

3.1.3 Entry of new firms

Entry by new firms has the ability to inject price competition into the market, stimulate innovation, provide gains in production efficiency, result in a broader variety of goods and services sold and improved product quality.

If entry by new businesses into the market is relatively easy, then incumbent firms are less likely to be able to exercise market power. If incumbent firms were to exercise market power, raise prices significantly and earn higher profits, then the new firms would be expected to enter the market quite quickly and erode the high profits being made by the incumbents.

The ease of entry into the relevant market is determined by the various types of barriers-to-entry described above. They include natural, regulatory, sunk cost related and those that are created by the behaviour of incumbent firms. Entry by new businesses is less likely when the barriers-to-entry are high. For example, entry is less likely in the:

- Pharmaceuticals production due to high sunk costs of R&D and regulatory approvals;
- Commercial aircraft engine manufacturing industry due to extremely high overhead and sunk costs and reputation effects;
- Internet services market if new entrants do not have access to the incumbent's network.

An additional issue relates to the timing of entry. The central concern is whether entry by new businesses can take place within a reasonable time frame. Entry within a short time period is unlikely:

- In the market for physicians due to the educational and certifications requirements;
- In the pharmaceuticals market for a particular diagnostic category as the R&D costs, time and regulatory hurdles are significant.

In contrast, entry within a short time-period is more likely:

- In the baking industry as the production technology is standard and overhead costs are relatively low;
- In the furniture industry as there are no regulatory hurdles and overhead and R&D costs are low.

Any assessment of competition effects must make a proper evaluation of the entry-barriers and the likelihood of entry by new businesses within a reasonable time frame. To consider some examples: (1) if new environmental regulations impose significant costs on business and are heavily grandfathered such that large incumbent firms benefit, this may have the highly undesirable effect of dampening new entry; and (2) in several countries, airline landing slot allocations are grandfathered. This is detrimental to entry as new start-up airlines find it difficult to compete with the incumbent carriers.

3.1.4 Exit of firms

If businesses exit, it may lead to increase in market power exercised by incumbent firms leading to higher prices. Businesses may be forced to exit due to a variety of circumstances. For example:

- Suppose, under a new regulation, incumbent firms have five-years to meet the new standards on environmental pollution. Companies that fail to make the costly investments would very likely have to exit;
- After the ruling by the U.S. Federal Communications Commission (August, 2005) that incumbents are not mandated to share the network with competitors, some internet service providers may be forced to exit due to lack of access to the network;
- If dominant incumbent firms in industries such as natural gas, electricity and telecommunications are allowed to impose significant switching costs it may lead to the exit of newly formed firms.
- Competition assessment of existing or new regulations and business conduct should examine the likelihood of foreclosure of businesses as it has consequences for the extent of future competition in the market, with implications for prices, product variety and other factors.

3.1.5 Innovation and Efficiencies

Innovation by businesses can provide a number of desirable outcomes such as:

- Increase in production efficiency due to process innovations that lead to decreases in firms' costs resulting in lower prices paid by consumers;
- Improvements in product quality;
- Wider product variety;
- Improvements in product safety.

Competition policy is very cognizant of the role played by innovation in preserving the dynamism of markets and strives not to hinder firms' innovative activities. Thus, this is an area of particular concern in relation to the potential anticompetitive impact of government regulation. In situations where the regulation is "prescriptive" in character (that is, it instructs firms on what they must do, rather than the result that they must achieve), there is a high probability that it will have a negative impact on innovation.

Generally speaking, if the particular business conduct enhances the likelihood of innovation and provides gains in efficiency, then these benefits are traded-off against any potential increase in market power. If the former outweigh the latter, the business conduct may be viewed favourably. We consider some examples of this recognition.

- Allowing research joint ventures between competitors. For example: the SEMATECH Consortia whose members include AMD, Freescale, Hewlett-Packard, IBM, Infineon, Intel, Panasonic, Philips, Samsung, Spansion, TSMC and Texas Instruments. The objective of this consortium is to advance semiconductor technology and the performance of integrated circuits. A fear that competition policy authorities have is that such collaboration has the potential to lead to information exchange and coordination of prices and production. But the understanding is that the expected gains to society from the resulting surge in innovation offsets the negative effects. Similar examples can be provided where companies are allowed to cooperate to set standards on product design and compatibility.
- Permitting businesses to undertake investments or initiate organizational changes or offer new products and services that would allow the companies to attain:

- *Economies of scale*: these arise when the overhead costs are high. Allowing for a greater scale of production leads to lower average costs per unit produced. For example, permitting larger retail stores may allow firms to reap economies of scale and have lower unit cost of providing services;
- *Economies of scope:* where it is less costly for one firm to produce the different products or services as compared to the products being produced by separate specialized firms. For example, from a cost-efficiency standpoint, it would be efficient to allow a grocery store to sell over-the-counter medication due to cost-savings that arise from common marketing, storage and supplier contracts as opposed to regulations forcing a separation between pharmacies and grocery stores.

Competition assessment of business conduct and regulation needs to carefully examine the effects on innovation as it has the ability to deliver significant benefits.

3.1.6 Raising rivals' costs

If a business can raise the costs faced by its rivals, it can reduce the amount of competition in the market and earn greater profits. Strategies to raise rivals' costs can take a variety of dimensions. For example:

- Incumbent telecommunications companies attempt to prevent rivals from gaining (easy) access to its network; this has implications for both internet services and telephone markets. Similar behaviour can be found in the electric industry where incumbents attempt to impose costs on competitors trying to gain access to the transmission network;
- Confronted with new environmental regulations, incumbent companies lobby hard to obtain grandfather clauses. These clauses allow the incumbent businesses to continue to operate under the older rules for a length of time while forcing any new business to meet the standards immediately. This can create significant cost asymmetries between incumbents and entrants with considerable harm to competition;
- A company can tailor its product or service such that consumers cannot easily switch to a rival's product. Such restrictive contracts, with lock-in periods, have been found in industries such as telecommunications, natural gas, electricity generation and banking.

- Pharmaceuticals companies can vigorously pursue patent extension applications and one of the objectives of this behaviour could be to impose additional (litigation and other) costs on rivals (generic manufacturers) to delay or thwart their entry.
- Since one of the objectives behind these types of behaviour by businesses is to make it difficult for rivals – a smaller incumbent or a potential entrant – to compete, leading to negative impact on markets and consumers, competition assessment needs to carefully sort through the alternative explanations for such behaviour and weed out the undesirable, anti-competitive aspects.

3.2 Summary and links to competition assessment of regulations

In assessing competition effects, the key issue that one has to grapple with is whether the particular business conduct can lead to a decrease in the extent of competition in the market (increase in market power), with implications for prices, efficiency and innovation. The above discussion provided a broad sense of the concepts and framework that competition policy uses to assess issues related to firms' behaviour, market power and innovation.

How is the above discussion and framework likely to be helpful in the competition assessment of regulations? While there are several benefits, we note two:

- A number of concepts outlined above – for example, related to the definition of markets, switching costs, barriers-to-entry, consideration of efficiencies and raising rivals' costs – will provide useful insights into understanding the adverse competition effects of the different types of regulation which we discuss in section 4;
- The competition assessment framework described above provides an outline which can be used to conduct a logical step-by-step assessment of the competition effects of regulations. The assessment steps are laid out in sections 5 and 6, and will seek to identify the likely impact in the affected market(s), and the types of businesses who might be affected.

4. Regulatory Interventions

There are alternative explanations for why governments intervene in markets. One rationalization is that there are market failures in many

industries and various rules and regulations are designed to remedy these.[6] As noted by MacAvoy (1992), regulation has typically been founded on the best of economic and social intentions with controls on profits and prices designed to protect consumers from monopoly power, and workplace safety codes and emissions legislation instituted for the protection of health and individuals living near the facilities. We take a quick look at some of the areas of regulations.

- Natural monopoly may arise in industries such as electricity, water, railroads, telecommunications, postal services, among others, which have typically been characterized by large economies of scale due to high overhead costs. This implied that it was often optimal to have local or regional monopolies (for example, in water and electricity) and even national monopolies (for example, telecommunications, railroads and postal service). If the monopolists were allowed to set the prices for their products, they would be unduly high. A solution was to allow the monopolist to operate in the market but regulate prices in order to guarantee fair prices to consumers. Apart from economies of scale, universal service provision was another argument for legal monopolies in these industries. As market conditions, technology and other factors changed, some of these industries have been deregulated in many countries. More sophisticated regulatory design has also allowed the separation of competitive and natural monopoly segments of particular industries, allowing competition to be introduced into areas such as telecommunications and railroads in place of the former regulated (or government owned) and vertically integrated monopolies.

- Industries such as electricity, chemicals, pulp and paper, petroleum refining, among others, can generate significant amounts of environmental pollution as part of their normal production process. Left unchecked, many industries would generate pollution above socially optimal levels which the polluters would have little incentive to clean up due to the high costs involved. Governments have intervened to control the negative externalities generated by pollution. Specific instruments have included taxes and quotas along

6. Viscusi, Harrington and Vernon (2005) and MacAvoy (1992) provide useful discussion of the motivations and different facets of regulations. A large and influential literature discusses the "capture theory" of regulation where lobbying and pressures from interest groups has led to various regulations. But we do not go into details of this line of reasoning in this document.

with offering investment credits for companies to make new less-polluting capital investments.

- In industries such as pharmaceuticals, governments have instituted regulatory approvals and oversight mechanisms for the approval of new drugs as well as monitoring potential negative effects of existing drugs. As noted in the OECD (2001) report, controlling the safety and quality of drugs is a predominant concern.
- Regulations are found in areas of industrial (workplace) safety. One motivation behind these regulations is the broader societal goal of reducing the risk of death. In similar vein, automobile safety regulations are designed to reduce death and serious injury during accidents.
- Several aspects of the banking industry and financial markets have been and are regulated. Among the key objectives are to ensure the stability of financial markets and protection of consumers' investments and finances.

Broadly speaking, regulation typically consists of a set of rules administered by the government to influence the behaviour of businesses and, consequently, economic activity. This document will focus on some of the instruments of regulation including:

- *Entry*: Many countries, for example, set limits on the number of pharmacies and retail store outlets within a geographic area. Regulations on the number of taxicabs in cities are common. In industries such as electricity, telecommunications and banks, among others, regulation prevented new firms from entering markets. Professions such as doctors, lawyers, architects, among others, have myriad rules and restrictions that often prevent, or greatly hinder, the flow of professionals from one region to another.
- *Quantity*: Examples include quantity regulations on the amount of fishing in many countries, prohibition on the sale of liquor on Sundays, regulations on the extent of (commercial) construction in specific areas, among others. Quantity regulations can take other forms such as universal service obligations for postal services where the Post has to meet all demand at the regulated price. Finally, there are examples from agriculture related to quotas on production and the acreage planted.[7]

7. Glaeser and Schleifer (2001) present an insightful discussion of quantity regulations.

- *Standards*: Governments in many countries set standards on the safety of medical instruments and pharmaceuticals, building codes, health and occupational safety, automobile safety, environment and labour. Regulations also exist in other areas such as on content related to material and language on different types of media such as radio and television.
- *Price*: Industries such as electricity, natural gas, airlines, telecommunications and postal services, among others, have been subjected to price regulation.

While we noted earlier that there have been myriad social and economic justifications for regulations, it is important to recognize that various rules and regulations enacted by governments and restrictions imposed by professional organizations often have the potential to hinder competition in markets. We consider a few examples. Successful lobbying by large incumbent firms and industry organizations to significantly grandfather environmental and other types of regulation; this may place new entrants at a cost disadvantage compared to the incumbent firms, potentially affecting entry and competitiveness of markets. Stringent regulations on the number of retail stores and pharmacies, for example, have the potential to limit competition, raise prices and reduce variety and quality of services offered. Setting of "unduly high" minimum quality standards may deprive consumers of greater variety and lower prices. Restrictions on advertising imposed by professional organizations – such as legal, medical and veterinarian – are very likely to have detrimental effects on competition and the variety of services provided. Finally, rules and regulations on the flow of goods and services across regions within a country are often without sound justification; these restrictions create geographic separation of markets potentially resulting in higher prices.

To develop a full understanding of the potential consequences of different types of rules and regulations on competition, the remainder of this section is devoted to the discussion of the various rules and regulations grouped under three broad categories:

- Rules and regulations that limit the number or range of suppliers
- Rules and regulations that limit the ability of suppliers to compete
- Rules and regulations that reduce the incentives of suppliers to compete

Under each of the above three categories, we note the motivation behind the rules and regulations, highlight the potential competition concerns that may result from them and present selected examples from various markets and industries in different countries.[8]

There is one mechanism that deserves commenting on up-front and it relates to the broad area of self-regulation and co-regulation. As we note in section 4.3.1, some professions and producers of goods and services are given the leeway to engage in self-regulation or co-regulation. These mechanisms have a number of potential advantages such as better coordination by market participants in setting standards related to product compatibility, quality and safety, among others. By imposing less direct and burdensome governmental rules on businesses, they allow markets to flourish. An important concern, however, is that the enhanced scope for coordination among firms may also provide a ripe setting for implementing collusive strategies in prices and quantities and even setting of standards that may impose barriers to entry. If left unchecked, these may result in considerable loss of consumer welfare and innovation in the markets. While we formally discuss self-regulation and co-regulation under category #3 above ("Rules and regulations that reduce the incentives of suppliers to compete"), given the somewhat wide range of areas of concern under this mechanism, it also has implications under the first two categories noted above. As an example, consider a situation where an industry group that is allowed self-regulation decides to erect barriers to entry to protect profit-margins of the incumbent group (see item C.2 in Box 6). Arguably, some of these concerns to competition could also be discussed under the categories #1 and/or #2 above. In short, the competition concerns that may arise in the areas of self-regulation and co-regulation extend to nearly all of the three broad categories above.

Finally, it is important to note that the examples in the information boxes are meant to indicate areas where a closer look and review of competition issues would be/have been worthwhile, and not necessarily where the government action taken was inappropriate.

8. As we will see in section 6 of this document ("Stages of Evaluation"), the above three categories form the key elements of the "Competition Assessment Checklist."

4.1 Rules and regulations that limit the number or range of suppliers

A number of rules and regulations can have the effect of limiting the actual number or the type of suppliers of goods and services in the marketplace. This is likely to be the case if the proposal:

- Significantly raises cost of entry or exit by a supplier;
- Grants exclusive rights for a company to supply a product or service;
- Establishes a license, permit or authorisation process as a requirement of operation;
- Limits the ability of some types of firms to participate in public procurement;
- Creates a geographic barrier to the ability of companies to supply goods or services, invest capital or supply labour.

Historically, policy-makers have often had sound economic and social reasons for imposing constraints on the number and type of firms. The concern, however, is that such regulations can end up having detrimental effects on the level of competition in the market with potentially adverse effects on consumer welfare. Therefore, in circumstances where the number or range/type of suppliers might be affected, it would be valuable to conduct a thorough investigation of the benefits and costs of the proposed regulation and potential loss of competition. Below we highlight two broad areas where competition effects would need to be carefully evaluated.

4.1.1 Regulations on entry

Entry by new businesses plays a crucial role in preserving the vitality of markets by offering competition to the incumbent firms and fostering innovation and growth in the longer-run. Therefore, it is important to recognize that rules and regulations that restrict entry are very likely to have a significant negative impact on competition and welfare, and they need to be carefully evaluated and justified.

Regulations on entry can take myriad forms and the justifications are diverse. For example, in a natural monopoly setting, the government grants a legal monopoly and explicitly restricts entry. The motivations include high overhead costs and economies of scale in production. Professional organizations, such as legal and medical, may originally have had good reasons for establishing rules that limited entry, but such restrictions can unnecessarily place constraints on competitive commercial behaviour. The

justifications typically include ensuring quality standards in professional practice. Regulations on the entry and growth of retail businesses are common in many countries. Justifications include controlling urban congestion, protection of private property values, among others.

To get a thorough understanding about the effects on entry, it is important to get a clear picture of the different types of new entrants. A useful classification for entrants in the manufacturing sector is provided by Dunne, Roberts and Samuelson (1988, p.504) and we adapt their framework for a general discussion. One can think of three broad types of entrants.

1. New firm entering by constructing a new plant (production facility) in the manufacturing sector. Similarly, in the services sector. For example, a new machine tools company started by entrepreneurs with no prior business experience. The information technology revolution and the more recent surges in biotechnology and nanotechnology have seen many firms enter these industries with no prior business experience in these or other industries. A new legal practice set up by fresh graduates would also fall under this category.
2. Diversifying businesses entering by the construction of new facilities. For example, a large multi-product company like Siemens could enter a new line of medical instruments by setting up new production facilities. A hospital could open a new facility for the treatment of cancer. A chemicals company starts new production facility for the manufacture of lysine.
3. Diversifying businesses entering through changes in the mix of outputs they produce in their existing plants. For example, an automobile company that historically made mid-to-large sized cars diversifies into making small fuel-efficient cars within the same flexible production facility. A steel company that produced machinable steels and micro-alloyed steels diversifies into making bearing and gear steels. A software company that focused on network security software diversifies into internet games.

The differences between the various types of entrants noted above can be significant in several dimensions. For example:

- *Financing constraints.* There is a large literature that provides evidence that firms' ability to enter and grow is, in an important way, dependent on their ability to attract external financing for their projects; see Fazzari, Hubbard and Petersen (1988) and the ensuing literature. This is less likely to be a problem for entrant types 2 and 3 above, but can be an important constraint for entrant type 1. One of the reasons is that banks, for example, typically need some form

of collateral and past history to make loans and the type 1 entrants are typically disadvantaged in this dimension. In contrast, entrant types 2 and 3 can more easily obtain external financing from banks as well as raise equity capital. Thus, financing constraints can make it more difficult for type 1 entrants to be successful.

- *Learning.* Prior business experience in general allows entrepreneurs to learn from past experiences, knowledge of markets, regulatory hurdles, among other factors. Entrant types 2 and 3 are likely to have an advantage in this dimension.

The data presented in Dunne, Samuelson and Roberts reveal interesting differences across the various types of entrants. The failure (or exit) rates are generally quite high and:

- More than 60% of the entrants in one cohort typically fail and exit an industry within five years;
- Entrant type 1 (new firms with new plant) have exit rates that are 7-8 times higher than entrant type 2 (diversifying firm with new plant).

As described in Caves (1998) and Sutton (1997), these broad findings are quite general and have been replicated by researchers using data from different industries in different countries. One way to look at these findings is that type 1 entrants face disproportionately high hurdles and costs in order to succeed. A clear implication of this would be that regulations that impose barriers-to-entry are likely to have a significantly greater adverse effect on type 1 entrants.

A wide variety of rules and regulations put in place by governments and professional organizations place constraints on entry into markets. Regulations can take very explicit forms such as outright restrictions on entry, but can also be implicit in nature.

- Explicit constraints are very direct and arguably have the most adverse effects on competition. For example:
  - Many countries impose rules on the number of retail stores that can be allowed within a certain geographic area or per a certain number of individuals living in an area. Under the latter rule, if the number of people never exceeds, for example 5,000, no new pharmacies will be allowed. (The OFT 2003 document contains a useful discussion of competition and regulatory issues in pharmacy markets.)

  - Under the older U.S.-E.U. airline agreement, a European airline could not offer flights to the U.S. departing from any city outside of their home country. This restricted the degree of competition in the U.S.-E.U. airline markets. (The new agreement signed recently removes many of the regulations.)

- Implicit constraints can be thought of as those that more indirectly place constraints on entry. For example:
  - In the deregulated telecommunications markets, facilitating competition would require rules forcing the incumbent to share its network with new entrants. Without this, entrants cannot provide (adequate) services (in internet, telephone) and compete. Similar issues arise in electricity markets where it is imperative that entrants be allowed access to the incumbent's transmission network to have meaningful competition. Not mandating sharing, however, does not necessarily imply that the incumbent will not allow access to it's network, but it does become a more uncertain business prospect for the entrant/potential rival;
  - Quality standards, certification rules, among others, adopted by professional organizations – such as legal, accounting or medical – can impose significant constraints on entry.
  - Considerable administrative and bureaucratic barriers that can delay or thwart entry (Djankov, La Porta, Lopez-de-Silanes and Schleifer, 2002).

Box 1 provides selected examples of rules and regulations where a closer look could be taken regarding the competition issues that may arise with consequences for consumer welfare.

