Competition in Professional Services

engineers

The Competition Authority is undertaking a study across a range of eight professions in the construction, legal and medical sectors of the Irish economy. The specific professions being reviewed are engineers, architects, dentists, optometrists, veterinary surgeons, medical practitioners, solicitors and barristers

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The Competition Authority
An tÚdarás Iomaíochta

All pictures courtesy of the Institution of Engineers of Ireland

Cover Pic: Wind Petals: by David O'Neill
Feb 2004 - Carnsore Point. This photo shows the tower and blades of a wind turbine against a clear spring sky.

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Pic. on previous page: Fidelity Inspired by Thomas Bulfin
Jan 2004 - The picture was taken on O'Connell Street and depicts the
Spire soaring into the sky next to the statue of fidelity on the roof of the GPO.

EXECUTIVE SUMMARY

Conclusions on the Engineering Profession

i The Competition Authority believes that the current regulatory regime in the engineering profession facilitates competition. The light regulatory framework has few barriers to entry and limited, but appropriate, restrictions on who can perform engineering work. This allows engineers to compete with each other, despite the complexity of the services they provide and without compromising the quality and safety of the work undertaken.

ii. The engineering profession has an open regulatory structure which assists in ensuring a high degree of competition and correspondingly provides significant benefits to buyers. The pro-competitive factors include:
- An open regulatory regime where individuals or companies, including foreign-based firms, may provide almost any engineering service;
- A range of educational institutions offering large numbers of courses for individuals wishing to study engineering, and;
- The existence of relatively transparent and objective procedures that allow the recognition of titles held by foreign-trained engineers.

iii. Statutory regulation of the profession consists largely of planning and building regulations.

iv. There are over 50,000 professionals describing themselves as engineers or engineering technicians in Ireland. Total income of the engineering profession in Ireland is in the range of €750 million to €1 billion per year, or just under one percent of Gross Domestic Product (GDP).

v. The importance of engineering to the economy and society goes far beyond the income generated by those involved in the profession. The engineer makes the benefits of science and technology accessible to society through the design, construction and maintenance of buildings, machinery, vehicles and infrastructure. Engineering plays a valuable role in providing safe housing, transportation and work environments for millions of people throughout Ireland every day.

The purpose of this Study

vi. In March 2003, a report commissioned by The Competition Authority, identified a number of restrictions to competition across a range of eight professions in the construction, legal and medical sectors of the Irish economy. The specific professions reviewed were engineers, architects, dentists, optometrists, veterinary surgeons, medical practitioners, solicitors and barristers.

vii. The work for this report was carried out by Indecon Economic Consultants and was used as the starting point by the Authority to carry out a series of in-depth Studies into each of the eight professions. Engineers are the first in this series to be analysed by the Authority.

viii. This Study of selected professions is being carried out by the Authority following an OECD report in 2001, which suggested that competition in the professional services sector in Ireland could be stronger. The purpose of the study is to;
- Identify any regulations or practices that may restrict competition within these professions;
- Evaluate any consumer benefits claimed to exist from any of these restrictions, and;
- Consider whether the restrictions are proportionate to any consumer benefits.

Preliminary Report and initial recommendations

ix. The Competition Authority published a preliminary report and consultation paper in August 2003 following its initial analysis of competition in the engineering profession. In this preliminary report the Authority made ten initial recommendations and raised concerns about the following issues:

- The criteria for obtaining the title of Chartered Engineer, and the potential conflict of interest in the Institution of Engineers of Ireland's (IEI's) role in setting these criteria and adjudicating upon applicants;
- Restrictions on advertising permissible by engineers under the rules of the IEI and the Association of Consulting Engineers (ACEI);
- IEI and ACEI rules requiring co-operation between competing engineers, and;
- Potentially anti-competitive advice provided by the ACEI to buyers of engineering services.

x. A further concern of the Authority related to the IEI's suggestion of additional regulation within the profession. Specifically, the IEI considers that a greater number of engineering functions should be reserved to those of its members holding the title of Chartered Engineer.