Box 1. **Entry**

1. The amount of time and money required to clear bureaucratic hurdles to start a new business can vary enormously across countries. According to the data presented in Djankov, La Porta, Lopez-de-Silanes and Schleifer (2002), the time required to start a business varies from a low of 2-months for Canada to a high of 174-months for Mozambique. The monetary cost as a percentage of (the 1997) GDP per capita ranges from a low of 0.42% for New Zealand to a high of about 100% for Nigeria, Senegal and Burkina Faso. Even among developed countries there are huge differences in the time required (and cost): for example, it is 7 months (and 1% of GDP per capita) for the U.S., 90-months (and 8.5%) for Germany and 3-months (and 2%) for Australia. The dramatic variation in the time required to get clearance and the associated costs show that there are likely to be significant differences in the barriers to new entry. Administrative reform of entry procedures seems imperative in order to reduce barriers to new entry and promote growth and innovation.

2. In some countries there are regulations imposed on pharmacies and these can take various forms.

- Rules limiting the number of pharmacies that can operate within a pre-specified geographic area or per number of inhabitants. For example, in Hungary the threshold is about 5,000 inhabitants.
- State control as in Sweden where since 1970 distribution has been controlled via Apotekets. Opening a private pharmacy can constitute a criminal violations as evidenced in the prosecution of the Swedish company Bringwell International who marketed Nicorette products.
- Direct entry regulations as noted in UK's Office of Fair Trading (2003) report. Entry regulations for pharmacies were introduced in England and Wales, Scotland and Northern Ireland in 1987 in order to contain the escalating cost to the National Health Service. The regulations include official evaluation of the desirability of new pharmacies, relocations and change of ownership.

While one of the justifications for the regulations on pharmacy locations is universal service provision, the restrictions may impede competition. Even in cases where prices of pharmaceuticals are regulated, these restrictions may affect competition in the sense that variety and quality of service may be affected. In Germany where many restrictions have been lifted, studies have noted the greater competition in the variety of services rendered. As the OFT (2003) report concludes, removing restrictions on entry to the community pharmacy market would give consumers greater choice, benefits from greater competition and better access to pharmacy services.

3. Australia's 1998 digital conversion legislation barred entry of new commercial broadcasters till 2006. The move was targeted to facilitate the incumbent commercial stations' conversion from analog to digital television transmission. This type of regulation places new entrants at a disadvantage who, even when they are allowed to enter later, have to buy their spectrum in auctions.

4. The liberal professions, such as lawyers, accountants, architects, engineers and pharmacists, across the E.U. are subject to regulations such as fee scales, advertising restrictions, exclusive rights and rules prohibiting inter-professional co-operation. While the professional organizations justify the restrictions on grounds of ensuring quality of professional services and standards, it is important to note that they may restrict competition leading to potentially higher prices and lower variety of services offered.

5. The U.S. General Accounting Office Report (2004) describes how under the new Open Skies agreement there will be little/no restrictions on the number of airlines that may operate and no restrictions on what markets airlines may serve. The older agreement had restrictions on the number of E.U.-U.S. flights and origin and destination. For example, Air France could offer flights from France to the U.S. but not say from Frankfurt to the U.S. Similarly for the U.S. airlines. The new Open Skies agreement is designed to reduce these barriers-to-entry.

6. As Terzic, Wurm and Dietrich (2000) note, Germany's 1998 energy law removed the exclusive franchises for electricity and natural gas that restricted entry. The new law opened the retail market for both types of energy to competition. German electricity consumers, who once paid the highest prices in Europe, have seen an increase in competition, better services offered and a decrease in prices.

7. Laws that affect entry potentially leading to loss of competition with implications for innovation and growth of the retail business sector are ubiquitous in many countries. For example:

- Bertrand and Kramarz (2002) show that regulations on the creation and extension of large retail stores have resulted in barriers-to-entry which have affected growth of the French retail sector and resulted in lower employment gains.
- Across many countries in Europe – Italy, Spain, Netherlands and France, among others – there are limits on retail store operating hours. Tax and planning laws are designed to protect small family-run corner shops. While smaller stores offer proximity services, these rules prevent retailers (big and small) from providing the better service and higher employment that would result from remaining open longer. The OECD (1997) report discusses competition problems created by such regulations.

- Countries such as Japan, where similar regulations have been relaxed, have seen significant growth of this sector. The Large-Scale Retail Store Law was passed in Japan in 1974 to protect small independent retailers. The restrictions were relaxed in three revisions that took place during the 1990s. The number of applications for opening large stores jumped from 794 in 1989 to 1 667 in 1990, and peaked at 2 269 in 1996.

While there are several public interest justifications for regulations in the retail sector such as those related to protection of small businesses, these regulations should be evaluated for their likely harm to competition and economic growth.

8. In August 2005, the U.S. Federal Communications Commission (FCC) voted to end regulations requiring incumbent telecommunications carriers, like the regional Bell companies, to share their Digital Subscriber Line broadband connections with competitors. This new FCC ruling puts DSL regulation on an equal footing with cable modem service. The FCC justified the change of rules by arguing that the rules forcing incumbents to share their networks with competitors discouraged them from investing in new products and offering new services. Consumer groups on the other hand argued that the market would see less competition and that DSL customers could have fewer choices, deterioration of service and higher prices.

While in many instances the original public interest justification for the rules and regulations were reasonable, it is important to keep in mind that they can have negative effects on consumer welfare and may retard longer-run growth and development of markets. Restrictions on entry, particularly those based on regulating the market structure, should be avoided. But regulations such as those based on land use regulations may, under certain circumstances, be deemed to be reasonable. In the case of natural monopolies and where there are universal service considerations, for example, exclusive rights should preferably not be part of the agreement. In the event they are included in the agreement, they should be subject to review and modification as circumstances and market conditions change. In circumstances where countries impose constraints on entry justified on stability considerations – such as in financial markets and banking – it should be clear and transparent what is done and the principle of minimum restrictions needs to be applied. Given the potential for significant negative effects, regulators need to scrutinize any rule or regulation that results in explicit or implicit constraints on entry.

4.1.2 Granting or extending exclusive rights

Exclusive rights to ideas, production of goods and provision of services are granted by governments to business in a large number of areas. For example:

- In the markets for solid waste disposal, a common mechanism for waste collection in local markets is by a private firm which has been granted exclusive rights to collect the waste;
- Historically, electricity, natural gas, telecommunications, water, postal services and railroads, for example, were granted legal monopoly status – or exclusive rights – to provide the services;
- In a wide variety of markets and across countries, local, regional or national government agencies can sign contracts that provide exclusive rights to private companies for the provision of specific goods and services. These can arise in defence contracts, supply of inputs, among others.

The motivations for granting or extending exclusive rights are myriad. In some industries, one of the reasons for granting legal monopoly (or exclusive rights) relates to economies of scale arising from high overhead costs. Over time as the markets and technology have evolved, many countries have deregulated the sectors, privatized nationally-owned companies and have allowed competition. Also, more sophisticated regulatory approaches have allowed the identification of specific elements of industries that are characterised by natural monopoly and their separation from other elements (both upstream and downstream) that are potentially competitive. Recipients of exclusive rights for the production of goods and services obtain significant market power. In the case of natural monopolies, the problem was alleviated by price or rate-of-return regulation in the utilities industries.

There are clear justifications for granting patents, but one topic that has generated considerable debate and concern in recent years relates to the "extension" of patent periods. Pharmaceuticals companies, for example, have aggressively attempted to extend patent periods. Extending patent protection periods can have significant downsides:

- It extends the period over which consumers will pay higher prices;
- Patent holders by aggressively fighting for extensions can impose heavy costs (e.g., litigation) on potential entrants – such as generic drug manufacturers – and this may significantly reduce the likelihood of future entry into the markets. The longer-term adverse effects on competition can be significant.

While granting legal monopolies had valid justification, the literature on the effects of regulation shows that there were significant deficiencies related to the lack of innovation, production inefficiency and adoption of newer technologies which harmed long-run growth of these industries. In other instances where governments grant exclusive rights, the pros and cons are mixed and are best evaluated on a case-by-case basis. In the solid waste disposal example noted above, governments are increasingly realizing that they can allow competition into these markets with beneficial effects; see OECD (2000) report on the Finnish experiments. In many instances, government granted exclusive rights can be done away with while maintaining a careful watch over these markets.

Box 2 contains examples and discussion of exclusive rights and some of the adverse effects that may arise from them.

Box 2. **Granting or extending exclusive rights**

1. In Western Australia, the Rights in Water and Irrigation (Construction and Alteration of Wells) Regulations (1963) granted the Waters and Rivers Commission sole rights to fit, repair and test water meters. In 2000, the government amended the regulations to remove the Water and Rivers Commission's exclusive right to the fitting, repair and testing of water meters noting that it was harming competition.

2. An industry with a significant number of applications for "extensions" of patent periods is pharmaceuticals. Extension of patent protection can, in many cases, have detrimental impact on competition.

- Prozac (an anti-depressant) was patented in 1977 and launched in 1987. It is one of the highest selling drugs in history. Eli Lilly fought a five-year battle in court to extend their patent on Prozac and lost. Barr Laboratories, who opposed the extension, along with Dr. Reddy's Laboratories, Teva Pharmaceuticals, Geneva Pharmaceuticals and Pharmaceutical Resources could produce a generic version for a fraction of the original cost. It was estimated that once the generics came to the market, the price for the 20mg capsule would drop from over $2.00 (Eli Lilly's brand-name version) to below $0.50 a pill for the generics.
- Patent extension applications are commonplace. For example, 20 new applications for patent extensions were filed in Japan, of which 16 were pharmaceutically based. A five year extension was obtained by Merck Sharp & Dohme for their Maxalt tablets used in treating migraine (the patent will now expire in January 2017). Source: The Japanese Patent Gazette, May 25, 2005.

3. In Brazil, a patented invention must be manufactured within Brazil in order for the patentee to retain the exclusive rights associated with a Brazilian patent. In some sectors such as pharmaceuticals and biotechnology, the manufacturing facilities are costly investments and it seems unrealistic to expect a company to build a factory in every country. This may have detrimental effects on competition in various sectors.

4. In the 1997 Ferrovias case, a Colombian state company (Ferrovias) entered into an exclusive contract with a company (Drummond) to transport coal yearly for 30 years. The contract also conditioned the transport of other firms' coal upon Drummond's prior approval. The Columbian superintendency later scrutinized the conduct and found the contract to be discriminatory and restrictive of competition. This example from competition law enforcement provides evidence of the harmful effects of granting exclusive contracts.

5. Governments may sometimes end state-owned monopolies but create private ones. Attracting high bids for state assets are sometimes a key element in the decision. An important issue here is the enduring tension between the government's desire to maximize the price at which they can sell state-owned assets and the need to ensure economically efficient outcomes in the industry of which those assets form a major part. In Jamaica, for example, the telecommunications company was privatized with granting of exclusive rights for a period of 25 years.

6. As noted in Goodwin (2001), in a case that was reviewed by the European Court of Justice in 2000, the municipality of Copenhagen's regulations had granted exclusive rights to limit the number of plants which could process non-hazardous building waste produced within the municipality. By ensuring a supply of waste to a limited number of plants, the regulations sought to encourage investment in the building of large scale processing plants producing better quality re-cycled material. Despite being equipped to perform this function, the regulations prevented a Copenhagen recycling plant from processing building waste.

There is increasing evidence that, in certain areas, granting or extending exclusive rights does not necessarily improve welfare. For example, given the burgeoning generic sector of the pharmaceuticals industry, a very close look needs to be taken on patent extensions. Undoubtedly, there are instances where extensions ought to be granted, such as when the regulatory approvals process gets drawn out over a longer period and effectively shortens the patent period. In some instances, patent holders may aggressively pursue extensions and impose high costs on rival generic manufacturers. Some incumbents have deep pockets and may engage in long drawn out litigation, whereas rivals may not necessarily be in a position to

do so. In these instances granting extensions are likely to deny consumers access to cheaper general drugs with considerable loss of welfare. In other areas such as waste collection, the few experiments that exist on allowing more competition in the markets shows noticeable gains in the areas of quality of services provided and price. Overall, granting or extending exclusive rights needs to be scrutinised carefully as they have the potential to significantly diminish competition.

4.1.3 Rules and regulations on the inter-state (or intra-national) flow of goods, services and capital

Within-country regulations on the flow of goods and services have been a common feature in many countries. Historically, tolls were imposed on the movement of goods across different regions and states. While many of these restrictions have been removed over time, there continue to be instances where they persist. The arguments made to impose such regulations are diverse and include:

- Protecting the in-state or in-region businesses from competition;
- Since roads in a region or state are typically the responsibility of the local government, regulations and taxes were imposed on the weight of the goods and the size of the trucks from other regions and states that could move through that region or state;
- Consumer protection. For example, by passing legislation preventing the sale of out-of-state/region alcohol in a particular State or transport of alcohol through or into that state.

Regulations can take very explicit forms such as outright bans on purchasing goods and services from outside the State or region. For example:

- The state of Florida in the U.S. has had restrictions on interstate wine shipments. For example, an individual cannot purchase wine in another state and have it shipped to his home or be part of wine clubs in other states and have wine delivered to his home. These are considered felonies under Florida law. Giachino (2000) suggests that regulations like these are often imposed to grant special privileges and protection to in-state retailers and distributors.

Regulations can take other forms such as impediments to the flow of goods including taxes imposed on inter-regional trade. For example:

- Goodpaster and Ray (2000) note that Indonesia had many regulations and taxes on inter-regional transportation of agricultural

commodities. Law 18 (1997) reduced the distortions and this lead to increase in inter-regional trade. However, the study notes that many of the restrictions implicit or explicitly returned in areas such as the South Sulawesi region. These include restrictions imposed by the local department of transportation on the weight of goods carried by trucks. A by-product of these regulations included harassment by local authorities to extract payments from truck drivers. The end result of these barriers to the flow of commodities has been lower prices obtained by farmers and hindering growth and development of local and regional markets.

Box 3 presents some examples of the different types of impediments to competition that can be generated by regulations on the flow of goods and services.

Box 3. **Flow of goods, services and capital**

1. The Jones Act in the U.S. imposes restrictions on ships carrying freight between two U.S. ports. The state of Maine legislature requested Congress to repeal this regulation as they are a serious impediment to commerce and Maine fully developing business for its ports. They argued that in an increasingly global market, restrictions on the nationality of the builders and owners of a ship no longer make sense.

2. In the past, India had imposed regulations on movement of agricultural foodgrains across different states. Government authorities restricted interstate movement through notified orders, imposing constraints on the free flows of goods. While in 1993 the central government decided to treat the entire country as a single food zone to ease the flow of agricultural products, Wadhwa (2001) notes that some states continued to impose at least informal controls that can hamper unfettered movement of agricultural goods between states.

- A common practice followed by the local officials at State borders is, to stop and check trucks carrying goods. Though on the excuse of a routine check, trucks can be held up for days on end. This imposes a heavy price on private traders. In surplus wheat-growing areas of Punjab, Haryana and Western Uttar Pradesh, informal restrictions have been imposed such that farmers lose the right to sell their produce to anyone offering better prices – making the government regulation akin to extortion.

3. In most countries, a substantial fraction of goods are transported via trucks. In many instances, restrictions are imposed on the operations of trucks. The justifications are diverse and include, urban congestion, pollution control, among others. While some of the justifications and constraints imposed appear meaningful, it is important to recognize that restrictions on the operations of trucks can lead to reduced flow of goods, separation of markets and harm competition. We provide a couple of examples:

- Highway A12 is a major commercial traffic route between Germany and Italy. The Tyrol region initiated a ban on heavy trucks for environmental reasons (improving air quality). The ECJ (case C-320/03) ruled that banning heavy trucks on such a critical thoroughfare constitutes an illegal restriction on the free movement of goods.
- Earlier, the E.U. member states had divergent driving restrictions for heavy trucks during weekends and holidays. The International Road Transport Union, for example, had argued that these divergent restrictions had significant consequences for commerce within a member state as well as E.U. as a whole and called for harmonization of rules.

4. In many countries there are (or have been) barriers to the movement of professional qualifications thus imposing constraints on the professional services market. While member E.U. states previously had fragmented rules, a new E.U. directive under the "the principle of mutual recognition" pushes for recognition of qualifications across member states. Easing of these restrictions will allow for greater flow of professional services with benefits to consumers in terms of a broader variety of services offered and potentially lower prices. In the U.S., different States require certification tests, for example, for lawyers and doctors. This imposes constraints on the flow of medical and legal professionals across States and potentially harms competition.

It is important to recognize that free flow of goods, services and capital across regions within a country are essential for consumers to reap the benefits of competition and businesses to have access to wider markets to sell in and grow. These benefits can be lost if regions or States within countries impose regulations on the flow of goods and services. This implies that proposed rules and regulations that restrict the flow of goods and services should be carefully scrutinized and their expected benefits and costs and competition effects evaluated. As a general principle, such restrictions should be eliminated.

4.2 Rules and regulations that limit the ability of suppliers to compete

Governments and professional organizations can impose rules and regulations that may sometimes have the effect of reducing the intensity of rivalry among businesses in the market, potentially increase prices and lead to reduced variety and quality of goods and services. Some examples include proposals that:

- Limit freedom of businesses to advertise or market their products;
- Set "unduly high" standards for product or service quality that end-up providing an advantage to some suppliers over others or that are above the level that many well-informed customers would choose given their preferences and ability-to-buy;
- Significantly raises costs of some suppliers relative to others, for example by treating incumbents differently than new entrants;
- Control or substantially influence the prices at which goods or services are sold.

As we note below in our more specific examples and discussions, the motivations behind these regulations typically have some beneficial economic and/or social underpinnings. Our objective here is not to question these motivations but to undertake a thorough examination of the potential adverse impact these regulations might have on the degree of competition in the markets and to examine whether the restrictions could be crafted in different ways in order to minimize the loss of consumer welfare that may result from higher prices and reduced variety and quality.

4.2.1 Regulations on advertising and marketing

Advertising by firms can disseminate information about product characteristics, quality and prices for existing products, improvements in existing products and introduction of new products. In general, advertising can serve a very important role by informing consumers so that they can make better, more informed, choices. Advertisements are placed by companies in different media which include television, radio, newspaper and magazines, and, increasingly, the internet. Other forms include, for example, window advertising in retail locations, professional panels on a place of business and distribution of flyers (or pamphlets). Finally, there is a more recent trend towards direct-to-consumer advertising (or marketing) where companies use telephone calls, emails and faxes to distribute information.

Advertising can be classified into two broad types, comparative and non-comparative.

- *Comparative advertising* has the objective of extolling the virtues of the product sold by the advertiser compared to its competitor(s). Comparisons can be very specific, highlighting, for example, technical differences. Or they could be general and more subjective in nature. Comparative advertising can also provide price comparisons between the advertiser's product and its competitors. A car manufacturer can, for example, advertise and make statements about how their cars are safer relative to their competitors and cite scientific crash test studies. A carbonated drink producer could advertise that their drink tastes better than a competitor's based on surveys of consumers.

- *Non-comparative advertising* aims to highlight features of the advertiser's own product. These could include quality, product characteristics and prices. No comparisons are provided with competitors' products. A car manufacturer, for example, can advertise and simply extol the virtues of their own cars or indicate the prices of their models.

Many countries impose regulations on advertising and marketing of various goods and services. These restrictions can take a number of forms and there are significant variations across countries and across products within countries. Box 3 provides illustrative examples of restrictions on advertising and marketing and below we provide additional discussion of some issues.

- *Comparative advertising:* Several countries impose restrictions on comparative advertising – whether they are about product characteristics or prices – in the sense that they are allowed, provided the claims are validated by an independent authority. One important issue with comparative advertising relates to the validity of claims and promises made. An individual consumer, for example, may have little information or ability to verify whether the claims made are accurate. In this sense there needs to be an agency that can address consumer complaints, and many countries in fact have laws on misleading and untruthful advertising. Looking at the bigger picture, unwarranted restrictions on comparative advertising are likely to deprive consumers of useful information about the differences in product quality, attributes and prices across alternative suppliers.

- *Non-comparative advertising:* Some countries, for example, do not allow pharmaceutical companies to advertise their products. Similarly for advertising of alcohol related products and tobacco. There are/have been stringent restrictions to outright bans on advertising by various professions such as architects, lawyers, veterinarians and doctors. For pharmaceuticals, one of the justifications given for the restrictions is that allowing pharmaceutical companies to advertise may lead to greater (advertising) induced demand for drugs, in part because lay people will not be able to adequately compare and contrast different products and that advertising may manipulate consumers' fears. The resulting increased use of pharmaceuticals may be detrimental to health and reduce the ability to contain healthcare costs. For alcohol, the regulations are justified on the grounds that it potentially has adverse health effects and that advertising results in consumers holding positive associations with substances that are, when consumed in excess, dangerous. The restrictions on advertising by the professions arise largely from the restrictions imposed by the respective professional organizations themselves. While the professions originally may have had good reasons for imposing the restrictions, they can unnecessarily reduce the intensity of competition and harm consumer welfare. In the broader context, however, restrictions on non-comparative advertising may hinder dissemination of valuable information about product quality and attributes.

- *Size, media and time of day:* For example, spirits (hard liquor) can be advertised in specialty magazines but there are stringent restrictions on advertising in media such as television. Even in magazines, many countries limit the amount of space that can be allocated to hard liquor advertisements. Some countries allow liquor to be advertised only after late evening hours. The major purpose of imposing regulations on size, media and time relate to minimizing the visibility of products that are deemed to have detrimental effects on segments of the population such as minors or related to health concerns.

- *Direct-to-consumer marketing:* Increasingly, countries are imposing bans or introducing significant regulations on direct-to-consumer marketing of products via email, fax and telephone. In general, both large and small companies and self-employed individuals rely on this channel to advertise their products and services. One factor that has been driving this type of advertising is the relatively lower cost – in comparison to say advertising on television and specialty

magazines. This type of direct advertising may also be preferred by many companies as they are better able to reach their target audience. One of the significant downsides of this type of marketing relates to intrusion of privacy. Individuals may prefer not to be bombarded by telephone calls at odd times of the day by tele-marketers. Business may not want to be sent faxes from companies advertising their products and services. Finally, non-work related spam emails are viewed as disruptive to productivity in the workplace and may clog the email and computer systems. Imposing unduly stringent restrictions or outright bans on direct-to-consumer marketing, however, may have an important adverse effect. It might be the preferred channel for advertising by many small businesses and self-employed individuals who otherwise may choose not to advertise due to the higher costs. On balance, while there is need for some regulations on direct advertising, for example to prevent productivity loss at workplace due to unsolicited faxes and emails, one needs to adopt a more balanced approach in order to allow the smaller businesses and self-employed to have successful businesses by advertising.

Apart from the above, there are some special problems posed by various rules that may govern advertising and marketing in professions. At times, a law gives a professional association the right to determine the conditions under which professional activity is exercised. When this is the case, professional associations often have an interest in passing rules that suppress competition, and one way they can do so is by imposing restrictions on advertising. These restrictions can serve as a very effective deterrent to providing consumers with information that they would find valuable, as professional associations have the ability to retract rights to practice a professional when their rules are not followed. Following a detailed review of seventeen studies on advertising, Stephen and Love (2000) conclude that increase in advertising typically leads to decrease in fees of professionals' services, implying that advertising restrictions by professions impose barriers-to-entry and competition.

Box 4 provides examples and discussion of selected rules and regulations on advertising and marketing.

While certain types of regulations on advertising contain important public interest justifications, restrictions on advertising generally have the potential to reduce information flows and adversely affect competition and consumer welfare. Regulations on advertising may also help to restrict the entry of new firms by reducing their ability to create brand awareness.

Given this, the restrictions need to be minimized where possible. Below we highlight some alternatives.[9]

1. Regulations on comparative advertising.

As we noted above, many countries impose severe restrictions on comparative advertising. An alternative would be to focus on preventing untruthful or misleading advertising. And some would argue that it is only regulations on misleading and untruthful advertising that can be justified in benefit/cost terms in the vast majority of markets. This objective could be achieved by setting up a mechanism where consumers can file their complaints along with penalties imposed for fraudulent or misleading advertising. For example, comparative claims in Taiwan have to be validated by an independent authority. In the U.S., the consumer protection bureau of the Federal Trade Commission evaluates complaints regarding fraudulent advertising. Such a process would allow companies to make claims and at the same time provide some checks and balances to protect consumers.

9. For a useful discussion of the informational role played by advertising and various aspects of deception in advertising, see Rubin (2000).

Box 4. **Advertising and marketing**

1. A number of Asian countries have (had) rules restricting advertising or subjecting it to specific framework conditions.

- Philippines: no direct comparison advertisements are permitted.
- Taiwan: comparative claims have to be validated by an independent authority.
- Thailand: comparative advertising is not allowed and all claims must be supported.

2. Significant advertising restrictions exist (or have existed) in many countries. For example:

- Auditing in France, Luxembourg, Portugal, Spain, Belgium and Germany;
- Architects in Luxembourg, Ireland, Germany, Netherlands and Greece;
- Engineers in Luxembourg;
- Lawyers in Greece, Portugal, and Ireland;
- Notaries in France, Spain, Greece, Austria and Germany;
- Pharmacists in Ireland, Portugal, Greece, Austria, France and Luxembourg;
- Accountancy in France, Belgium, Germany, Luxembourg and Portugal.

As an example, there are advertising restrictions on Italian veterinarians, such that their names and contact information cannot be posted on the internet to gain business. A study by the Maastricht Accounting and Auditing Research Centre concluded that there is no evidence that restrictions on auditing make a direct, positive contribution towards audit quality. They concluded that there is convincing evidence on the negative effects of these restrictions on intra-EU competition. The study recommended that national restrictions regarding unsolicited offering of services and advertising should be removed.

3. In the U.S., there is increasing pressure on the pharmaceuticals companies to reduce direct-to-consumer advertising of prescription drugs via television, magazines and other media. Members of the U.S. Senate have asked companies to wait two years before advertising new drugs. Some companies, fearing regulation, have started delaying their advertisement of new drugs. The main issue is whether drug advertising leads to unnecessary prescriptions and higher health costs. While direct-to-consumer marketing is permitted in the U.S. and New Zealand, it is prohibited in EU and other countries. …/

The European Parliament is considering legislation that would impose advertising restrictions on beer. If passed into law, the legislation would also forbid breweries from advertising any beneficial health effects of beer. The main purpose of this regulation is health related and there is pressure from countries like Sweden which have pushed for curbs on advertising (and higher taxes) on beer. While excessive consumption of beer is likely to be harmful and the health objectives are legitimate, it is still useful to note that legislation that restricts advertising has the potential to limit competition.

4. Direct marketing regulations in the U.S. and E.U. such as restrictions on email, telephone and fax marketing and solicitations. For example:

- The U.S. Federal Communications Commission fined First Choice Healthcare Inc. of San Diego, California, more than $750,000 for sending unsolicited fax advertisements to individuals and companies around the country. The company provides health care discount cards to customers who pay a monthly fee and generally don't have health insurance. While a variety of businesses can be affected, small businesses and new firm startups may be particularly susceptible to such restrictions as they may not be in a position to advertise in other media such as television which is much more costly.

The justification for the regulations mainly relate to the invasion of privacy. However, since these can be important avenues by which firms advertise and market their products, they may limit competition.

2. Restrictions on advertising by professional services.

In many countries, doctors and other professionals are either prohibited from advertising or have stringent restrictions. In many instances these restrictions are imposed by the respective professional organizations such as legal and medical associations. If a professional association, body or board is given control over the practice of the profession, this control should not include any rights to restrict truthful advertising, except when there is compelling evidence that the advertising may cause direct harm to consumers. Preventing valid advertising by the professionals is very likely to lead to lack of competition and higher prices for these services.[10]

10. In recognition of these adverse effects, the Italian Competition Authority Act (August 4, 2006, n. 248, Article 2), for example, has eliminated advertising restrictions for professional services. Professionals can now advertise their specific qualifications and specializations and the characteristics and prices of their services.

3. Direct-to-consumer marketing.

Direct marketing has increased significantly in recent years and governments are imposing significant restrictions. Some of the prohibitions would however be detrimental as they are likely to disproportionately affect smaller businesses and the self-employed who may choose this low-cost avenue for advertising. A solution is to provide individuals with an opt-out clause. Mechanisms could be set up where specific telephone and fax numbers or email addresses could be added to a list of 'do-not-call', or 'do-not-send-email' list. Internet and server based spam filters can accomplish part of this role, but in general it is quite difficult to track down the perpetrators (unlike do-not-call telephone number list), implying that a do-not-email policy will not be effective. Overall, these solutions may allow individuals to opt-out if they would like and at the same time permit businesses – small businesses in particular – to legitimately advertise their products and services.

Overall, regulations on advertising and marketing should be minimized as they are important avenues for the dissemination of information. In some cases, restrictions on comparative advertising may be justified. As we have discussed above, some checks and balances could be put on comparative advertising in order to weed out misleading and untruthful advertising.

4.2.2 Rules on content and setting standards

Markets naturally tend to produce goods and services that are differentiated in characteristics as well as quality. Consumers have a preference for variety and this, along with their differential ability to pay, implies that producers of goods and services would typically respond and provide a broad spectrum of variety as measured by product attributes and quality. For example:

- The automobile market contains a wide range of cars: for example, from bigger and higher-quality luxury cars that are very expensive, to those that are smaller, relatively lower-quality and low price. This market is populated by consumers who vary in their preferences for quality as well as their income levels which determine their buying power. In the market for cars, some consumers would be happy to buy relatively lower quality and lower priced cars, whereas others would prefer the higher priced luxury cars;
- The bottled water industry is rapidly growing worldwide. In an unrestricted market, the quality of bottled water produced – say as measured by its mineral content – is likely to vary considerably across different sellers (or brands). Given that the cost of producing

better water (in terms of its content) is higher, it will be priced higher. Since preferences vary, some consumers would prefer to have access to safe but relatively cheaper bottled water while others would prefer the more expensive higher quality bottled water.

Many products and services are, however, subject to regulations on content and quality standards and these can arise from at least two distinct sources:

- Governments often set standards on product content or characteristics, including minimum quality standards. These can occur in diverse categories such as:

  – Food products and beverages, where regulations can span both content and quality controls. The objectives behind the content and quality regulation of food and beverages typically relate to safety and nutritional value;

  – Television programming, where the regulations are typically related to lewd content (e.g., pornography, abusive language) or undesirable products (e.g., alcohol, tobacco). Certain types of programming can either be prohibited or restricted to specific times of the day.

  – Residential and commercial building codes which are designed to push quality above a certain threshold. The typical motivation relates to safety standards.

  – Environmental pollution has become a significant issue worldwide and governments have progressively imposed guidelines and standards on various types of substances that can be emitted into the atmosphere or discharged into water.

  – Automobile safety is an important issue and governments have, over time, imposed stricter formal standards, as well as coaxed companies, on the safety mechanisms that are built into cars. It started with seatbelts, then crumple-zones, followed by front-airbags and more recently an elaborate and extended set of airbags.

- Professional organizations, such as legal, architectural, accounting and medical, can impose – via criteria related to education level, professional certification among others – minimum quality and certification standards. One objective of the organizations in imposing these rules is higher quality of professional services rendered, and in some instances, like the medical profession, it also relates to safety and reliability of practice.

Setting standards and quality is often necessary and clearly serves the public interest. What is important to note is that while many of these objectives are reasonable, "unduly high" or stringent rules and regulations on content and minimum quality can, at times, clash with consumer preferences which tend to be diverse. Regulations that force the quality to unduly high levels may disadvantage consumers – for example, lower income consumers – who may prefer a lower price and lower quality outcome. It goes without saying that food and beverages need to be safe for consumption, but pushing quality and content to higher than necessary levels can have the effect of reducing variety offered to consumers and raising prices. Housing and construction codes are clearly necessary and designed for safety, but setting standards too high would lead to considerably higher housing prices that may result in many lower-income individuals being foreclosed from the market. Indecent language needs to be controlled in the media, but imposing restrictions on the content of television programming, particularly if they are not well thought out and are too broadly interpreted, can harm consumer welfare by reducing the variety of programming. Safer automobiles are very important, but the newer generation of safety features adds thousands of euros to a car's final price. One potential downside of "unduly high" safety standards that push prices above desirable thresholds is that many low-income consumers may shy away from paying these higher prices and may prefer to drive older (more dangerous cars) for longer periods. While safety features have to be improved, it is useful to evaluate the marginal benefits from a new safety regulation against the marginal costs.[11] Environmental regulations are required as they have clear societal benefits in terms of cleaner air and water, but one needs to at least evaluate the economic consequences on consumers and producers of setting "unduly high" standards.[12] Finally,

11. Pedestrian safety is an important issue in Europe and upcoming EU safety requirements are likely to mandate design changes to minimize the harm done when cars hit pedestrians. The regulations spell out specific targets for leg impacts and may force design and safety changes in the front end of cars. As noted in Ogando (2003), suppliers are working on different types of deployable systems for pedestrian safety: some would raise the hood in the event of a crash while others aim to add an exterior airbag to the car. The likely EU regulations could have a significant adverse cost impact on all automobile manufacturers as they have to incur additional costs, R&D and design changes. This is expected to lead to marked increases in the prices of automobiles.

12. Due to the imposition of more stringent environmental regulations that were put in place, the global pulp and paper industry had to undergo significant transformation which included costly investments in new technologies to restructure their production processes and products. As

while professionals such as lawyers and doctors obviously need to be qualified and standards of professional practice need to be ensured, the professional organizations may set minimum quality rules that lead to higher than necessary quality. As has been noted by a growing number of scholars, one of the objectives behind some of the restrictions imposed by the professional organizations is to raise the entry-barriers and reduce the level of competition in the market in order to raise their earnings.[13]

While many of the rules and regulations on content and standards are necessary, it is important to recognize that they may impose significant costs on businesses, as well as differential costs across imposed on companies, as they attempt to restructure their production processes and products to meet the new standards. For example, significant new investment and R&D expenditures may have to be incurred by businesses for developing new products. And, as we have discussed earlier, these costs may have a large sunk cost component – that is, costs are largely non-recoverable if the firm decides to exit the industry. The imposition of these costs has the potential to create competition problems in the sense that some companies may have to exit the market. One, somewhat unintended but significant, end result could be that in the new market that emerges after the change in regulation, there is less competition and potentially higher prices. For these reasons, it would be useful to at least evaluate the benefits of the higher standards along with their costs.

We conclude by noting that when imposing rules and regulations on standards, quality and content, an important point to debate is how high the standard should be or the nature of the specific content to be regulated. "Unduly high" standards can have significant negative consequences on consumer welfare. The added costs of delivering the unduly high standard or quality need to be carefully considered as the higher costs incurred by businesses will typically translate to higher prices paid by consumers and reduction in the variety of products and services available. In setting content rules, the rules need to be set and applied to the very specific types of content deemed harmful. Otherwise there may be a tendency to apply the

noted by Panchapakesan (2003), the cost increase has been as high as $30 per ton for some grades of paper in terms of fixed and operating costs. A negative consequence of the higher costs was that many domestic plants were shut down with loss of jobs as the U.S. pulp and paper companies built new plants overseas to avoid some of the regulations.

13. The study by Kleiner and Kurdle (2000) provides interesting information. They find, for example, that more stringent licensing restrictions in dentistry do not lead to better dental health such as fewer cavities, but have the effect of increasing dentists' incomes.

restriction more broadly and this may lead to loss of variety and harm competition. In short, one needs to carefully balance the legitimate societal goals of setting the higher standards and content regulations with the ensuing costs, including potential loss of variety and competition, to determine the net impact on welfare.

4.2.3 Grandfather clauses

Grandfather clauses relate to situations where the existing businesses (incumbents) are allowed to continue operations under older rules whereas new firms are subject to the newly imposed rules and regulations. We consider two examples:

- The pulp and paper industry has, over the decades, seen a significant ratcheting up of environmental regulations. A simple grandfathering rule would be one where existing production plants are given a pre-specified time-frame within which they have to conform to the new pollution standards whereas any new production facility that is set up has to meet the newly imposed regulations. Similar examples can be provided for the electricity generation and chemicals industries.
- Construction of new buildings in earthquake prone areas have to conform to considerably higher standards of tolerance. Similarly, new high-rise buildings may have to install fire-extinguishing sprinkler systems. Older buildings are typically exempt from these regulations.

The main motivation behind such grandfather clauses is that the new rules and regulations may place an undue cost burden on incumbents who made their investments in production facilities and started operations under the older rules. Since significant changes in the existing structure and facilities can be prohibitively costly, they can either be exempt or given a pre-specified time-frame to conform. For example, forcing older buildings to meet new earthquake standards or installing fire-extinguishing sprinkler systems would be exorbitantly expensive in most cases and this is exactly why they are not forced to conform to the newer regulations. On the other hand, most pulp and paper companies have, over time, been forced to conform to the more stringent pollution control standards. Grandfather clauses can be quite diverse and complex. Which production facility is grandfathered and for what time-frame can vary considerably and would depend on the specific industry, the nature of production technology and the costs of meeting the new regulations.

Box 5. **Grandfather clauses**

1. For electric generators participating in the European Greenhouse Gas Emissions Trading Scheme, the initial allocation of greenhouse gas emission permits will be crucial. An important aspect is grandfathering where permit allocations are decided on the basis of one or more past reference years. While new generating plants will be cleaner, the introduction of greenhouse gas emissions constraints throughout the E.U. power sector has the potential to add significant extra cost to power generation, increase power prices, accelerate the shift to natural gas and will have dramatic consequences for the commercial viability of existing power stations.

2. A recent study by Stavins (2005) examined whether the timing of plant investments was affected by the nature of regulation. In a study of several industries over 1963-1992, it was found that the U.S. Clean Air Act's New Source Review significantly depressed the birth of new plants, keeping old plants in use. In the organic industrial chemicals industry, Becker and Henderson (2000) found that grandfathering of plants contributed to environmental degradation by raising survival rates, reducing plant turnover rates, and keeping otherwise unprofitable operations in business. It also slowed improvements in air quality by prolonging the lives of older, dirtier plants. They concluded that it would be desirable to adopt a more uniform policy with respect to age to encourage retrofitting and other antipollution activities of existing VOC and NOx emitters much earlier in the regulatory process. Overall, these studies point to grandfathering creating barriers-to-entry by new firms, depressing new investments and promoting inefficiency.

3. The current slot allocation system controls landing rights at the majority of European airports, with a carrier needing a landing slot for a particular time of day in order to operate a flight at that time. The slots are allocated using grandfather rights: carriers that used their slots last year have the right to continue using the slots this year. (These are the use it or lose it rules.) This allocation system implies that inefficient, high-cost airlines can have access to an airport even though a new low-cost carrier or an efficient, former flag carrier could use the slot much more productively. For example, the European Commission in its 2000 decision noted that British Airways' stranglehold on the U.K. markets for air transport is reinforced by the substantial portion of the slots it holds in the relevant airports and by the system of grandfathering that currently exists for their reallocation. (See Brueckner, 2004, for details.) Control of landing slots and gate facilities have also been of significant concern to the U.S. Federal Aviation Administration.

4. The European Board of Thoracic and Cardiovascular Surgeons was founded in 1996 to establish common standards for thoracic and cardiovascular surgery and to gain recognition by the European Union. According to Article 19 of the

Regulations, surgeons in established practice of at least five years at the time the Board was founded, with independent responsibility and meeting the other eligibility criteria, may be recognized without examinations. Surgeons had till September 2001 to apply for fellowship under the grandfather clause.

5. In 1975 the U.S. Securities and Exchange Commission (SEC) created a new regulatory category: nationally recognized statistical rating organization (NRSRO). One effect of this was to ensure that less competent firms would not set up business to receive payments from bond issuers in return for good rating. This SEC classification grandfathered the main ratings agencies – Moody's, Standard & Poor's, and Fitch. The agency has not approved any new entities since 1992, and all the newcomers have consolidated with Fitch, leaving only the three grandfathered firms today. Though there are a handful of smaller niche raters, the absence of a NRSRO designation is an impediment to their expansion as well as to new entry (see White, 2001).

While the cost considerations for not making the older facilities immediately conform to new regulations is a legitimate economic justification, it is important to recognize that grandfathering clauses which impose asymmetric standards on older versus newer production facilities may impose considerably greater costs on new entrants as well as new capital investments by incumbents. Depending on the extent of the burden imposed and the cost asymmetry, grandfathered regulations can:

- Deter new entry
- Dampen new investment by incumbent businesses
- Allow continuation of inefficient production by older more inefficient plants
- Lead to higher prices

Box 5 provides some examples and discussion of grandfather clauses in different markets.

In circumstances where, for example, new stricter environmental standards are being put in place, it is inevitable that there will be grandfathering to some extent. What is clear is that the greater the extent of grandfathering – for example, where incumbents do not have to meet the standards for a long time period – the greater will be the potential asymmetries created between incumbents and entrants, and the consequent harm to markets. In addition, it is crucial to note that grandfathering has the ability to depress new capital investment by incumbent firms and this has implications for longer-term growth and efficiency of the affected markets. The central issue, therefore, is the structure of the grandfather clauses. We consider a hypothetical scenario to discuss some alternatives.

Proposed legislation being considered: set new standards on environmental emissions and allow *grandfathering* for all incumbents for a ten-year period. In this case, the new emissions standard is to be taken as a given when assessing the competition effects.