Resolution of the Authority's concerns

xi. Of the ten initial recommendations put forward by the Authority, the nine recommendations relating to the professional engineering bodies have all been satisfactorily resolved.

xii. Since August 2003 the relevant professional organisations have either removed these restrictions or satisfied the Authority that the relevant rules do not restrict competition or are justified on the grounds of the overall benefits they provide to buyers of engineering services.

- The IEI and the ACEI have both agreed to remove certain advertising restrictions;
- The IEI also agreed to amend potential restrictions relating to criteria for the title of Chartered Engineer, and;
- The ACEI has ceased to publish statements and information that have the potential to mislead buyers and hinder competition.

xiii. In addition both the IEI and the ACEI have adequately justified other restrictions identified by the Authority. For example;

- The rule of the IEI, which requires engineers who take over projects to communicate with the original engineer, is justified on the basis that it ensures that all relevant information concerning the project is shared, preventing costly delays, and;
- The ACEI explained a rule prohibiting members from contacting the clients of other members as being directed only at misleading or unethical behaviour and not at cold-calling in general. The Authority also took into account that many engineering consulting firms in Ireland are not members of the ACEI and, are not therefore, subject to its rules.

xiv. The resolution of these issues should further decrease any barriers to competition in the sector, with corresponding benefits to consumers of engineering services.

Outstanding Issues

xv. Following the consultation process, the issue of further state restrictions on the engineering profession remains unresolved. The Competition Authority believes that the case has not been adequately made for any further regulation of the engineering profession, as suggested by the Institution of Engineers of Ireland (IEI).

xvi. If the Minister for the Environment, Heritage and Local Government is to consider imposing further regulation on engineers, the Authority recommends that he should first undertake a Regulatory Impact Assessment (RIA) as outlined in the Government's White Paper 'Regulating Better'.

xvii. In its final recommendations the Authority has outlined how Regulatory Impact Assessments (RIAs) can be used to ensure that the impact of further regulation is fully considered.

xviii. The issue of accreditation for engineering degrees was raised with the Authority for the first time during the consultation process and is also the focus of the final recommendations.

Final Recommendations of The Competition Authority on the Engineering Profession

Recommendation concerning State restrictions on the engineering profession	Organisation / individual responsible for implementing recommendation
No further regulation should be imposed on the engineering profession without a Regulatory Impact Assessment (RIA) being carried out by the Minister for the Environment, Heritage & Local Government	Minister for the Environment Heritage & Local Government
Recommendation regarding accreditation of engineering degrees	**Organisation / individual responsible for implementing recommendation**
The accreditation system for engineering degrees by the Institution of Engineers of Ireland (IEI) must be made more open and transparent. Specifically (a) Membership of the IEI should not be a pre-requisite for inclusion in the accreditation process, and; (b) Interested parties should be provided with reasons regarding accreditation decisions made by the IEI.	Institution of Engineers of Ireland (IEI)

Initial Recommendations on the Engineering Profession resolved during the consultation process

Recommendations regarding the administration of the title of Chartered Engineer:	Organisation / individual responsible for implementing recommendation	Result
The Institution of Engineers of Ireland (IEI) should amend the criteria for Chartered Engineers so that applicants can use non-Chartered Engineers as supporters	Institution of Engineers of Ireland (IEI)	IEI has amended rules
The IEI should remove all references to a candidate's age from the criteria for the title of Chartered Engineer. To the extent that age is used as a proxy for experience, the IEI should refer to the amount of experience required explicitly.	IEI	IEI has amended rules
Recommendations regarding the process of becoming an ACEI member:	**Organisation / individual responsible for implementing recommendation**	**Result**
The Association of Consulting Engineers (ACEI) should amend its membership criteria so that an applicant's supporters do not need to be ACEI members	The Association of Consulting Engineers (ACEI)	ACEI has amended rules
The ACEI should amend its membership selection process so as to require members to provide reasons when objecting to new applicants.	ACEI	ACEI meets requirement, no amendment necessary
Recommendations regarding the rules governing the conduct of IEI and ACEI members:	**Organisation / individual responsible for implementing recommendation**	**Result**
The IEI and the ACEI should remove all restrictions on members advertising except the requirement that advertising must be truthful and capable of verification, or if not, clearly expressed as personal opinion.	IEI & ACEI	IEI, ACEI have amended rules
The IEI and the ACEI should clarify prohibitions on 'unfair competition' to ensure that only misleading or unethical behaviour that is clearly harmful to buyers is prohibited.	IEI & ACEI	IEI, ACEI have amended rules