Alternatives that could be considered include:

1. Where relevant, the no grandfathering option needs to be considered. For example, in some countries airport landing rights have explicit or implicit grandfather clauses and the no-grandfathering option can be evaluated. But in cases with new environmental standards that require new capital investments or changes in products and processes, the no-grandfathering option is not a meaningful option.
2. Grandfather all incumbents but reduce the number of years for which grandfathering occurs. The decision on this will critically depend on the magnitude of the costs that are imposed by the regulation on the firms. Costs imposed should not be considered in absolute terms but relative to, for example, the firms' sales revenues. The larger these relative costs, the longer may be the optimal grandfathering period.
3. Grandfathering based on the vintage of the firms' capital. Suppose we can segment the incumbents into those who purchased their capital stock a long time back versus those who purchased it recently. While there are alternative ways to examine this situation, we consider one scenario. For capital stock that is "older", depreciation ensures that the current value (and efficiency) of the machinery may be quite low. For firms that have "newer" capital stock, the existing machinery has higher market value and efficiency. What this implies is that forcing those who purchased their capital relatively recently to change may be quite costly. Those with much older capital may be at a point where they are due for replacement anyway, and therefore the regulation forcing them to change may be less of an undue cost burden. Where the vintage cut-off – between older and newer capital – lies, will be determined by the technological facts of the particular type of capital.[14] For example, a particular machine tool may have a meaningful lifespan of a few years, whereas the machines that pulp and paper companies buy typically last several decades. Under the above scenario, the vintage effect can be combined with the duration of grandfathering as follows:

14. For firms with different vintages of capital – as will typically be the case – the cut-offs will have to be based with consideration given to the average vintage and the distribution around the average.

- Shorter grandfathering period for firms with older vintage;
- Somewhat longer grandfathering period for firms with relatively recent vintage.

4. Considerations for smaller versus larger firms. An important consideration here may relate to exit or foreclosure. While the argument is likely to be important for both larger and smaller firms, faced with new costly regulations there might be greater likelihood at the margin that smaller firms may not be in a position to meet the standards. While some exit may be inevitable, it would be useful to consider the scenarios of larger scale exit. As with the vintage issue discussed above, it may be useful to consider alternative grandfathering scenarios where the adjustment period provided could vary by the size of the firm, vintage of capital and issues related to firms' production technology.

The above discussion highlights the point that grandfathering agreements can raise very complex issues in many industries and have significant detrimental side-effects. Overall, the alternatives to the proposed hypothetical grandfathering rule above could include varying the extent of the adjustment (grandfathering) period as well as conditioning the time-period on firm-specific characteristics such as technology, vintage of capital and firm size.

4.2.4 Regulations that influence prices

Across countries, regulations have influenced prices of goods and services in markets such as electricity, cable television, healthcare, telecommunications, airlines, taxicabs, rental housing units, among many others. In the case of natural monopolies, the unregulated market outcome would lead to undesirably high prices. Historically, industries that fell under this category such as electricity, telecommunications, natural gas, postal services, among others, were subject to various forms of governmental price regulation designed to protect consumers from unduly high prices.

While governments can regulate prices with the objective of protecting consumers, the downside is that firms, when confronted with prices that are lower than what they would wish to charge, may reduce the quality of services offered. Product variety may also be reduced as incumbent firms may have little incentive to offer additional variety under price controls. In several countries, markets such as airlines, telecommunications, among others, have seen noticeable changes in the quality and variety dimensions once the price regulations were relaxed. In addition, entry may be lower in markets with regulations on prices due to reduced profit-making incentives. Overall, the literature shows that while governments may be pursuing legitimate socio-economic goals in controlling prices in certain markets,

these controls can have a wide range of detrimental effects in the long-run such as reduction of production efficiency, slower adoption of new technologies and reduction in product quality and variety.[15] This implies that in markets where competition among businesses can potentially flourish, rules and regulations on prices need to be looked upon with a great deal of scepticism and avoided to the extent possible.

4.3 Rules and regulations that reduce the incentives of suppliers to compete

Some rules and regulations and mechanisms that permit businesses to exchange information and collaborate in specific activities can lead to an environment which diminishes the incentives for businesses to compete. A particular concern is that these circumstances may facilitate cartel-like activities among firms, potentially leading to higher prices, loss of output and reduced variety. These considerations are very different from those related to the number and range of suppliers or the ability of businesses to compete – issues that we discussed in the preceding two main categories. In addition, there are specific business practices that may be employed by firms in formerly regulated industries such as electricity, telecommunications, natural gas, among others, which erect barriers to competition and lead to reduced incentives to compete. The incentives to compete can be diminished in situations where:

- Self-regulatory or co-regulatory regimes are created;
- Information on supplier outputs, prices, sales or costs are required or encouraged to be published;
- The activity of a particular industry or a group of suppliers is exempted from the operation of national competition laws;
- The mobility of customers between suppliers of goods or services is reduced by increasing the explicit or implicit costs of changing (switching) suppliers. As we detail below, of particular concern are such costs imposed by dominant incumbent formerly-regulated monopolies.

15. Viscusi, Harrington and Vernon (2005, Ch.16) provide a detailed discussion of the motivations for price regulation in potentially competitive industries and some of the intended and unintended effects of such regulation including issues related to productive efficiency and non-price competition. Also see Netz (2000) for an excellent and relatively non-technical overview of this literature.

Many of the information sharing mechanisms and collaboration among firms are permitted on the grounds that they may help facilitate greater innovation and the setting of uniform technical codes, standards and business practices. Companies and industries in many countries were (are) granted partial or complete exemption from competition laws to encourage their growth and increase exports. While in some cases the economic and social objectives are justifiable, they may be misguided in others. Below we present a discussion of the pros and cons and note some of the significant concerns related to the potential effects on the incentives of firms to compete.

4.3.1 Promoting self-regulation

In contrast to the traditional command-and-control model of government regulation, certain professions and producers of goods and services have historically been given the latitude to engage in self-regulation (or co-regulation).[16] Self-regulation has a number of potential advantages:

- It presents the opportunity for a more co-operative approach to regulation. There may be enhanced regulatory credibility arising from the involvement of a respected industry association as an active participant in the regulatory scheme and, by extension, endorsing its validity. This effect can, in turn, improve compliance levels.
- Involves industry and other interested parties in the regulatory process and allows a leveraging of resources provided at little or no cost by making these parties participants in regulatory monitoring and, in some cases, enforcement activity.
- Specific knowledge of industry participants is drawn upon in designing the regulatory system, suggesting that it should be well adapted to its purpose and minimize formal regulation.

Specific areas in which self-regulation exists include:

- Product characteristics including quality and safety
- Design compatibility

16. While many of the arguments below also apply to co-regulation, our discussion will be based on self-regulation only. The Jaguar Consulting (2003) report and Deighton-Smith et al. (2001) present insightful discussion of various aspects of self-regulation and co-regulation.

- Coordination of technical standards
- Ethical standards of practice
- Control of pollution

The fact that formal regulatory processes are avoided means that self-regulation is potentially more flexible in its form and approach than government regulation and is also more easily amended over time in response to problems that may arise. From the government's perspective, self-regulation is low cost in nature. Industry participants also tend to regard self-regulation as generally less costly than the more traditional command-and-control government regulation.[17] In certain sectors such as professional services, an industry association is likely to be better positioned to ensure standards as opposed to traditional governmental regulation. Self-regulatory agreements reached on design and standards among the market participants have the ability to enhance competition. Finally, self-regulation can in many instances lower the burdens faced by businesses – costs and uncertainty – that often accompany the more traditional governmental regulations. Therefore, in many areas, self-regulation has the potential to deliver gains in efficiency, enhanced innovation and improved profitability.[18]

An important competition concern, however, can arise in self-and-co-regulatory arrangements. By its very nature, self-regulation, via industry organizations and trade associations, brings together "competitors" permitting greater flow of information. While the objective of the meetings among the market participants may be to reach agreements on, for example, product designs or safety standards, they also provide fertile ground for discussion of firms' strategies related to prices, quantities, capital investments, market shares and other aspects. Permitting the market participants to cooperate in some areas of business, therefore, has the potential to lead to greater information flows and coordination rather than competition. Some of the concerns include:

- Greater likelihood of price coordination

17. We note a potential strategic issue. Often, self-regulation may serve as an intermediate step towards more formal regulation. If self-regulation fails to deliver the results, then governments may intervene and more formally regulate the market. Faced with this scenario, industry organizations and participants have an incentive to propose self-regulation and to make it work.

18. Valentine (1998) and Pitofsky (1998) present useful discussions of some of the pros and cons of self-regulation.

- Coordination to prevent new entry
- Agreement on conduct standards, or regulations on the nature of and range of services that may be provided, that may be to the detriment of consumers
- Rather than engage in competition in innovative activities via costly R&D expenditures, competitors may choose to coordinate their actions and reduce product and process innovation

These concerns can arise in markets with a large or small number of competitors. While the presence of a few competitors increases the likelihood of coordination in prices and production, the problem can arise even in large groups. Consider the following example. Suppose under the current technology the industry association – consisting of a large number of firms as members – has reached a consensus on standards. Now let a new entrant attempt to enter with a superior technology. The incumbent firms via the industry association will have an incentive to erect entry-barriers to protect their profits (see item C#2 in Box 6 for an example of this). Permitting collaboration, therefore, has the potential downside of leading to collusive anti-competitive outcomes irrespective of whether the group of incumbent firms is small or large.

Box 6 provides a few examples of self-regulation and discusses some of the adverse effects on competition that might result from them.

One important issue with self-regulation is the setting of standards. If adoption of standards is voluntary – or that the industry merely indicates guidelines which the market participants could follow – it may reduce the likelihood of anti-competitive effects. A key feature to take note of is whether the industry standards are imposed in a coercive manner. If so, there may be a significant likelihood of anti-competitive behaviour as industry associations can use these standards to erect barriers to competition (for example, item C #2 in Box 6). In this sense, the design of the self-regulatory system should avoid coercive standards.

Regarding the issue of anti-competitive conduct such as price-fixing and market allocation schemes, evidence from competition law enforcement suggests that while these can occur in markets with a large or small number of competitors, they are more likely to occur in markets with high concentration and/or few firms. These variables, therefore, can thus be used to gauge the likelihood of such behaviour. In the end it is important to note that while the enforcement of these abuses is in the domain of national competition law enforcement, regulatory officials need to be aware of the potential harm to competition when crafting or altering regulatory arrangements.

Box 6. **Self Regulation**

A. Examples of types of self-regulation

1. Australia started a new self-regulation system for advertising standards in 1998 with the creation of the Advertising Standards Board and Advertising Claims Board. These organizations are now responsible for consumer complaints regarding the content of advertisements.

2. The U.S. Federal Trade Commission (U.S. Federal Register, August 20, 1998) rescinded the labeling guides for the feather and down products industry in favour of self-regulation where industry determines the standards for labeling. The FTC decision was based on the argument that the existing disclosure rules were more likely to have harmful effects that distorted consumer demand, affected firms' production decisions and potential anticompetitive effects. The existing regulation allowed, for example, a product with 75% down content to be called "down". This would, however, make a 100% down product appear less distinguishable as high quality and adversely affect firms' incentives to bring higher quality down products to the market.

3. Australia allows for a certain degree of self-regulation in the telecommunications industry with the expectation that it will encourage the industry to better respond to customer needs. Self-regulation is encouraged through the cooperative development of technical standards and operating arrangements and is promoted via the Australian Communications Industry Forum – a telecommunications industry owned and resourced organization. In the event that compliance relative to the industry developed guideline is viewed as deficient, the regulator reserves the option of requiring the industry to develop a "Code of Practice" which effectively has regulatory status and compliance becomes compulsory under the relevant legislation. Given the stringency of the latter, the industry has an incentive to attain a degree of self-regulation that avoids more formal regulation.

B. Threat of more formal regulation and industry initiatives in self-regulation

1. More stringent regulations on the beer industry, including harmonization across member countries, has gained momentum in the EU. The objective is to discourage beer drinking and proposed solutions include higher taxes and effective ban on advertising. The brewing industry has, however, argued that self-regulation, as opposed to formal restrictions such as an advertising ban and increased taxes, is the more efficient way to ensure that the brewing industry develops in a healthy way. The industry has argued that formal regulations and over harmonization would harm longstanding European traditions, the competitiveness of the industry and go against the concept of open European markets.

2. In response to growing criticism concerning advertising and promotional activities and looming threats of explicit regulation, the Pharmaceutical Research and Manufacturers of America issued self-regulatory guidelines in 2002. The self-regulatory codes controlling the promotional activities of companies, however, have been subject to criticism as being vague and lacking teeth. As noted by Lexchin (2003), the mission of the association is primarily to increase sales and profit and when they outline codes of practice, they deliberately make them vague, do not cover many aspects of promotion and allow companies a wide latitude by leaving room for misleading advertising.

C. Examples where there were competition concerns in self-regulated areas

1. In the U.S., the American Medical Association had imposed standards on physicians. The rules set constraints on advertising, provision of services to patients and price competition by physicians. In 1979, the U.S. Federal Trade Commission held that this form of self-regulation violated U.S. antitrust laws as they prevented competition among physicians and the emergence of new forms of competition in the healthcare industry.

2. Industry self-regulation can result in perverse incentives whereby potential competitors are foreclosed from the market. An example is the 1988 U.S. antitrust case – Allied Tube & Conduit Corp. v. Indian Head, Inc. In this case, Allied Tube had set standards for steel based electrical wire conduits in buildings and these standards had been incorporated into safety codes of local governments. A new entrant offered a plastic based conduit that was high quality and cost efficient. The incumbent steel conduit manufacturers collectively agreed to vote against the new entrant in the association's annual meeting. The association coordinated action prevailed, resulting in significant harm to competition.

We conclude the discussion on self-regulation by re-iterating the comments we made in the beginning of Section 4. As noted in the discussion above and highlighted in some of the examples in Box 6, self-regulatory mechanisms can generate perverse incentives for firms to engage in collusive activities such as setting prices or quantity restrictions as well as erect barriers to entry to protect the incumbent groups profits. In this sense, the range of competition concerns that arise from self-regulation are not only valid for the category #1 of “Rules and regulations that limit the number or range of suppliers” but also for the category #2 of “Rules and regulations that limit the ability of suppliers to compete.” For example, depending on the specific nature of implicit or explicit entry barriers that may be erected, the competition concerns would fall under category #1 and/or #2.

4.3.2 Cooperation and information exchange

Businesses in a market are expected to compete. Competition brings benefits related to lower prices, efficiency gains and innovation. Under competition laws of most countries, firms are prohibited from coordinating their strategies with respect to variables such as prices, quantities and market share.

Specific exceptions to these general prohibitions, however, can be found. Rules often enable competitors to engage in specific types of cooperation and formation of market organizations such as:

- Formation of agricultural cooperatives for joint marketing of produce. These were justified on the grounds that smaller farmers would not get fair prices for their products as the buyers often tended to be large. Allowing co-operatives was seen as a mechanism to counter buyer power;
- Allowing professional organizations, such as legal and medical, to set best practice guidelines and rules for its members. Allowing this was assumed to ensure better controls on quality and standards for the professional services offered;
- Formation of trade associations which allow members of the industry to meet and exchange information about industry trends and market conditions;
- Coordinate product design and compatibility to ensure standards and uniformity;
- Permitting research and development joint ventures for promoting innovation.

While there are legitimate reasons for allowing and encouraging these types of cooperation, an unintended side-effect may be that these mechanisms also allow competitors to exchange information about prices and quantities and engage in collusion. In other instances, public information provision on, for example, prices may lead to better information flows among firms resulting in greater likelihood of collusive behaviour.

Box 7 provides examples of instances where information sharing and cooperation by firms has led to investigations by the competition authorities. While these examples are from competition law enforcement, they are included to highlight the fact that (opportunities for) information sharing can lead to anti-competitive outcomes. A broad message is that permitting information exchange and cooperation needs to be well thought out due to its likely anti-competitive outcomes.

Box 7. **Cooperation and information exchange**

1. In 1993 the Danish competition authority decided to collect and publish firm-specific transactions prices for two grades of ready-mixed concrete in three regions of Denmark. Within one year of the publication of the data, average prices of the two grades increased by 15-20%. Publication of prices potentially facilitated collusion and increased prices.

2. Professional or producer organisations are common in most countries and involve collective decision-making by firms who otherwise would compete against each other. If not adequately monitored and regulated, such organizations may lead to loss of competition and barriers-to-entry due to the organisations making membership difficult, intentionally excluding firms, and even agreeing to engage in anti-competitive activities such as price-setting.

- The cooperative of anaesthesiologists of the state of Goiás in Brazil. The cooperative distributed a list of prices covering anaesthesiological procedures to all the affiliated anaesthesiologists in the state of Goiás. The Brazilian Competition Council held the cooperative guilty for price coordination.
- The cooperative of Medical Works Ltd. in the city of Macapá in Brazil was implicated for restraining competition by influencing the adoption of uniform commercial conducts or agreements among competitors.

3. The American Medical Association has argued that physicians should be entitled to collectively compare information about the reimbursement rates from health insurance plans. The AMA argues that physician reimbursement rates are contractually imposed by large health insurance companies in a take-it-or-leave-it manner. The concern, however, has been that this arrangement potentially allows the physicians to fix prices (set their rates).

4. Cavaliere, Silvestri and Tanasso (2001) outline issues regarding self-regulation and voluntary agreements designed to allow firms to meet environmental objectives. But this cooperation is also viewed as fertile ground for sharing information about prices and other activities that may reduce competition.

5. As noted in Potter (2001), an important concern of regulators with internet based business transactions and exchange of information is whether the amount of information that is revealed and shared between the sellers will lead to collusion and increase in prices. More generally, business-to-business internet based transactions may permit firms to view the prices and volumes at which other sellers have consummated sales or to learn whether other sellers have excess capacity. This may encourage at least tacit price coordination. The U.S. Department of Justice, for example, has investigated

internet bond exchange (Schiffrin, 2000) as well as airline reservation entities formed by several airlines such as Hotwire and Orbitz, which were also the subject of investigations by the U.S. Federal Trade Commission and the Department of Transportation (Greenberg, 2000).

6. On the broad topic of information sharing and anti-competitive outcomes, an example from the French mobile telephone industry is illustrative. Three companies – Orange France, SFR and Bouygues Télécom – were implicated by the Conseil de la Concurrence and heavily fined for sharing strategic information on new subscriptions and cancellations. The Conseil noted that the information sharing distorted competition by reducing uncertainties over competitors' strategies and diminishing each company's commercial independence. In addition, the Conseil observed that from 2000 onwards, the information sharing had enabled them to monitor and stabilize their jointly-targeted market shares.

It is quite transparent that allowing cooperation in some areas has the potential to bring substantial benefits to society, such as collaboration in research and development. Thus, determining the nature and extent of the derogations from the general prohibition on a range of cooperative behaviours between firms in an industry is one of the more difficult tasks facing a regulator. Many of the violations of competitive principles may occur in a covert manner, one that is not readily apparent or forecastable by the regulator. In this area, as in others, the task effectively amounts to that of reaching a difficult conclusion on whether the benefits to society of allowing cooperation in particular contexts are likely to outweigh the costs, expressed in terms of the anti-competitive corollaries of allowing the cooperative behaviour. While, as a general rule, it is difficult to forecast when collaboration in one area – such as R&D or determining compatibility standards – might lead to coordination of prices or market share allocation, evidence from competition law enforcement points to high market share or small number of firms as one of the indicators for the likelihood of such anti-competitive behaviour. While, in the ultimate analysis, national competition law enforcement is entrusted with the task of detecting and prosecuting collaborative behaviour in the areas of prices and quantities, it is important to keep in mind that regulatory decisions should not end up facilitating collaboration because collusion is very hard to detect even by the competition authorities.[19]

19. Ghosal (2007) presents a discussion of the various avenues by which information flows into the investigative offices of the competition authority and the extreme difficulty they have in detecting cartel-like activities.

4.3.3 Regulations that partially or completely exempt activities from national competition laws

In many countries, governments grant competition policy exemptions to companies and business organizations. The motivations are diverse and include exemptions for:

- Promoting exports
- Regulated companies
- Agricultural cooperatives
- Organisations for small and medium businesses.

Undoubtedly, some of the underlying arguments for granting competition law exemptions can be justified from a historical perspective. Worldwide, farmers tended to be small and permitting them to coordinate their marketing/selling activities made sense. For some of the above categories, exemptions at times can serve to help create goods and services that would not otherwise exist or that otherwise may have lower quality.