The IEI and the ACEI should remove any requirements that members must (a) communicate with previously hired engineers, and, (b) decide upon the status of agreements between other engineers and clients before taking over the work of other engineers.	IEI & ACEI	The Authority is satisfied that communication is justified when taking over projects, no amendment necessary for requirement a) IEI and ACEI amended rules for requirement b)
The ACEI should not prevent its members from soliciting for work from other members' clients.	ACEI	ACEI meets this recommendation
Recommendation regarding the ACEI's advice to buyers:	Organisation/individual responsible for implementing recommendation	Result
The ACEI should remove material from its website that has the potential to reduce competition, including statements that suggest that fee competition between members is prohibited	ACEI	ACEI has removed material from its website

section 1

Pic. on previous page: The Boyne Bridge by Donal Murphy
July 2003 - Boyne Bridge, Drogheda, Co Louth.

1. INTRODUCTION

Main Conclusions

1.1 The engineering profession delivers important and complex services to consumers in a reasonably competitive manner, while mainly avoiding substantive regulation. It shows how professional services do not necessarily need restrictive regulation in order to provide consumers with affordable high-quality services.

1.2 The relative freedom from regulation is notable, as engineering services are at least as complex as those offered by professions such as law and accountancy. The costs of deficiency of service are considerable, as having buildings or bridges fall down would impose huge costs on society. By avoiding direct regulation of who can provide engineering services, and instead attempting to regulate directly the quality of service, engineers produce the results that have been of consistently appropriate quality.

1.3 This Study found very few barriers to competition in the provision of engineering services, though The Competition Authority's Consultation Document from August 2003 referred to several rules and regulations which potentially inhibited competition. During the consultation period, nearly all such rules have been amended by the professional bodies concerned, which should help further improve competition in the area.

1.4 A small number of new issues were raised by the consultation process, and have resulted in further recommendations, which, if implemented, should ensure further increases in competition.

1.5 The engineering profession has an open regulatory structure, with few barriers preventing individuals or businesses from providing engineering services. This assists in ensuring a high degree of competition and correspondingly provides significant benefits to buyers. The pro-competitive factors include:

- An open regulatory regime where individuals or companies, including foreign-based firms, may provide almost any engineering service;
- A range of educational institutions offering large numbers of courses for individuals wishing to study engineering; and,
- The existence of relatively transparent and objective procedures that allow the recognition of titles held by foreign-trained engineers.

1.6 The importance of the profession can be recognised by both the nature of the work done and its impact on the economy as a whole. Engineering work is fundamental to the entire built environment and to the operation of the machines and structures of a developed, technological society. Our estimates suggest that the total income accruing to engineering services is around €1 billion per year, which is just under 1% of Gross Domestic Product (GDP).

1.7 In spite of the fact that engineers in Ireland are not required by law to possess formal credentials, most engineers hold engineering qualifications from third-level institutions. Most engineers are employed directly by private companies and public organisations as in-house engineers while a minority of engineers provide services on an independent, consulting basis. The purchasers or consumers of engineering services are varied, ranging from small businesses to multi-national companies and Government departments.

1.8 Services supplied by engineers are often combined with other occupations, such as architects, technicians, IT specialists, etc. Given the core nature of engineers' contributions, their overall importance to the economy may be greater than 1% of GDP. The way in which the complex and technical professional services of one profession can be combined with those offered by other professions is also a good example of how professionals from different areas can operate with each other without a lowering of standards or harm to the consumer. Indeed this combination of professionals can enhance the choices and combination of services to consumers.

Study Context and Process

1.9 Section 30 of the Competition Act 2002 allows the Competition Authority to "study and analyse any practice or method of competition affecting the supply and distribution of goods or the provision of services or any other matter relating to competition".

1.10 Following an OECD Report[1] in 2001, which suggested that competition in the professional services sector in Ireland could be stronger, the Authority commenced a study of selected professions. The professions chosen were: engineers, architects, dentists, optometrists, veterinary surgeons, medical practitioners, solicitors and barristers.

1.11 The purpose of the study is to identify any regulations or practices that may restrict competition within these professions; to evaluate any consumer benefits claimed to exist from any such restrictions; and to consider whether the restrictions are proportionate to any benefits.

1.12 The initial process of the study involved the selection of Indecon International Economic Consultants to conduct the primary research phase. Indecon subsequently published a report on the eight selected professions, in March 2003: "Indecon's Assessment of Restrictions in the Supply of Professional Services".[2] The Indecon Report outlined a number of practices and regulations that it considered had the potential to restrict competition.

1.13 In August 2003 The Competition Authority released a Consultation Document for the engineering profession. This document presented draft analysis and recommendations and sought comments from interested parties. Several parties provided responses and were consulted by the Authority in the creation of this final report.

1.14 All material from the consultation process is incorporated in this report, which gives the Authority's final views on the engineering profession. One exception is the issue of professional indemnity insurance, which is closely linked to the architect's profession; a recommendation on this issue will be given in the final architects report.

1.15 The report is structured in the following manner: each chapter takes an overall area and within that area focuses on a number of major issues. Chapter 2 examines the regulatory structure and nature of competition within the engineering profession. Chapter 3 looks at barriers to entry to the profession, examining areas such as educational training, entry from abroad, and reservation of title and certain functions to some engineers. Chapter 4 looks at rivalry within the profession, focussing on the rules of professional bodies, and advertising restrictions. Chapter 5 briefly examines how complaints within the profession are dealt with.

1. OECD 'Regulatory Reform in Ireland', Review of Regulatory Reform, 2001.
2. See http://www.tca.ie/professions.html.

section 2

Pic. on previous page: Night Train by Niall O'Brien
The picture was taken by Railway Tracks. An epic and view of public transport. An under estimated machine.

2. THE ENGINEERING PROFESSION

What engineers do

2.1 The role of the engineer is to make accessible to society the benefits of science and technology through the design, construction and maintenance of buildings, machinery, vehicles, infrastructure, etc. This provides safe housing, transportation and work environments for millions of people throughout Ireland every day.

2.2 The different disciplines within engineering include mechanical, civil, electrical, chemical, structural, HVAC (heating, ventilation and air conditioning), marine, agricultural, bio-medical, software and traffic engineering. Some engineering businesses also offer project management services, involving a combination of disciplines such as civil and structural engineering along with other professional services like architecture.

2.3 Many engineers are engaged in a professional or consulting capacity whereby public and private sector clients retain their services. The majority of these practices are small - many engineers work alone - although there are a small number of larger practices, some of which may employ other related professionals.[3] A proportion of engineers employed by consulting businesses typically leave to set up their own businesses in competition with former employers. Many other engineers are employees of industrial organisations, central and local Government, while a small number are employed as researchers and academics.

2.4 There is no requirement to register with any regulatory body to practise as a professional engineer or to use the title "engineer". The only engineering title that is statutorily protected is that of "Chartered Engineer". The main professional body, the Institution of Engineers of Ireland (IEI), is invested with the statutory protection of the title of Chartered Engineer under The Institution of Civil Engineers of Ireland (Charter Amendment) Act, 1969. The IEI has a membership of 20,000 engineers and technicians, of which 3,500 are Chartered Engineers.