The significant downside, however, is that regulations that eliminate or reduce competition by exempting activities from competition laws or requiring competitors to act jointly can have detrimental effects on the extent of competition in the market and the actions of businesses protected under these arrangements have often cast a long shadow. Therefore, careful consideration should be given to proposals which aim to provide exemptions from competition laws. In situations where a proposal creates some uncertainty as to whether the government intends to apply the competition laws in the future, it would be valuable to state that clearly in binding legal terms. For example, the 1996 Telecommunications Act in the U.S. contained an “antitrust savings clause” which made it clear that antitrust laws would continue to apply and would not be displaced by that legislation.

Box 8 provides some examples of exemptions from competition laws and the adverse effects.

Box 8. **Exempting activities from competition laws**

1. The *Shipping Conferences Exemption Act, 1987* (SCEA) in Canada, exempts certain shipping conference practices (e.g. collective rate setting, and conditions of service) from the provisions of the *Competition Act*. In order for a conference not to run afoul of the *Competition Act*, antitrust immunity is provided through SCEA. The report by Clyde and Reitzes (1996) provides evidence that some aspects of the liner shipping conference immunity system may have contributed to higher ocean liner shipping rates.

2. The European Commission has proposed to repeal the block exemption of liner conferences from the EC Treaty competition rules' ban on restrictive business practices (Article 81). The current block exemption, established by Council Regulation 4056/86, allows carriers to fix prices and regulate capacity jointly. Repealing the exemption will benefit EU exporters by lowering transport prices whilst maintaining reliable services. The Commission proposal would also bring maritime tramp and cabotage services under the scope of the competition implementing rules (Regulation 1/2003), giving the Commission jurisdiction to apply the competition rules in the sector.

3. The U.S. McCarran-Ferguson Act (1945) exempts the insurance industry from some federal antitrust statutes to the extent that they are regulated by the states. The exemption primarily applies to gathering data for the purpose of ratemaking. Otherwise, antitrust laws prohibit insurers from boycotting, acting coercively or restraining trade. Commentators have argued that the Act has provided shelter to the insurance companies and allowed them to fix prices. As noted in King (2003), consumer advocacy groups have argued that insurers have taken advantage of the Act to raise prices and restrict coverage, as well as engage in other anti-competitive activities that would be considered unlawful in any other industry. Legal challenges involving alleged price-fixing by insurers are typically dismissed by the courts because of the industry's special exemption from the antitrust laws.

4. In the U.S., sectors that retain some form of exemption from, or special treatment under, the antitrust laws include: agricultural cooperatives; fishermen's cooperatives; banks and other financial institutions; securities and commodities industries; insurance; newspapers; professional sports; interstate motor, rail, and water carriers; ocean shipping; organized labour; and air transportation. The U.S. Congress passed Newspaper Protection Act (1970) to provide limited antitrust exemption by allowing the creation of Joint Operating Agreements by newspapers. The motivation was to keep newspapers from failing, especially if it would leave only one daily paper in a market.

5. The European Union's block antitrust exemption for the distribution and servicing of automobiles had created a system where automobile dealers had to offer after-sales repair services, and mechanics needed a quality mark from the manufacturer. This allowed manufacturers to dominate the market by excluding competing brands from their dealers' showrooms. The exemption ended in September 2002 and car dealers are now able to offer a variety of brands.

6. In Sweden, there is legal exemption under the Competition Act for agricultural cooperatives. Pricing by a primary association where it is responsible for the sale of goods, which are supplied to the association, falls outside the scope of competition policy actions against anti-competitive behaviour.

7. In South Africa, exemptions may be granted to firms and professional associations to act in a manner that, in the absence of exemption from the Commission, would be anti-competitive. Exemption could be granted on grounds such as: (a) promoting exports; (b) promoting small and medium enterprises; (c) aiding the economic stability of an industry; and (d) maintain professional standards or for the ordinary function of the profession.

While in some instances the historical roots of granting exemptions from competition laws are deep, it is fair to say that such exemptions merit serious consideration when they are brought into place. As the OECD (1997) report points out, exemptions from national competition laws have accumulated in numerous sectors such as energy and utilities, transport, communications, and agriculture. Such exemptions can reduce economic performance by allowing anti-competitive practices such as abuses of dominant position and collusive conduct. Overall, there are significant benefits to applying general competition law as widely as possible.[20]

4.3.4 Switching Costs

In many instances, consumers may face costs of switching companies for the purchase of the same service or product. Switching costs can take several dimensions and arise for a variety of reasons. For example, the telephone company or the natural gas company may have had the consumer

20. The report notes that this is particularly important in the period after regulatory reform, because such abuses can frustrate the emergence of competition by blocking entry or fixing prices. Vigorous enforcement of laws against cartels will be needed where years of regulation have taught firms to co-operate instead of compete. Without determined action, the benefits of reform can be lost.

sign a contract which locks the consumer in to buying the product or service from the company for a specified duration. In some instances, the companies may make the consumer pay up-front for the provision of services for the contract duration, or charge a fixed fee to sign the contract. One motivation for such clauses is to lock-in customers as this helps create barriers to consumer mobility and raises profits earned by the company.[21] Under such contracts, if the customer wants to change to a new supplier – say a new entrant – they will have to forgo the fee they paid to the previous supplier. Imposing switching costs can, therefore, benefit the incumbent firm(s), reduce competition and potentially make future entry difficult.[22]

One aspect of switching costs that we are concerned about relates to the newly deregulated industries such as natural gas, electricity and telecommunications which have dominant incumbent companies who attempt to thwart competition by offering contracts that embed switching costs. These traditionally regulated industries pose considerable challenges for at least two reasons:

- The incumbent's network of gas pipelines, or transmission wires or telecommunications network has to be accessed by competitors to provide service;
- The incumbent firms have high market shares due to their regulatory heritage.

21. In the case of mobile phones, one can argue that such clauses are designed to keep customers long enough in order to pay for the mobile phones (handsets) that are heavily discounted during promotions. This appears to be a common marketing strategy among competing providers of mobile phone services. However, this logic would not apply to the provision of natural gas or electricity services.

22. Paul Klemperer (New Palgrave Dictionary) provides a more general definition of switching costs: "A product exhibits classic switching costs if a buyer will purchase it repeatedly and find it costly to switch from one seller to another. For example, there are high transaction costs in closing an account with a bank and opening another with a competitor; there may be substantial learning costs involved in switching between computer-software packages; and switching costs can also be created by non-linear pricing as, for example, when an airline enrols passengers in a "frequent flyer" program that gives them free trips after flying a certain number of miles with that airline. Switching costs also arise if a buyer will purchase "follow-on", or "aftermarket", products such as service, refills or repairs, and find it difficult to switch from the supplier of the original product. In short, switching costs are created whenever the consumer makes an investment specific to his current seller that must be duplicated for any new seller".

As some of the examples in Box 9 show, consumers in many countries are (have been) subject to switching costs that impose barriers to choosing alternative suppliers.[23]

The behaviour of incumbent firms in industries such as electricity, telecommunications and natural gas shows that they have significant propensity to impose switching costs and deny or restrict access to new entrants to their markets in order to maintain their market power and profits. Governments can play an important role in shepherding these industries from their regulated-monopoly past into a future where there is a more competitive environment. The solution is multi-part and all of the elements below have to be in place to increase competition:

- Legislate access to the incumbent's network. This is the case in many countries in Europe. The U.S. provides mixed evidence as the Federal Communications Commission (August 2005) ruled that incumbent telecommunication companies do not have to provide access to competitors. (There are a number of issues related to access which we will not discuss here – these relate to the ability of incumbents to degrade access even when there is open-access. The relevant regulatory agency has to monitor this.)
- The price to access the network has to be fair and non-discriminatory.
- Consumers must have the ability to switch suppliers. Switching costs have to be low. One can think of two distinct components of switching costs in these industries and both the issues noted below have to be lowered or eliminated to increase ease of switching and generating more competition:
  - Administrative barriers such as specific periods/dates when the consumer can switch. These create practical difficulties for consumers who may want to switch;
  - Monetary barriers that are created by lock-in contracts and up-front fees;

In closing we note that the combination of dominant market position, ownership of the network and ability to impose switching costs presents a rather complicated mix of factors and they have to be addressed in unison.

23. The paper by Salies (2006) contains a brief survey and sampling of estimates of switching costs from selected countries.

Box 9. **Switching Costs**

1. Number portability relates to the ability of customers to retain their existing mobile phone number when they switch their supplier. In mobile telecommunications, number portability is considered to be an important prerequisite for competition as it reduces switching costs. Lack of portability has the potential to lock-in customers to the incumbent's network. Thus switching costs favour the incumbent and are an obvious source of monopoly power to established suppliers. As examples of the significance of this issue: (a) number portability was legislated in the U.K. starting 1999; and (b) since end-2002, number portability became mandatory in Germany. Landgrebe (2004) provides a discussion of various switching costs in the mobile telecommunications market in Europe.

2. Following the deregulation of electricity markets in many countries, switching costs are deemed to be an important factor determining the competitive functioning of markets. Inability of customers to switch due to barriers and costs imposed by incumbent suppliers are expected to result in a less competitive market. Given this, many countries have focused on this issue with an eye towards streamlining the switching procedures and reducing costs faced by customers.

- The level of consumer switching activity varies considerably across the Nordic countries with the highest activity in Norway, followed by Sweden, Finland and Denmark. As the NordREG (2006) report indicates, the ease of switching varies across the countries. In Sweden, supplier switches can take place only on the first day of the month and switches can take up to two months if the consumer is late by just one day. In Finland, the current system allows the distribution system operators to charge fees if the customer changes supplier more than once a year. In Finland, Sweden and Norway a consumer can enter into a new supply contract orally or electronically, whereas in Denmark the consumer actually has to sign the contract. As the study notes, lowering barriers to switching are a prerequisite for an effective electricity market.

- The electricity market in Austria has seen a relatively low rate of switching in the small consumer segment with roughly 5% rate of switching compared to 25% for the large customers. The barriers to switching, especially for the smaller customers, include, for example, opaque price information provided by the suppliers on electricity bills such as all-inclusive prices, restrictive minimum agreement terms which lock-in consumers for the contract duration and loyalty rebates which reduce the incentive to switch. For similar reasons, switching among gas customers is also low. In autumn 2004, the Austrian Competition Authority launched an investigation into some of these practices.

4.4 A summing up

In section 4 we discussed the myriad types of rules and regulations that can be imposed by governments and professional organizations. We briefly evaluated the underlying social and economic motivations behind the regulations and then focused on the potential competition problems that could be caused by the restrictions. For each type of regulation we provided some examples, along with additional discussion, to highlight the nature of the restrictions under each category.

In discussing the various competition concerns for the rules and regulations imposed by governments and professional organizations, we utilized the concepts and framework from section 3. Next, in section 5, we develop a general framework that can be used to gain a better understanding of the competition concerns for a given rule or regulation and, in section 6, we outline a two-stage process for a more specific evaluation of the competition concerns that may arise.

5. General Framework for the Competition Assessment of Regulations

The concepts and framework outlined in section 3 provide a flexible and analytical method for competition assessment of the different types of regulations highlighted in section 4. The concepts and framework of section 3 are flexible in the sense that they can be used to evaluate competition effects of different types of regulations in industries and markets with widely differing characteristics. The primary objective of this section is to develop a broad framework which can be used by regulatory officials and economists to gain a thorough understanding of the issues related to competition and help them evaluate the effects of regulations on competition. After we spell out the broad framework in this section, a more specific two-step process for evaluation of regulations is outlined in section 6.

As a general principle the regulatory officials should focus on three important aspects to begin the evaluation process. Firstly, the starting point of any evaluation should be the "objectives" being pursued. Once this is done, at a later stage it will become easier to consider and evaluate alternatives that achieve the objective with fewer restrictions imposed on market processes. For example:

- If the goal is the protection of less-informed consumers, regulating minimum prices may be one way to achieve the goal. But there are other means of accomplishing this that also merit consideration;
- Depending on the nature of the regulation, some grandfathering is inevitable. However, an important challenge is to minimize the

time-period over which grandfathering occurs as longer periods of protection and ill thought out grandfather mechanisms have the potential to cause significant harm to markets.

Secondly, many markets may have significant barriers to competition that are relatively transparent. Given this, it would be useful to itemize the "existing barriers" which could be related to:

- *Regulatory* barriers related to entry regulations, grandfathering clauses, advertising restrictions, among others. Whatever regulations the market under consideration is subject to will need to be itemized and their likely effects on competition noted;
- Large *overhead costs* or *sunk cost* related barriers such as the need for businesses to incur significant advertising or R&D expenditures to compete in the market. For example, if the market's current set of products or services required high investments in capital or R&D, then any new regulation that affects the market's cost structure – either due to necessary changes in the production process or re-positioning of products – can have significant consequences for incumbent firms as well as potential entrants;
- *Behaviour* of incumbent businesses. Is there any history of dominant firms in the market behaving in a manner that makes it difficult for new firms and potential entrants to compete? For example, a dominant telecommunications or electric company may have a history of denying or degrading access to its network.

Thirdly, if the proposed regulation involves rules and regulations on market prices, it needs to be recognized that this may affect numerous facets of firms' operations. As was noted in section 4.2.4, controls on prices that firms can charge can have potentially wide ranging effects such as lower product quality and variety, lower entry, reduced production efficiency and slower adoption of new technologies. Given this, if there are restrictions on prices, it should be looked upon with scepticism and alternative solutions that are less damaging to the long-run functioning of markets need to be carefully evaluated.

The above considerations will provide a better, up-front, understanding of some aspects of competition assessments in situations where new rules and regulations are being proposed. Even in the case of existing rules and regulations that are being reviewed, such an assessment will be valuable. The key point to note is that the combination of different types of barriers may significantly impact competition; this effect may not be apparent if one focuses only on a particular barrier.

After the above assessment, the considerations noted below are designed to gain a fuller understanding of the likely effects on competition.

5.1 Examine the effect on incumbent businesses

It is important to gain a clear understanding of how the regulation might affect various aspects of the companies' operations, whether the regulation might have substantially different impacts on different incumbent firms, and whether the differing impacts would substantially change competitive relations in such a way as to reduce the intensity of competition within the market in a significant manner.

- Assess the costs of meeting the regulation.
  - What are the components of the costs that have to be incurred?
  - Are these costs best described as fixed (or non-recurring) costs or as variable (or recurring) costs?
  - How large are the costs relative to businesses annual sales revenues?
  - Does the answer in (iii) vary by the size of the business? For example, are small businesses more adversely affected?
  - Does the answer in (iii) depend on the (old versus new) vintage of a business's capital? For example, are companies with older production facilities more adversely affected?
- Examine the effect of the regulation on the exit of firms. Note that if the exit of firms occurs in significant numbers, it may result in a decrease in the intensity of competition. Various types of regulations will impose costs on incumbent firms.
  - Will these costs lead businesses to exit the market?
  - Which businesses are more likely to exit?

Can we conclude whether small or large businesses will exit? Can we conclude whether businesses with older vintage of production facilities will leave?

Gaining an understanding of which types of businesses (if any) might leave the market will provide insights into the likely changes in the structure of the market.

- Evaluate the effect of the regulation on the potential anti-competitive behaviour of incumbent firms. For example, if the

regulation facilitates cooperation and sharing of information, it may lead to collusion among the firms in the market: price-fixing; quantity restrictions and market share allocations. While enforcement of collusion is in the domain of competition law enforcement, it would be useful to explicitly make note of the illegality of price-fixing agreements and collusive agreements. Finally, if the past history of the market shows occurrences of collusion, this information should be accounted for in the decision-making process.

5.2 Examine the effect on the entry of new firms

In section 3 we discussed different types of entrants. It will be important to note the answers to the following questions. Does the regulation restrict entry:

- For all types of entrants? For example, if there is a regulation that limits the total number of pharmacies per 5,000 people, this applies to all types of pharmacies and will limit the extent of competition in the market in a very explicit manner.
- For specific types of firms such as the new-firm/new-plant category? Suppose new environmental regulations have to be met that require considerable capital expenditures. In this case, it is very likely that the regulation will affect smaller entrants more than larger. It is also likely to adversely affect the new-firm/new-plant category of entrants more than diversifying entrants. The competition effects here may be more complicated. For example, since it may lead to the emergence of a set of dominant firms, it may facilitate collusion.

Understanding the consequences on entry, and by type of entrant, would provide valuable insights into future competition in the affected market(s).

5.3 Examine the impact on prices and production

Here we examine the potential channels via which the regulation under consideration can *increase* the prices of goods and services and production in the affected market(s).

- The regulation may impose costs on producers. Increase in the costs of production will lead to higher prices paid by consumers and lower production by the firms. This, for example, would occur if new environmental or safety standards were imposed that force firms to make new and costly investments. The resulting price

increase is obviously not due to any anti-competitive behaviour. But taking note of this would be useful in assessing what fractions of the total price increase may arise due to cost increases versus potential anti-competitive behaviour or increased market power.

- The regulation may cause exit of incumbent firms, lower the likelihood of future entry by creating barriers-to-entry and lower the extent of competition in the market. This may lead to increase in the market power wielded by firms that remain in the market and lead to higher prices and lower production.
- Regulation may facilitate greater information sharing and cooperation among businesses leading to collusion. This will result in higher prices and lower production.

An important objective here will be to sort through the different channels and get clear answers to the following questions:

- Whether prices paid by consumers will increase?
- If yes, what are the likely major factors that will cause prices to rise?
  - Increase in production costs?
  - Increase in market power?
  - Likelihood of anti-competitive behaviour?

While the primary concern here is whether there will be a reduction of competition in the market (say, due to lesser number of firms), it is important to recognize that different rules and regulations can have complex effects. In the case of new environmental standards, for example, it is relatively transparent that prices may increase as firms make costly investments to meet the new standards. However, as we have discussed earlier in the document, potential consequences of the new standards may include the exit of firms and less entry of new firms; these may confer greater market power to the incumbent firms. In this sense, an increase in environmental standards has a direct cost-driven price increase as well as a potentially indirect effect where future price increases may occur due to gains in market power resulting from lesser competition. When examining regulatory proposals, one needs to be aware of these complexities and gain a proper understanding of the underlying issues.

5.4 Examine the impact on the quality and variety of goods and services

At a broad level, any regulation that reduces the quality and variety of goods available in the market is detrimental to consumer welfare unless we are speaking of specific cases in which minimum product standards are introduced in order to reduce substantial risks associated with use of the product. Regulatory officials will need to assess whether there will be a negative impact on quality and variety and, if yes, whether it meets this specific "public benefit" test. Quality and variety can be affected via alternative mechanisms such as:

- Regulations that set minimum quality standards will reduce variety in the market. While this will raise the average quality, market prices paid by consumers will increase to reflect this higher average quality. The segment of the consumers – for example, those who prefer to consume lower price and lower quality products – will experience a loss of welfare.
- If the market contains differentiated products, then regulations that cause firms to exit are likely to lower product variety.
- If the regulation creates barriers-to-entry, then the market does not benefit from future injection of variety that would become available if entry was freer.

Overall, a market with reduced variety and quality can have significant negative effects on consumer welfare. These adverse effects will need to be carefully traded off with the key socio-economic objectives of the regulation.

5.5 Examine the effect on innovation

To understand the impact on the efficiency of business operations and *innovation*, one rule-of-thumb that can be applied is:

- If the regulation creates barriers-to-entry and causes exit of incumbent firms, it is highly likely to result in reducing competition in the market. Lack of competition may encourage the incumbent businesses to be less efficient and reduce the incentive to innovate. As we have discussed earlier, various types of regulations can result in this. For example:
  - Grandfather clauses that offer significant and long protection-periods to incumbent firms may lead to reduced entry and perpetuation of inefficient production practices;

- Prohibitions on advertising can create markets that have reduced competition leading to lack of incentive to innovate and become more cost efficient;
- Restrictions on the flow of goods and services across regions may reduce competition within regions and promote inefficient production structures.

Another important issue relates to the costs imposed by the regulation. If these are significant, they may negatively impact firms' R&D expenditures and other innovative activities as firms may divert resources away from pursuing innovative activities and towards meeting the regulatory standards.

5.6 Examine the effect on the market's growth

- There are two primary features of regulations that may lead to adverse consequences for *growth*:
  - If the regulation imposes high cost on the incumbent firms and potential entrants;
  - If the regulation creates barriers-to-entry and thwarts competition.

Market growth issues can be examined by considering growth of production and sales as well as new capital investments in plant, equipment and machinery. Analysis of this aspect is directly linked to the concerns about entry and exit highlighted in our prior discussions.

5.7 Examine the effect on related markets

It is important to understand that apart from directly affecting the market under consideration, regulations are likely to affect the upstream and downstream markets. For example, suppose a regulation calls for reduced automobile emissions and raises production costs for the automobile companies to meet the new standards. While this regulation will have obvious direct effects on production and prices in the automobile industry, it will also have indirect effects on a variety of markets such as automobile dealers, suppliers of inputs such as rubber, steel, electronics among others. In addition, it will also affect the petroleum industry where the gasoline may need new additives and changes in refining process to meet the newly-set emissions standards. Ignoring the effects on the upstream and downstream markets – or the full "supply-chain" – could, under certain circumstances,

lead to a significant under-statement of the adverse effects on competition and welfare.[24]

To properly gauge the impact of a regulation, one should examine its effects on all the related – upstream and downstream – markets. The procedure can be thought of as containing two parts.

- A preliminary assessment is made to identify the markets that might be affected and whether there are likely to be "significant" upstream or downstream effects on competition.
- If the answer from above points to significant effects, then, for completeness of the competition assessment, items 5.1-5.6 noted above will need to be examined for each related market that is affected.

5.8 Summary of the impact of the rule or regulation

Highlight the conclusions for the ***primary*** market under consideration:

- Prices and production;
- Product variety and quality;
- Efficiency;
- Innovation.

Highlight the conclusions for the ***related*** (upstream and downstream) markets that might be affected. Any assessment of the related markets will be conducted only if significant negative effects to competition are found for the primary market and noting the procedure outlined in item 5.7 above. As in the case for the primary market, the summary should include the effects on:

- Prices and production;
- Product variety and quality;
- Efficiency;
- Innovation.

24. There are other ways in which one can think about how markets relate to each other. For example, two products may not be exactly the same and may be subject to different regulatory structures, but compete for a subset of buyers. Tough regulation in one area may give an "artificial" competitive advantage to others. Consider the case of power boats and personal water craft in Canada. Personal water craft are regulated in a way very different from powerboats, even though both are close substitutes for a given set of users. Another example is real estate legislation in Canada which required bundling of various services largely because legislators did not realize that services could in fact be unbundled.

5.9 Alternatives to the proposed rule or regulation with less restrictions on free markets

In many instances, the rules and regulations can be re-structured to minimize harm to competition. While for some types of restrictions a broad consensus can be reached regarding the nature of alternatives, in others the issues are more complex and will have to be evaluated on a case-by-case basis. Consider two hypothetical examples:

1. Restriction: ban on all *advertising*. Aside from some products such as tobacco or alcohol, limitations on advertising should be viewed very sceptically. Alternatives that could be considered include:
   - (a) repeal all restrictions on advertising;
   - (b) allowing all non-comparative advertising;
   - (c) allowing all non-comparative and comparative advertising with comparative advertising being subject to verification of claims.
   - (d) allowing all advertising but subject it to a standard that it cannot be false or misleading.

   In most cases, options (c) or (d) may be the ideal ones.

2. Proposed legislation being considered: set new standards on environmental emissions and allow grandfathering for all incumbents for a ten-year period. In this case, the new emissions standard is to be taken as a given when assessing the competition effects. Alternatives that could be considered include (for more details on the items below, see section 4.2.3 on grandfather clauses):
   - (a) Where relevant, the no grandfathering option needs to be considered.
   - (b) Grandfather all incumbents but reduce the number of years for which grandfathering occurs.
   - (c) Grandfathering based on the vintage of the firms' capital. The vintage effect could be combined with the duration of grandfathering:
     - (i) Shorter grandfathering period for firms with older vintage;
     - (ii) Longer grandfathering period for firms with more recent vintage.
   - (d) Differential grandfathering periods for smaller versus larger firms.

The alternatives to the proposed grandfathering rule above could include varying the extent of the adjustment (grandfathering) period as well as conditioning the time-period on firms' characteristics such as vintage of capital and size.

To complete this portion of the assessment, identify alternative ways of structuring the proposed regulation. For each proposed alternative:

- Assess the competition effects;
- Compare the alternatives with respect to their effects on competition;
- Rank the options with the objective of maximizing benefits while minimizing restrictions.

We conclude this section by noting an important issue. The problem with many rules and regulations are that while they may be beneficial at a point in time and for a given state of the world, they may end up lasting too long and become protectionist. This, for example, may be the case with pharmacies in many countries, various regulations on retail operations, and for professions. This problem also exists in other types of regulatory decisions such as grandfathering where offering a lengthy grandfather period may significantly distort market incentives and damage competition. Overall, it is crucial for governments to realise that "time" is an important variable when structuring regulations and this should receive explicit recognition. Where possible, the time-period of the rule or the regulation should be tailored to the specific needs and no longer.

6. The Stages of Evaluation

The assessment of competition effects will contain two stages. Stage one will contain an initial assessment that can be completed within a reasonable time-frame to gauge potential competition problems. If there emerges a likelihood of significant harm to competition, a more detailed stage-two evaluation will be required. If the stage-two assessment reveals that the scale and scope of the impact on competition is large, one might want to consider external reviews of the analysis carried out by the government agency as well as collaboration with the country's competition authorities.

6.1 Initial evaluation

This stage will contain an initial assessment to gauge the scale and scope of likely harm to competition. The initial evaluation will be focused on the primary market under consideration. No attempt will be made to assess harm

to competition to related – upstream and downstream – markets (as in section 5.7). In the initial evaluation, extensive use of data and its analysis is not expected.

To carry out the initial evaluation, an official can review the *Competition Checklist* contained in Box 10 below to examine whether a regulatory proposal has a significant potential for anti-competitive impacts. The Competition Checklist provides a series of simple questions designed to elicit the potential for anti-competitive impact without requiring extensive industry knowledge. Many regulations are not expected to raise significant competition concerns as identified in the checklist.

The objective will be to subject various rules and regulations to the above screen to make an initial assessment of the likely harm to competition. A "yes" answer to **any** of the items noted in the Competition Checklist will warrant a more thorough review of the rule or regulation under consideration as it potentially signals a significant competition concern. This will trigger a "full assessment" noted in section 6.2 below.

Many regulations are likely to be complex in their structure (e.g., grandfather clauses and regulations on content and standards) and will require careful assessment in order to evaluate the likely harm to competition. However, there are some rules and regulations that can more easily be argued to reduce competition unless there is a compelling public interest justification. These merit high scrutiny and include:

- Advertising. The primary focus should be on restricting misleading or untruthful advertising. In addition, imposing restrictions on advertising for products such as alcohol and tobacco may have strong public interest justifications such as those related to health and consumption by minors. Aside from these considerations, restrictions on advertising should be viewed very sceptically;
- Exemption from competition laws. Partially or completely exempting potentially competitive industries or specific businesses from competition laws needs to be done away with. The public interest justification for such exemptions is often not transparent;
- Explicit restrictions on entry should be viewed with scepticism unless there are compelling public interest justifications.

In addition, if the proposal calls for any form of restriction on the prices of goods and services, these need to be reviewed carefully as they may have wide-ranging, detrimental effects on the long-term functioning and performance of markets. As we noted in section 4.2.4, restrictions on prices should be avoided wherever possible.

Box 10. **Competition Checklist for the conduct of competitive effect assessments**

A competitive effect assessment should be conducted if the regulatory proposal has any of the following 3 effects:

(1) Limits the number or range of suppliers

This is likely to be the case if the proposal:

- Grants exclusive rights for a company to supply goods or services
- Establishes a license, permit or authorisation process as a requirement of operation
- Limits the ability of some types of suppliers to provide a good or service
- Significantly raises cost of entry or exit by a supplier
- Creates a geographical barrier to the ability of companies to supply goods or services, invest capital or supply labour

(2) Limits the ability of suppliers to compete

This is likely to be the case if the proposal:

- Controls or substantially influences the prices for goods or services
- Limits freedom of suppliers to advertise or market their goods or services
- Sets standards for product quality that provide an advantage to some suppliers over others or that are above the level that many well-informed customers would choose
- Significantly raises costs of production for some suppliers relative to others (especially by treating incumbents differently from new entrants)

(3) Reduces the incentive of suppliers to compete vigorously

This may be the case if the proposal:

- Creates a self-regulatory or co-regulatory regime
- Requires or encourages information on supplier outputs, prices, sales or costs to be published
- Exempts the activity of a particular industry or group of suppliers from the operation of general competition law
- Reduces mobility of customers between suppliers of goods or services by increasing the explicit or implicit costs of changing suppliers

6.2 Full evaluation

The full evaluation is to be conducted if the initial evaluation suggests that the regulation has the potential to be harmful to competition. One aspect in particular that requires a thorough analysis is the issue of costs.

A common theme across many regulations is that they impose costs on market participants. The issue of costs imposed by the regulation on incumbent businesses and potential entrants is a significant one and will typically be addressed in detail within the more standard benefit-cost analysis of regulatory assessments. Setting of content and standards, grandfather clauses, switching costs, product repositioning, among others, have the potential to impose significant costs on businesses. What is important is that the costs may be significant and asymmetric. For example, smaller businesses may be more adversely affected if the new quality or environmental standards force firms to incur significant new investment and R&D expenditures or when there are asymmetric effects by vintage of capital. If a firm acquired capital relatively recently assuming that older rules will prevail, then their costs of meeting the new rules may be more significant compared to another firm whose capital stock is relatively old and nearing replacement. Thus, for many regulations, evaluating the costs imposed by the regulation is of paramount importance to assessing the competitive effects. In this dimension, there are clear synergies between the standard regulatory assessments process and competition assessment as the evaluation of costs imposed by regulations forms part of the standard benefit-cost regulatory evaluations. These data and information obtained from regulatory assessments can be used to make assessments of the degree of costs imposed and whether they might be asymmetric.

In some instances the assessment of costs will be relatively easier, but in others it will pose significant challenges. For example, if new environmental regulations for electric generation companies require new capital equipment such as pollution filters, the costs of these may be readily available. In other instances, such as regulation of product content or standards, where new R&D expenditures may have to be incurred by businesses, estimating costs is more complicated. Assessment of the magnitude of costs and whether they have asymmetric impact by type of business and type of capital will have to be made on a case-by-case basis. What is clear is that such an assessment may be critical for the evaluation of the effects of the regulation on entry, exit and future competition in the market.

Assess whether the regulation might:

1. Impose barriers to entry of new businesses.

Regulations that explicitly restrict entry or impose barriers to the flow of goods and services are obvious cases. Other candidates in this category – which may be thought of as implicitly restricting entry – include regulations that set content and standards, grandfathering clauses, granting or extending exclusive rights, switching costs and product repositioning.

2. Force certain types of incumbent businesses (e.g., smaller firms) to exit the market.

Included in this category would be setting of new standards or content, grandfather clauses, granting or extending exclusive rights, switching costs, new (implicit or explicit) regulations on flow of goods and services into local or regional markets and product repositioning.

3. Increase the prices of goods and services.

Inference on this item will, in part, be derived from 1 and 2 above. For example, if a particular restriction might reduce entry or force exits, there is a likelihood that prices might increase. In addition, there is a likelihood of prices increasing if there are restrictions on advertising; if mechanisms that allow increased cooperation between businesses lead to collusion; and if self-regulatory mechanisms lead to price coordination and collusion; and partially or completely exempting industries or specific businesses from competition laws.

4. Reduce product variety.

As for item 4, inference on this item will, in part, be derived from 1 and 2 above. For example, if a particular rule or regulation might decrease competition by reducing entry or force exits, there is likelihood that the market may suffer from reduced variety.

5. Significantly increase concentration in the relevant market.

A more thorough description of the specific (affected) market and an assessment of the potential increase in concentration would be useful in gauging the likelihood of anti-competitive conduct. Section 3 discussed issues related to market definition and market concentration, and Appendix A outlines measurement issues. As has been alluded to before in this document, it is important to note that while concentration data is a useful starting point for analysis, the proper assessment of market

power effects will have to take into account issues related to barriers-to-entry and the competitive behaviour of incumbent firms. For example, high concentration in the relevant market when combined with high barriers-to-entry will lead to a significant likelihood of market power.

6. Reduce innovation.

The broad guidelines for this were outlined in section 5. These include assessment of entry and exit and the extent of costs imposed by the regulation on businesses. If the consequence of a regulation is likely to be reduced competition in the market, it may lead to decrease in innovation. Also, if the costs of meeting the regulatory requirements are high, it may divert firms' resources away from innovative activities into meeting the regulatory targets.

7. Affect upstream and downstream markets.

This issue was discussed in section 5.7. The impact on related markets can be assessed in two stages, just as they were for the primary market under consideration.

6.3 Proposed alternatives

As noted in section 5, alternatives to the proposed regulation will have to be outlined and an assessment of their competition concerns noted.

7. Concluding Remarks

Keeping the broad social and economic objectives of regulations in clear view, assessing the impact of rules and regulations on competition in markets can serve to accomplish important economic goals. Economies flourish when markets are relatively competitive as this compels businesses to be more efficient and innovative. The long-term rewards to the national economies can be significant in terms of better allocation of resources, lower prices, improved competitive position relative to trading partners and higher economic growth and welfare. Traditionally, when crafting regulations, governments typically did not pay close attention to the impact of the regulations on the extent of competition in markets. While competition effects cannot supplant some of the desirable social and economic goals that are pursued by regulations, it is being increasingly recognised that minimising the adverse effects on competition can reap significant dividends. In recent years, many national governments have initiated steps to evaluate the pros and cons of various rules and regulations in order to minimise harm to economic growth and welfare.

While initiatives to improve the efficiency of regulations are gaining ground, there is relatively little guidance available on how to assess the impact of various rules and regulations on competition. This document is an important step towards alleviating this shortcoming.

This document draws on the concepts and framework used by competition law enforcement to provide an understanding of the key competition issues. It discusses various types of rules and regulations that have the potential to unduly limit competition, and outlines a general framework to provide guidance on how regulators and public-policy officials can evaluate the impact on competition. While discussing the different types of regulations, the document also provided some insights on how to devise ways to assess the competition effects and minimise the negative consequences.

The guidance contained in this document is meant to provide an introduction to competition issues for regulatory officials who seek to consider the market impacts of regulations and other actions by governments and professional organizations. On the one hand, the approach outlined here could potentially be included as one element within a broader regulatory assessment process. In that case, it is expected that a detailed competition assessment would be merited only in those cases where there was a potentially significant adverse impact on competitive conditions. On the other hand, the approach outlined here could also be used to simply enable policymakers to consider more fully the competition impacts of various regulations and directives. Overall, the framework for competition assessments outlined in this document is likely to help regulatory officials sharpen their knowledge of competition law enforcement concepts and tools and to then use those to evaluate the impact of regulations.

Overall, competition assessments that focus on evaluating the impact on market outcomes of governmental policies, and rules and restrictions imposed by professional organizations, can be a valuable input into increasing the effectiveness and efficiency of rules and regulations and lead to improved outcomes for consumers and higher economic welfare and growth.

Bibliography

Ascher, Bernard. "Toward a borderless market for professional services." American Antitrust Institute, 2004.

Becker, Randy, and Vernon Henderson. "Effects of Air Quality Regulation on Polluting Industries," *Journal of Political Economy* 108, 2000.

Bhattacharjea, Aditya. "India's Competition Policy: An Assessment," Working paper, 2003. Available at SSRN: http://ssrn.com/abstract=440080

Bresnahan, T., P. Reiss."Entry and Competition in Concentrated Markets," *Journal of Political Economy* 99, 1991, 977-1009.

Bush, Nathan. "Chinese Competition Policy: It Takes More than a Law," *China Business Review*, 2006.

Cassidy, B. "Can Australian and US Competition Policies be Harmonized?" Speech, Australian Competition and Consumer Commission, 2001.

Cavaliere, Alberto, Fabio Frontoso Silvestri and Giorgio Tanasso. "Voluntary Agreements as Information Sharing Devices: Competition, Environmental Regulation and Welfare," Working paper, Università di Pavia, (September) 2001.

Caves, Richard. "Industrial Organization and New Findings on the Turnover and Mobility of Firms," *Journal of Economic Literature*, 1998, 1947-1982.

Clyde, P.S. and J.D. Reitzes. "The Effectiveness of Collusion under Antitrust Immunity: The Case of Liner Shipping Conferences." United States Federal Trade Commission, Bureau of Economics Staff Report, December, 1995.

Czech Business Weekly. "Beer Spat Brewing in E.U.", January 2006.

Deighton-Smith, R., Harris, B. and Pearson, K. "Reforming the Regulation of the Professions," National Competition Council Staff Discussion Paper, AusInfo, Canberra, 2001.

DGXV Report. "The Role, Position and Liability of the Statutory Auditor in the European Union," European Commission, 1996.

Djankov, S., La Porta, R., Lopez-de-Silanes, F., Schleifer, A. "The Regulation of Entry," *Quarterly Journal of Economics* 117, 2002, 1-37.

Dunne, Timothy, Mark Roberts and Larry Samuelson. "Patterns of Firm Entry and Exit in U.S. Manufacturing," *RAND* Journal of Economics 19, 1988, p.495-515.

Eekhoff, J. (Ed.). Competition Policy in Europe. Springer, 2004.

Fazzari, Stephen, R. Glenn Hubbard, and Bruce Peterson, ''Financing Constraints and Corporate Investment,'' *Brookings Papers on Economic Activity* 1, 1988, 141–195.

Financial Times (April, 14), 2006. "GM Products Approved as Brussels Overhauls Food Safety Body."

Ghosal, Vivek. "Competition in International Postal Markets: Should the Universal Postal Union's Anti-Remail Provisions be Repealed?" *World Competition Law and Economics Review*," 2002, p.205-222.

Ghosal, Vivek. "Regime Shift in Antitrust," Working Paper, Georgia Institute of Technology, 2006.

Ghosal, Vivek. "Discovering Cartels: Dynamic Interrelationships between Civil and Criminal Antitrust Investigations," *Journal of Competition Law and Economics*, 2007.

Glaeser, Edward, and Andrei Schleifer. "A Case for Quantity Regulation," National Bureau of Economic Research, Working Paper No. 8184, 2001.

Goodpaster, Gary, and David Ray. "Trade and Citizenship Barriers and Decentralization," *The Indonesian Quarterly* 3, (September) 2000.

Goodwin, Edward. "Quantitative Restrictions and EC Environmental Law," Environmental Focus, University of Nottingham School of Law, 2001.

Government of Australia. "Competition Principles Agreement," Clause 5 (1), 1996.

Greenberg, Paul A. Six Airlines Target Priceline with Travel Site, E-Commerce Times, June 29, 2000. http://www.ecommercetimes.com/news/articles2000/000629-9.shtml

Harding, C., J. Joshua. Regulating Cartels in Europe: A Study of Legal Control of Corporate Delinquency. Cambridge: Oxford University Press, 2004.

Hay, G., D. Kelley. "Empirical survey of price-fixing conspiracies," *Journal of Law and Economics* 17, 1974, 13–38.

Homma, T. "Japan Fair Trading Commission's Grand Design for Competition Policy in the 21st Century," Commissioner's Speech, 2002.

Jaguar Consulting Pty Ltd. "Identification and examination of best practice principles for national regulation," A paper prepared for the National Transport Commission, (November), 2003.

King, Rawle O. "Medical Malpractice Liability Insurance and the McCarran-Ferguson Act," Congressional Research Service Report for Congress, 2003.

Kleiner, Morris, and Robert Kurdle. "Does Regulation Affect Economic Outcomes," *Journal of Law and Economics* 43, 2000, 547-82.

Landgrebe, Jonathan. "The mobile telecommunications market in Germany and Europe: Analysis of the regulatory environment," Working Paper Ludwig-Maximilians University (Munich), 2004.

Langley, Alison. "The growing problem of obesity means that American food companies must face increasing scrutiny abroad," New York Times News Service, (August 9) 2003.

Legnetti, Paul. "Ink, Paint and Plastics Applications," Presented at the Annual Conference on Hazardous Waste Minimization and Environmental Regulation," (September) 1992.

Lexchin, Joel. "Voluntary Self-Regulatory Codes: What Should We Expect?" American Journal of Bioethics, p. 49-50, 2003.

Littlefield, Timothy R. "FDA Regulation of Cranial Remodeling Devices," *Journal of Prosthetics and Orthotics* 16, 2004, p.35-38.

MacAvoy, Paul. Industry Regulation. New York: W.W. Norton & Company, 1992.

McKinsey Global Institute, Employment Performance, Washington D.C.: McKinse and Company, 1994.

Motta, M. Competition Policy. Cambridge University Press, 2004.

Muris, Timothy J. "Creating a Culture of Competition: The Essential Role of Competition Advocacy," International Competition Network Panel on Competition Advocacy and Antitrust Authorities, Naples, Italy, (September 28) 2002.

New York Times. "FTC Chief Calls Role of Agencies Inflationary," (October 8) 1974.

Netz, Janet. "Price Regulation: A (Non-Technical) Overview," in Bouckaert, Boudewijn and De Geest, Gerrit (eds.), Encyclopedia of Law and Economics, Volume III, The Regulation of Contracts. Cheltenham, Edward Elgar, 2000.

NordREG. "The Integrated Nordic End-User Electricity Market: Feasibility and Identified Obstacles," Nordic Energy Regulators, 2006.

Office of Fair Trading (UK). "Switching Costs," Economic Discussion Paper 5 (Annex C – case studies), A report prepared for the Office of Fair Trading and the Department of Trade and Industry by National Economic Research Associates, April 2003.

Office of Fair Trading (UK). "The Control of Entry Regulations and Retail Pharmacy Services in the UK," January 2003.

Ogando, Joseph. "Safety Nets," *Design News*, 2003.

Organization for Economic Cooperation and Development. "The OECD Report on Regulatory Reform: Synthesis," 1997.

Organization for Economic Cooperation and Development. "Regulatory Reform in Japan: The Role of Competition Policy in Regulatory Reform," 1999.

Organization for Economic Cooperation and Development. "Competition in Local Services: Solid Waste Management," 2000.

Organization for Economic Cooperation and Development. "Competition and Regulation Issues in the Pharmaceuticals Industry," 2001.

Organization for Economic Cooperation and Development. "Regulatory Policies in OECD Countries: from Interventionism to Regulatory Governance," 2002.

Organization for Economic Cooperation and Development. "Regulatory Impact Analysis: Inventory," 2004.

Organization for Economic Cooperation and Development. "Guiding Principles for Regulatory Quality and Performance," 2005.

Organization for Economic Cooperation and Development. "Competition on Merits," 2005.

Panchapakesan, Bala. "Repositioning in Tough Economic Times," *PaperAge*, (October) 2003, p.34-37.

Pitofsky, Robert. "Self Regulation and Antitrust," Speech by Chairman of the U.S. Federal Trade Commission, 1998.

Richardson, J.D., Graham, E.M. (Eds.). Global Competition Policy. Institute for International Economics, 1997.

Rubin, Paul. "Information Regulation (Including Regulation of Advertising," in Bouckaert, Boudewijn and De Geest, Gerrit (eds.), Encyclopedia of Law and Economics, Volume III, The Regulation of Contracts. Cheltenham, Edward Elgar, 2000.

Salies, Evens. "A Measure of Switching Costs in the GB Electricity Retail Market," Observatoire Français des Conjonctures Économiques, (January) 2006.

Sappington, David and Gregory Sidak. "Anticompetitive Behavior by State-Owned Enterprises: Incentives and Capabilities," in Competing with the Government: Anticompetitive Behavior and Public Enterprises, Rick Geddes (Ed.), Hoover Institution, 2004.

Schiffrin, Anya. "Top U.S. Investment Banks under Antitrust Microscope," (December 1, 2000). http://www.cnn.com/2000/TECH/computing/12/01/banks.antitrust.idg/index.html

Stephen, Frank, and James Love. "Regulation of the Legal Profession," in Bouckaert, Boudewijn and De Geest, Gerrit (eds.), Encyclopedia of Law and Economics, Volume III, The Regulation of Contracts. Cheltenham, Edward Elgar, 2000.

Sutton, John. "Gibrat's Legacy," *Journal of Economic Literature*, 1997, 40-59.

Sutton, John. Sunk Costs and Market Structure. Cambridge: MIT Press, 1992.

Sutton, John. Technology and Market Structure. Cambridge: MIT Press, 1996.

Terzic, Branko, Berthold Wurm and Yorck Dietrich. "Germany: Taking the Lead in Electricity and Gas," *Public Utilities Reports*, January 2000. http://www.pur.com/pubs/3382.cfm

Valentine, Debra. "Industry Self-Regulation and Antitrust Enforcement," Speech by the General Counsel of the U.S. Federal Trade Commission, 1998.

Viscusi, W.K., Harrington, J.E., Vernon, J.M., Economics of Regulation and Antitrust. Cambridge: MIT Press, 2005.

Wadhwa, Mayank. "Parking Space for the Poor: Restrictions Imposed on Marketing & Movement of Agricultural Goods in India," Research Internship Papers, Centre for Civil Society, 2001.

White, Lawrence J. "Why is the SEC Protecting the Big Three Bond Raters?" *The American Banker*, (June 29) 2001.

Appendix A.

MARKET DEFINITION AND STRUCTURE ANALYSIS

In the event that a regulation appears to have significant adverse effects on competition, it might be useful to conduct a more formal analysis of the relevant market under consideration and its structure as part of the more detailed stage-two assessment. This analysis is more in tune with analysis conducted by competition authorities. Given this, there might be benefits of consulting with other parts of government that have competition policy experience.[1]

A valid question to ask is: why might a formal analysis of market definition and market structure aid in competition assessment of regulations? One of the objectives of a formal analysis would be to assess the likelihood of anti-competitive behaviour and exercise of market power.

1. Pro-competitive legislation is becoming stronger and more effectively enforced in many countries. The European Union has seen important changes in the enforcement of competition rules and calls for greater vigilance to ensure competitiveness of markets. Contributions in Eekhoff (2004) make a case for competition policy vigilance in the newly deregulated sectors in Europe to ensure competition and growth. Enforcement of price-fixing agreements has seen a big change in Europe; Harding and Joshua (2004) detail the shifts. Motta (2004, p. 9-17) provides an overview of competition policy in selected European countries and the E.U. Japan and Australia have, for example, put new emphasis on competition policy and debated harmonizing laws with major trading partners (Cassidy 2001, Homma 2002, OECD 1999, and Richardson and Graham 1997). The U.S. has signifcantly ratcheted up enforcement against cartels over the last two-decades; Ghosal (2006) discusses these shifts. China is expected to pass its Antimonopoly Law sometime in 2006-07 after over ten-years of deliberations (Bush, 2006). India passed its new Competition Act in 2002 and set up its Competition Commission (Bhattacharjea, 2003). Within this context, there might be meaningful synergies between government staff who enforce competition laws and those who conduct regulatory assessments.

As we have described in several places in section 4, myriad types of rules and regulations can lead to barriers-to-entry and exit of firms, leading to changes in the market structure. Decrease in entry and/or increase in exits may significantly increase market concentration and the likelihood of exercise of market power and anti-competitive behaviour. To the extent that market concentration has a link to the likelihood of anti-competitive behaviour, it is worthwhile to formally examine this issue. The classic article by Hay and Kelley (1974), for example, shows the clear links between the structure of markets – small number of firms and high concentration – and emergence of coordination of prices and quantities (collusion). Once the relevant market has been formally defined, then, consistent with the country's guidelines on critical cutoffs of concentration, an assessment can be made regarding the likely harm to competition. Once again we note that while concentration data is useful for assessing the likelihood of market power, a complete assessment of market power effects will have to take into account issues related to barriers-to-entry and the competitive behaviour of incumbent firms.

Next we go through the process of defining the relevant – economically meaningful – market. A key question to ask is: Is the product sold by one firm a good substitute for that sold by another firm? The extent to which the two firms' products are good substitutes depends on factors such as product characteristics and geography. Let us consider some examples:

- Automobiles are highly differentiated in terms of their characteristics. Consumers who go shopping for a large luxury car like the Rolls Royce are not the same as those who are looking to buy a small economy car like the Smart Car. In other words, these two cars are typically not considered by consumers to be substitutes. In contrast, corn produced in two neighbouring farms may be virtually identical in their taste and characteristics, in which case consumers would treat them as very good (if not perfect) substitutes.

- A producer selling electricity in Norway does not compete with a producer selling electricity in Portugal. Similarly, sellers of electricity in the state of California do not compete with sellers in Florida. Transmission constraints ensure that these markets are geographically separated. In other words, the supply of electricity in one market may not be a substitute for the other, geographically separated, market. In contrast, pencils used in schools that are manufactured by different producers are available all over the country and there is no geographic separation of this market.

Thus, when defining the relevant market, we need to consider firms and products that are in direct competition with each other and this involves careful assessment of:

- The relevant product;
- The relevant geography.

From the above examples, the market for small cars has to be defined as different from large luxury cars. And the set of firms selling electricity in one part of the country (e.g., California) may well be different from those in another part (e.g., Florida).

Defining the relevant market is important in order to assess the potential impact on consumers. Let us consider some examples:

- If the producers of electricity in California are engaging in business practices that may be harmful to competition – such as price-fixing – this is expected to have an adverse impact on the consumers of electricity in California but no impact on the consumers in Florida.
- Suppose a new nationwide regulation raises the safety standards for x-ray machines to make them emit lower radiation. Companies now engage in new expenditures on R&D to attain the new regulatory standards. Some businesses are able to cost-effectively meet the standards early on, while others fail and have to exit the market. An effect of this regulation may be to permanently change the number of firms that compete in this market and potentially raise the market power and prices consumers face. These effects will have to be evaluated in the specific product market that is affected by the new safety regulation.
- Access to the incumbent's telecommunications network is crucial for new entrants to enter the market and compete. Suppose a country legislates rules whereby the owners of the network (incumbent companies) do not have to share it with the competitors. This ruling is likely to have an adverse impact in several markets such as (a) long-distance phone services, (b) domestic phone services and (c) high-speed internet. The adverse impact of this ruling may differ significantly across these three markets. Competition in the high-speed internet services market, for example, may be quite adversely affected if competitors do not have reliable and adequate access to the network.

Thus any competition assessment has to be targeted to the relevant – economically meaningful – market and the companies in it.

Once the relevant market has been defined, after considerations of the product characteristics and geography, one can look at several variables that describe the structure of this market.

- *Number of firms:* In general, the larger the number of firms in the relevant market, the lower the concerns about market power. A small number of firms is not necessarily bad for competition – it depends on the magnitude of the barriers-to-entry and potentially on the type of competition that prevails (e.g., bidding markets versus regular markets).[2]
- *Size distribution of firms:* Are the firms in the relevant market relatively equal in size, or are there substantial differences in their sizes? For example, suppose a market has 20 firms but the size distribution of firms is highly skewed with the largest firm enjoying 80% of the market share and the remaining 19 firms having the other 20% of output. If the size distribution is highly skewed, it has potential implications for the market's competitiveness. It may well be the case that a dominant firm that faces no effective competition from the firms at the fringe wields significant market power.
- *Concentration of output:* This measures the extent to which sales or production capacity is concentrated in the hands of a few firms in the market. A simple measure, for example, is the share of total sales that is accounted for by the 3 or 4 largest firms in the market. The measure that is typically used by competition policy authorities, is the Herfindahl-Hirschman Index (HHI). A larger HHI indicates greater concentration of sales (or production capacity) in the hands of a few firms. Increases in HHI are, in general, expected to lead to greater likelihood of market power with implications for higher prices paid by consumers.

In combination, the variables related to the number of firms, the size distribution of firms and output concentration can be used to get a broad picture of the structure of the relevant market, allowing us to make judgments about the competitiveness of the market under consideration. It is important to note that high concentration or the presence of a few firms do

2. Bresnahan and Reiss (1991), for example, study entry into local markets by various professional services – doctors, dentists, and others. They find that starting from a monopoly provider, even the entry of one additional provider leads to a significant drop in profit margins with additional entry reducing the margins by much smaller amounts. Their results seem to indicate that one does not necessarily need a large number of competitors to attain low prices for consumers and low margins for producers.

not necessarily imply the ability to exercise market power. For a proper assessment, one will also have to examine the extent of barriers-to-entry and competitive behaviour of incumbent firms. For example, higher concentration when coupled with high barriers-to-entry will lead to a greater likelihood of incumbent firms having the ability to exercise market power.

Box A1 presents information to illustrate the market structure concepts.

Box A1: Market structure

Example 1. A hypothetical market.

Consider a market with five firms with their market shares being 40%, 25%, 20%, 10% and 5%. The size distribution is skewed in the sense that the biggest firm has a large share, but the second and third firms have shares that are not too much smaller.

- Four-firm output concentration measure (C4) = 95%.

- The Herfindahl-Hirschman Index (HHI) is defined as follows. Let there be N firms in the market with Q the total output of all the firms in the relevant market and q_i be the output of the ith firm; $Q = \sum_{i=1}^{N} q_i$. Let s_i be the market share of the ith firm; $s_i = \frac{q_i}{Q}$.

  HHI is defined as: $HHI = \sum_{i=1}^{N} (s_i^2)$.

In the above hypothetical market, HHI=$40^2+25^2+20^2+10^2+5^2$=2,750.

Example 2: Market shares for aircraft engine manufacturing (approx. numbers for 2001).

General Electric 42%; Pratt and Whitney 32%; and Rolls Royce 26%. While General Electric has the largest share, the size distribution is not terribly skewed.

- C4=100%.

- HHI=1764+1024+676=3464.

Example 3: Market shares for internet browsers (approx. numbers for 2005).

Internet Explorer 85%; Firefox 5%; Mozilla 4%; AOL 2%; MSN 2%; Netscape 1%; and Opera 1%. The Internet Explorer has the largest share and the size distribution is highly skewed.

- C4=96%.

- HHI=7225+25+16+4+4+1+1=7276.

Example 4: Market shares for UK supermarket store chains. (Source: BBC, Feb. 8, 2006.)

Tesco 31%; Asda 17%; Sainsbury's 16%; Morrison's 11%; Somerfield 6%; Waitrose 4%; Iceland 2%; and total for other (smaller) stores 13%. Tesco has double the market share compared to its closest rival and the next three chains are relatively even. (While the HHI computations below assume a national market, most probably the market is likely to have some geographic segmentation and, in this case, the concentration measures will have to be calculated for each geographically segmented market. But we do not go into this complication here.)

- C4=75%
- HHI (for the top 7 firms)=961+289+256+121+36+16+4=1683.

From examples 2-4 we see that the internet browser market has the highest HHI at 7276 and the UK supermarket chains the lowest at 1683. The stark difference in the HHI is generated due the fact that Microsoft has 85% of the market but the leading supermarket chain Tesco has only 31%. The HHI is a better measure compared to the C4 as it takes into account size distribution issues. The broad conclusion that one draws in competition policy analysis is that markets with higher HHI have greater potential for the exercise of market power.

The steps in evaluation could be thought of as follows.

1. Define the relevant product and geographic market

This is a crucial first-step in order to properly assess the impact of the rule or regulation. We consider a few hypothetical examples to highlight the product and geography issues.

- Regulation: Suppose a local government in a country has imposed restrictions on the transport of goods into the region. And suppose that the set of products affected are agricultural. One could go about defining the product and geography as follows:
  - Product: First, itemize all the agricultural products that are likely to be affected. This gives us the broader product market definition. Second, identify whether there are any specific products (potatoes? corn?) within the broad set that are likely to be affected more. Thus, one can have product definitions at two levels: one broad and one narrow.
  - Geography: The broad definition would include the entire region affected. If say parts of the region (East?) is affected the most, this could constitute a narrower geographic definition.
- Regulation: Suppose a grandfather clause permits existing electric generation plants not to meet the new pollution standards for five

years but all new plants (either expansion by incumbents or new entry) have to meet the new standards.

- Product: Electricity.

- Geography: The best way to think about geography would be to consider whether the market is segmented in terms of the electricity (transmission) network or is it best considered as an integrated whole. In the U.S. for example, if the state of California passes a new environmental legislation and adds a grandfather clause, it is unlikely to affect the market in Florida. Thus, it would be best to consider the state as the relevant geographic market.

- Regulation: Suppose there is a prohibition on veterinarians from advertising on television or the internet.
  - Product: veterinarian services.
  - Geography: entire country. Since the restriction applies to everyone in the profession, there is no geographic segmentation of the markets.

2. Assess the structure of the relevant market

Once the relevant market has been defined above, proceed to outline the following information:

- Number of firms in the market. This would be a tally of all the businesses in the relevant market. If a complete tally is not possible, at least the major players in the market should be identified.3
- Size distribution of firms in the market. In general, it will be difficult to obtain the market share of each business. A rough idea can be obtained by grouping the businesses into small, medium and large categories, and the number of businesses in each category.
- Concentration. The Herfindahl-Hirschmann Index (HHI) of concentration will be a difficult measure to construct in general as exact production levels of the businesses in the market may be hard to get. Where available, one can use the market shares of the major

3. Ideally one would also like to obtain a picture of the number of potential entrants as this would more accurately portray the extent of likely competition. But this information may be difficult to obtain.

players in the market to compute this index. A simpler measure, such as the four-or-five firm concentration index, may be easier to construct because less information is needed.

As noted earlier, the specific cut-offs for market concentration or number of firms that will be used will be determined by the country-specific guidelines.

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Appendix B.

SAMPLE COMPETITION ASSESSMENT FOR TAXI REGULATIONS*

This appendix provides a sample competition assessment for a change in taxi regulations in a hypothetical town. First, the current situation and potential actions are described. These are materials that would be envisaged with a broad regulatory review and are therefore not specific to a competition assessment. After these introductory materials, a sample competition assessment is provided.

This sample assessment is relatively brief. Longer assessments could easily be envisaged, especially for markets with greater economic import.

1. Overall situation

1.1 Background

The city of Touriste has a City Council that is the municipal authority in charge of regulating the taxi industry. In pursuing its functions, the City Council's ultimate goal should be ensuring that the markets providing taxi services function efficiently and deliver the maximum benefit to consumers, the taxi industry and the overall economy. Touriste is a town with a number of major tourist attractions. 60% of taxi rides in the town are generated by tourists. In order to protect the tourists, the City Council has maintained a highly regulated taxi environment in the past.

Despite the high level of regulation, the level of consumer complaints has been quite high, largely related to an absence of supply of taxis both at peak hours and at night. At the request of the Department of Transportation and Local Government, the City Council has reviewed the regulations in place. It has found that the existing regulations were not always in accord

* This sample competition assessment was prepared by Marta Troya-Martinez.

with the public interest and is suggesting new regulatory proposals that are intended:

- To ensure the efficient functioning of the market of taxis, guaranteeing that safety, quality and availability are assured at all times of the day and year; and
- To deliver the maximum benefit to consumers in accord with the public interest.

1.2. Description of existing regulations and current environment

The City Council, empowered by the Traffic Act, has, since 1978, had the duty of determining the regulation of the taxi industry, which has three dimensions: the regulation of entry, the regulation of quality and the regulation of fares. The City Council currently has 2562 licences in circulation. In the last three years, the city has issued a total of 25 new licences, i.e. increased the number of licences available by 1 per cent.

The City Council, the municipal licensing authority, requires that all persons operating a taxi shall own a driving licence and pass a background check, before they are licensed. The potential taxi drivers must meet government standards on financial viability, safety of passengers and the public, and vehicle maintenance. Operators must also ensure that taxis under their control fulfil the same conditions.

In particular, the background check requires taxi drivers:

- To present a bank account statement for the last five years;
- To pass a medical fitness check;
- To undergo a review of the driving record;
- To pass tests on the knowledge of the local road network and on language skills; and
- To take the taxi vehicle to a city garage to have it tested.

A satisfactory background check must be completed before obtaining a licence. There are two paths by which a licence can be obtained: first, when the City Council issues new licences and second, when an incumbent taxi driver wants to sell his or her own licence. In both cases, the newcomer has to pay a fee for the licence.

Due to the restrictions on entry and to prevent the abuse of market power, the licensing authority determines a per-distance-fare per time band

and area plus an initial charge. The rules do not state whether drivers can offer discounts. While discounts are occasionally obtained through advance negotiation with a driver, particularly for long trips, such discounts are rare. The fares are increased when necessary to reflect inflation and the market price of petrol. The Council specifies, as well, the taximeter characteristics and the regularity of its inspections.

It has been pointed out by various consumer and tourist associations that the goal of the current regulation is to protect incumbents instead of protecting consumers. It has been alleged that the measures to obtain a licence (replacing an existing licence holder or acquiring one of the rare additional licences issued by local authority) restrict entry to the market.

As a result, there is a significant demand and supply imbalance that gives speculators the incentive to apply for licences and on obtaining them (for a regulated price), sell at a high market value and make a healthy profit. The shortage of supply also lowers the quality of service, for instance, waiting time over the last five years has increased significantly, as the number of active taxis during the day has decreased from 9.2 to 7.9 taxis per 10,000 people and some illegal taxis have already entered the market. Taxis are particularly difficult to find at night (currently, there are only 5.7 taxis per 10,000 people), because the lower rate of usage and higher likelihood of "bad" customers results in taxi drivers earning less, per hour, at night than during the day. In addition, the fact that most taxi drivers have families means that they are less willing to work at night.

1.3. Alternatives

There are five primary policy alternatives being considered:

- No action;
- Maintenance of the licensing system with a gradual elimination of the restriction in the number of licences while maintaining taxi fare regulations, with a higher fare during the night time hours;
- Maintenance of the licensing system with a gradual elimination of the restriction in the number of licences and on the taxi fares;
- Conversion to a franchise system; and
- Elimination of all regulations.

2. Sample competition assessment

Given this background, the competition assessment prepared for the Touriste City Council is attached below. The exact outcomes of this assessment would not necessarily be the same in all circumstances, so other assessments of taxi regulations could well arrive at different conclusions. The City Council would then make its decision as to how to proceed based, in part, on the results of the competition assessment, but would have no legal obligation to follow the recommendations of the assessment.

2.1. Objectives of the regulation

The objectives of the regulation are:

- To ensure the efficient functioning of the taxi market, guaranteeing that safety, quality and availability are assured at all times of the day and year; and
- To deliver the maximum benefit to consumers in accord with the public interest.

2.2. Regulatory options

Regulatory options are:

Option 1: Do nothing but keep the current regulatory content, under which the City Council (the municipal regulatory body) continues to regulate entry through a compulsory licensing system that restricts the number of licenses in the market. By means of this licensing system, the Council also establishes the quality requirements under which taxis can operate. In particular, it has established that, prior to obtaining a license, a background check, which requires presentation of a bank statement for the last five years; passing a medical fitness check; a review of the driving record; passing tests on the knowledge of the local road network and on language skills; and taking the taxi to a city garage to have it tested, is made. Moreover, the City Council also sets the structure and the maximum level of taxi fares that can be charged.

Option 2: Maintain the licensing system implemented by the City Council but eliminate, gradually, the restriction in the number of licenses. The City Council will charge newcomers a fixed fee to cover the costs of certifying driving ability, knowledge of services, personal fitness of drivers, possession of liability insurance and safety checks for cars. The City Council will also retain the taxi fare regulations, although it will introduce a

higher fare during the night time hours and will require the fare structure to be displayed on the outside of the taxi.

Option 3: Remove the maximum fare regulation and the rule of "first-in, first-out" that apply to taxi stands but otherwise retain the regulations of option 2.

Option 4: Introduce a franchise system under which all the taxi companies compete with each other to offer the best price-quality service. Companies proposing the best offer will be awarded franchises, which shall be re-tendered periodically. As part of the franchise, the City Council will make the taxi operators responsible for handling complaints and will hold them accountable for resolving each complaint satisfactorily. Franchisees that violate city standards will be subject to fines and possible revocations. Consideration has been given to awarding four franchises.

Option 5: Abolish all the regulations. In particular, make the industry impose a voluntary registration system (certification system), managed by the City Council, and let potential consumers freely decide between using a certificated taxi service or a cheaper unregulated taxi service.

2.3. The affected market

The product market directly affected by the regulation is the market for taxi services which includes all the vehicles providing door-to-door passenger services on demand within the municipal area. This market can be segmented on the basis of how customers search for the service. According to this criterion, the following segments can be delimited: the phone-booked taxi market, the taxi stand market and the hailed-taxi market. The scope of the market is the municipality affected by the City Council regulation as taxis can only take passengers from within their licensed area.

Any substantive impact on other elements of the supply chain (i.e. supply of special devises for taxis such as taximeters) is unlikely.

Although the market is not highly concentrated (as at January 2006, there were 2562 licenses in circulation, most of which owned by self-employed drivers who drive their own vehicle) and the degree of differentiation[1] is low, competition in the market defined above is rather weak, with important supply and demand imbalances (especially at night)

1. The degree of differentiation refers to the amount of modifications that can be done to the service in order to make it different from those of the competitors.

and with taxi drivers apparently making little effort to improve the service with the objective of attracting customers. This is the result of:

- The existence of information failures, regarding both price and quality, that prevent consumers from choosing the most suitable service for them (for example, when a taxi is ordered by phone, they do not know the features of the taxi);
- The artificial restrictions on the number of drivers in the market (in the last three years, the city increased the number of licenses available by only 1 per cent) that prevents potential drivers from entering into the market when there is a situation of undersupply; and
- The custom, enforced by taxi drivers through mutual threats, that requires customers at taxi stands to take the first taxi, rather than choosing a car that has quality-related features that they might prefer.

The existence of prices that are higher than the competitive level and undersupply is reflected in the exorbitant unofficial market value of the licenses, when they are resold to newcomers and in the long waiting lists to obtain a license.

However, the liveliness of competition varies with the segment. In principle, the phone-booked market can be fairly competitive as travellers can shop around gathering and comparing information about different prices with relatively low search costs (i.e. a phone call). Moreover, repeated purchases in this segment are relatively probable which would ensure the provision of an appropriate service. In the taxi-stand market the opportunities for competition are limited because consumers are required to take the first taxi on the rank (the "first-in-first-out" policy). Finally, in the hailed taxi market, the opportunities for choosing between taxis can be limited, especially if taxis arrive infrequently meaning that consumers have incentives to hail the first vacant taxi that passes them. In such a situation, price competition is difficult to sustain because a price reduction is very likely to be unprofitable if consumers are unwilling to search for offers and a repeated purchase pattern is inexistent (i.e. a taxi driver that unilaterally decreases his price would not see demand for his service increase).

2.4. Competition assessment

2.4.1 Option 1

Licensed drivers would continue to benefit from the weak competition stated above.

2.4.2 Option 2

The initial fixed cost of entry is expected to decrease as a result of the increase in the available licenses. Moreover, a tendency to offer innovative services is expected to arise to the extent that competition is enhanced.

The abolition of the restrictions on the number of licenses will decrease the barriers to entry and therefore encourage competition. This fact, together with the decrease in costs, will create a downward pressure on the fares, which now are going to be easily available to consumers. This should enable the market to function more effectively, with consumers making better-informed choices. Additionally, the increase in entry will also reduce the waiting times and therefore increase the average quality of the service.

2.4.3 Option 3

The competitive impacts are the same as in option 2, with the difference that competitive fares would not be as effectively ensured. In particular, it is difficult to predict with any degree of certainty what the final impact on fares will be. On one hand, fares may decrease if more competition is promoted and if the initial entry costs are reduced. But on the other, fares may increase if the expansion in the supply leads to a reduced occupancy rate[2] or if a competitive setup is not achieved due to the market failures inherent in the market, including the ignorance of non-resident customers about the taxi system and the need to negotiate.

Given that 60% of rides are by tourists, and most tourists would not be familiar with the idea that fares might differ or be negotiated, there is reason to worry that many taxis may engage in price gauging tactics.

2.4.4 Option 4

The effects of this option seem to be ambiguous. Much depends on whether competition could be successfully established.

2. Given that the majority of the costs are fixed, this would mean that fares should increase in order to recoup all the costs.

If this is the case, then the fares are expected to decrease and the quality and the available information to increase, which would enable the market to function more effectively, with consumers making better-informed choices.

However, if instead, a collusive setup is established, then the fares are expected to increase and the quality to decrease. This is a possible scenario as concentration and barriers-to-entry are expected to increase (i.e. effectively, only large companies will be able to operate).

2.4.5 Option 5

The costs of entry and of quality compliance are expected to decrease. Thus more entry is anticipated. Fares are expected to decrease on average as a result of the decrease in costs and the increase in competition but quality is expected to decrease due to the lack of quality control and insufficient incentives for taxis (except for those that are pre-ordered) to invest in quality.

Since no quality and fare regulation is provided, consumer uncertainty about the quality and prices of services will increase. As a result, particularly for less informed consumers, such as tourists, who are a high percentage of taxi users, welfare may be decreased, with many non-certified taxis expected to pursue a "ripoff" strategy. The punishment for taxi drivers who commit fraud or do not respect their initial oral commitments on price (once a trip is over) are weak, as the retraction of a license is not very costly if entry is low cost. Once taxi customers, particularly those with luggage, are in a taxi, they are in a weak negotiating position if initial commitments are not respected.

2.5. Conclusions

Option 1 is likely to have the greatest detrimental competitive effect, since regulations impose unnecessary barriers-to-entry into the market, which not only undermines competition but also the information available to consumers necessary to make informed choices. As a result, the quality and availability of the services provided are negatively affected. Proposals number 2 and 3, conversely, have a number of pro-competitive benefits because compared to the current regulations, the number of available licenses in the market is not artificially restricted, which had the effect of limiting competition. It is believed that these options would promote a high-quality deal for customers and appropriate service availability. However, under option 3, competitive fares will not be as effectively ensured. It is difficult to determine whether option 4 would do away with the anticompetitive problems detected under option 1. If it is successfully

implemented, it may have pro-competitive benefits but the risk of ending up in a collusive agreement is significant, particularly if new franchise operators are not able to enter easily in later rounds of bidding. Moreover, given the current market structure, the implementation of franchises is relatively complicated. Finally, although option 5 has many pro-competitive benefits, it is not able to ensure good market functioning in a heavily tourist-oriented town, as it does not address the problem of asymmetric information between the driver and the customer. Moreover, neither quality nor safety are effectively ensured in the market.

Appendix C.

SAMPLE COMPETITION ASSESSMENT FOR DENTISTRY REGULATION*

This appendix provides a sample competition assessment for a national change in dentistry regulations. First, the current situation and potential actions are described. These are materials that would be envisioned within a broad regulatory review and are therefore not specific to a competition assessment. After these introductory materials, a sample competition assessment is provided.

This sample assessment is relatively brief. Longer assessments could easily be envisaged.

1. Overall Situation

1.1. Background

The Parliament held hearings into dentistry two years ago that included testimony by dentists, dental insurers, dental hygienists and consumer groups. The testimony from the non-dentists suggested that dental treatment was increasingly being moved from the state payment schedule to much higher private fees. Consumer groups testified that there was little active competition between dentists over these fees. The Competition Authority testified that, if the General Dentistry Council were not protected by its authorizing regulations, many of its actions would likely be viewed as those of a cartel organizer. Dental hygienists noted that private options for receiving dental care, such as teeth cleanings by dental hygienists, would be much less costly but were obstructed by the system of governance over all dental practice. Because the system of governance was set up by a regulation that stated that dentistry practice should be governed by the

* This sample competition assessment was prepared by Marta Troya-Martinez.

General Dentistry Council, and that many problems were thought to arise from the fact that dentists held the majority of seats on the General Dentistry Council, the Parliament passed, as part of its recent Health Act, a requirement that the Department of Health review its dentistry regulations and the operation of the dentistry profession, with a view:

- To ensure that safety and qualifications for persons engaged in dentistry are assured, as well as the appropriateness of services performed; and
- To avoid unnecessary or disproportionate restrictions on dentistry provision, particularly those that may not be in accord with the public interest.

1.2. Description of existing regulations and current environment

In the provision of dentistry, a substantial portion of patients have their care reimbursed by the state, while a substantial portion of dentist revenue comes from private provision. The state reimbursement is directed towards the young, unemployed, low income, elderly and disabled population. The fees for private service are considerably higher than those of the state's fee schedule. Most dentists serve both private and public patients.

For 37 years, the Department of Health has held by regulation 103.4(a) that the duty of determining the qualifications necessary to practice different kinds of dental procedures, excluding oral surgery, shall be determined by the professional regulatory body, the General Dentistry Council.

The General Dentistry Council requires that all persons overseeing and practising dentistry shall have, at least, a professional degree in dentistry (the Doctor of Dentistry Degree) from a program certified by the General Dentistry Council and that all such persons shall remain members in good standing of the General Dentistry Council.

The General Dentistry Council has established that, in order to remain a member in good standing, a Doctor of Dentistry must maintain "ethical standards" of the Council. The ethical standards include:

- Honest billing practices (patients shall be charged rates that are in accordance with the practice's price list);
- No advertising for services in newspapers or on public panels that exceed 10 cm x 20 cm;
- No soliciting of other dentists' patients;

- No employment by a corporation and no employment of a dentist by non-dentists; and
- No prices set that are below standard prices practised in the local community.

The General Dentistry Council has determined that no person who is not a Doctor of Dentistry shall be permitted to perform dentistry, except under the supervision and oversight of a Doctor of Dentistry. In particular, dental hygienists and dental technicians were determined by the General Dentistry Council to not have sufficient qualifications to provide any services on their own.

As a result of the review called for by the Dentistry Act, the Department of Health is proposing to rewrite the regulation 103.4(a). The proposed amendment gives the General Dentistry Council the duty of determining medical and safety requirements for becoming a Doctor of Dentistry, a dental hygienist or a dental technician and of regulating the business practices of practitioners and their corporate form. However, the Department of Health would retain veto power over the proposed codes of conduct by the General Dentistry Council and would act according to the principle that persons shall be permitted to be self-employed and perform the tasks for which they have been licensed to perform, as long as they do so honestly and without false advertising. The Department of Health will also introduce a complaints procedure with the scope to discipline dental professionals whose patients claim provide inferior service and will introduce a corresponding disciplinary procedure.

1.3. Alternatives

There are four alternatives considered in this review:

- No action;
- The General Dentistry Council maintains quality and standards control, as well as non-medical aspects of care delivery. However, non-medical aspects will be subject to oversight by the Department of Health. Similarly, the complaints procedures will be governed by rules of the Department of Health;
- Department of Health assumes all functions previously carried out by the General Dentistry Council; and
- Elimination of all dentistry regulations.

Under the first option of no action, the pre-existing regulation 103.4(a) would remain in place.

Under the second option of revision, a number of changes would be instituted that address concerns raised by some observers about the current regulation of dentistry. In particular, the General Dentistry Council has used its ability to develop and oversee appropriate qualifications of oral health practitioners to govern both health related and non-health related aspects of behaviour, while not appropriately ensuring that patients are aware of prices for procedures before those procedures are performed. The General Dentistry Council would then maintain the responsibility for overseeing health-related qualifications and non-health related aspects of conduct; however, the aspects of conduct would henceforth be subject to approval by the Department of Health. The complaints procedures would also henceforth reside and remain with the Department of Health.

Under the third option, the Ministry would assume the duty of setting the qualifications of practitioners and deciding on recommendations concerning appropriate procedures to perform a given diagnosis.

Under the fourth option, the current regulations governing safety and conduct would be eliminated. Qualifications would continue to be issued by the General Dentistry Council, but such qualifications would not be necessary for practice. Rather, potential patients would be responsible for ensuring that their practitioners had the appropriate qualifications and would have recourse to courts for non-performance.

A competition impact assessment should be undertaken as option 1 of the regulatory proposal appears to have at least one of the effects listed in the "Competition Checklist" proposed by the OECD Competition Toolkit. In particular, option 1 would "control or substantially influence the price at which a goods or services can be sold in the market" and "limit the freedom of suppliers of a product or service to advertise or market their product (beyond any general limitations requiring accurate labelling and preventing false or misleading advertising)".

2. Sample Competition Assessment

2.1 Objectives of the Regulation

The objectives of the regulation are:

- To ensure that safety and qualifications for persons engaged in dentistry are assured, as well as the appropriateness of services performed; and

- To avoid unnecessary or disproportionate restrictions on dentistry provision, particularly those that may not be in accord with the public interest.

2.2. Regulatory Options

Regulatory options are:

Option 1: Do nothing but keep the current regulatory content, under which the General Dentistry Council (the private professional body) is responsible for the dental related and the non-dental related regulations and the complaints procedure. In particular, the current regulation has established that all persons overseeing and practising dentistry shall have, at least, a professional degree in dentistry (the Doctor of Dentistry Degree) from a program certified by the General Dentistry Council and that all such persons shall remain members in good standing (i.e. shall respect the following ethical standards: honest billing practices, no advertising for services in newspapers or on public panels that exceed 10 cm x 20 cm, no soliciting of other dentists' patients, no employment by a corporation and no employment of a dentist by non-dentists and no prices set that are below those prices standardly practised in the local community) of the General Dentistry Council. One result of this regulation is that dental hygienists and dental technicians cannot practise without the supervision of a dentist.

Option 2: Allow the General Dentistry Council to retain both the duty of determining medical and safety requirements and the duty of regulating non-dental related issues; however, place the last responsibility subject to the approval of the Department of Health, who will act according to the principle that persons shall be permitted to be self-employed and perform the tasks for which they have been licensed to perform, as long as they do so honestly and without false advertising. Place the complaints procedure and the regulation under the control of the Department of Health.

Option 3: Give the Department of Health the duty of setting the qualifications of practitioners and the non-dental regulation but otherwise retain the regulations of option 2.

Option 4: Abolish all the regulations. In particular, make the industry impose a voluntary registration system (certification system), managed by the General Dentistry Council, and let potential patients be responsible for ensuring that their practitioners had the appropriate qualifications. Let patients have recourse to courts for non-performance.

2.3. The Affected Market

The product market directly affected by the regulation is the market for dental services which includes all the professionals who can provide preventive services (e.g. general exploratory visit, X-ray and analysis), advice on oral health, fitting and selling dentures, denture repairs, routine treatments (e.g. fillings, extractions, plaque cleaning), complex treatments (e.g. crowns), orthodontic treatment, oral surgery and cosmetic treatments (e.g. bleaching the teeth). Due to the small size of the national territory, the geographic scope of the market is the whole country.

There is unlikely to be any substantive impact on other elements of the supply chain (i.e. supply of inputs and machinery).

Although the market is not highly concentrated (as at April 2005, there were 3,459 dental professionals registered, usually practising as self-employed dentists or small partnerships of two or three professionals), competition in the market is rather weak, with each professional "waiting" for customers to arrive. This is the result of:

- The enforcement of the ethical standards, which explicitly forbids any type of competition (including promotions and advertisement);
- The existence of factors that prevent consumers from easily changing to another professional, such as the difficulty in transferring the medical records (many dentists refuse to give their records to another dentist) and the lack of available information on prices and treatment characteristics; and
- The restrictions on the supply side that prevent corporations from entering the market and dental hygienists and dental technicians from practising independently from dentists.

2.4 Competition Assessment

2.4.1 Option 1

Dentists would continue to benefit from the weak competition stated above.

2.4.2 Option 2

The costs of operation are expected to decrease as a result of more freedom in the choice of business model and more efficiency in the use of

the professional dental expertise. Moreover, more investment is expected as corporations benefit from greater access to sources of capital.

It is difficult to predict with any degree of certainty what the impact on the market structure will be. On one hand, more entry is expected as dental hygienists and dental technicians are allowed to practise on their own. But on the other, the entry of corporations and other private business, which are potentially larger than self-employed professionals or partnerships, may make the market more concentrated. Entry will be enhanced as well by the possibility to implement marketing strategies that were previously forbidden, such as advertising targeted to make the new business known and promotions to attract rivals' patients. These tools will facilitate the entry of newcomers by enabling them to promote their practice and, therefore, by shortening the necessary time to generate the sufficient business to obtain a return on investment.

The abolition of the most restrictive non-dental regulation would lead to increased competition without this being at the expense of inferior quality (the professional conditions to practise remain unchanged and the complaints procedure will be made more effective under this option). Additionally, in the race for obtaining new clients, more information will be disclosed. This should enable the market to function more effectively, with consumers making better-informed choices.

2.4.3 Option 3

The competitive impacts are broadly the same as in option 2, with the difference that less quality is expected as the Department of Health will take over technical, professional regulation, for which it is generally less qualified than professionals.

2.4.4 Option 4

As under option 2 and 3, the costs of operation are expected to decrease. However, newcomers will benefit more (due to the introduction of a certification system). Similarly, more investment is also expected.

More entry is anticipated, not only from dental hygienists and dental technicians, but also from all those professionals who were not able to operate under the status quo. Nevertheless, the effect on the market concentration is unclear, as new and larger businesses are also expected. As under options 2 and 3, more information and new market strategies will arise in the market. However, since there will be no restriction in the behaviour of the professionals, this potential flow of information may be confusing or even misleading and, therefore, useless for the purposes of

decreasing the asymmetry of information between the patient and the professional. Thus, the market may become less transparent, increasing the perceived uncertainty about the services. As a result, it will function less effectively, with consumers making worse-informed choices. Additionally, due to the certification system and a less effective complaints procedure, the quality is expected to be lower on average.

Therefore, although it seems that competition will increase, it will be at the expense of the quality.

2.5 Conclusions

Option 1 is likely to have the greatest detrimental competitive effect, since regulations impose unnecessary restrictions on the business of dentistry, which not only undermines competition but also the information available to consumers necessary to make informed choices. The proposals number 2 and 3, conversely, have a number of pro-competitive benefits because compared to the current regulations, dentists will no longer be able to limit advertising, promotions, corporate form and auxiliary dental professional employment, which all have the effect of limiting competition. However, under option 3, quality will not be as effectively ensured. Finally, option 4, although it has many pro-competitive benefits, is not able to ensure an effective market function as it does not address the problem of asymmetric information between the professional and the patient.

Therefore option 2 attains the policy objectives while likely most promoting the process of competition. Option 2 is likely the best option from the perspective of competition.