2.5 The other main domestic professional body is the Association of Consulting Engineers of Ireland (ACEI). This is a non-statutory professional body, and has approximately 200 consulting engineers as individual members and approximately 100 corporate members. Other engineers and engineering firms that operate in Ireland may also register with international organisations, such as the International Society of Pharmaceutical Engineers, the Institution of Chemical Engineers and the Chartered Institution of Building Services Engineers.

2.6 As there is no registration requirement for engineers in Ireland, the total number of engineers engaged in private practice is unknown. Figures suggest there are over 50,000 persons describing themselves as engineers or engineering technicians in Ireland, based on IEI estimates and Central Statistics Office data.[4]

2.7 Survey figures suggest that engineers' salaries typically range from around €22,500 for an inexperienced ordinary member to approximately €90,000 for a Chartered Engineer with over 30 years experience who has obtained the title of Fellow.[5] In some cases gross earnings may exceed €150,000; for example, engineers with specialist skills employed in the pharmaceutical sector. Furthermore, owners of engineering businesses can earn profits in addition to any salary income. Applying these figures to our estimate of engineering numbers suggests that the total income of engineers in Ireland is in the vicinity of €750 million to €1 billion per year, or just under 1% of Gross Domestic Product.

2.8 About 90% of engineering businesses' income comes from corporate or Government clients. The remainder comes from individual clients.

3. Table 6.10 of the Indecon report indicates that a majority of engineering businesses employ fewer than four engineers, and a small number employ much large numbers, up to approximately 400. The pattern of advertising expenditure across engineering businesses suggests the same structure.
4. Census data indicates that there were 59,400 engineers and allied trades workers in 1996. CSO figures suggest that consultant engineers numbered 13,177 of this figure, although this figure may not account for employee engineers that work for consulting firms in a consulting capacity.
5. IEI Salary Survey, 2003, Manpower SkillsGroup, 2003.

2.9 Some engineering work will be done by engineers from outside Ireland, particularly if the consumer is a multi-national company with a base in Ireland. For example, an American-based company that wishes to undertake construction in Ireland may engage the services of an American-based engineering firm to design the construction. Similarly, there is nothing preventing Irish buyers from purchasing engineering services from abroad, or preventing Irish engineering businesses from providing services abroad.

Demand for engineering services

2.10 The provision of engineering services is generally referred to as one market because engineers share common abilities, skills and quantitative problem solving methods. However, the demand for services can be separated into different market segments depending upon the buyer characteristics, the size of the project, and the specific engineering disciplines required.

2.11 Different types of engineering disciplines provide different services. From a demand perspective, if a consumer requires the services of an electronic engineer, the services of a civil engineer would not provide a suitable substitute. Thus, from a demand perspective different engineering specialists do not tend to compete with each other. But a customer may demand a variety of engineering services, and potentially engage a number of different engineers to work on the same project.

2.12 Also, an important factor about the demand for engineers is that, although engineering services are complex, they are often combined with those of other professionals. For instance, for a large construction project, engineers will be used in combination with a variety of other professionals to provide inputs to the whole project. Even for smaller projects, an engineer will often work with an architect or quantity surveyor. Sometimes the buyer will themselves engage both professionals, sometimes one will sub-contract work out to the other. Overall, this flexibility in purchasing and working together with other professionals facilitates competition and buyer choice within the sector.

2.13 One segment of demand derives from large private buyers undertaking major projects (for instance construction projects in excess of €50 million). Such purchasers usually have substantial experience in buying engineering services, and will typically undertake an extensive selection process to ensure that they receive the desired quality of service for the most competitive fee possible. This process can involve obtaining expressions of interest from businesses that offer the necessary engineering services. A short list of the most appropriate firms may be subsequently created and the prospective client firm may then seek an extensive amount of detailed information from the various competing engineering businesses regarding the following matters:

- The level and quality of service to be provided. Under this heading, details are provided of the specific engineers available, their qualifications, experience and titles, including whether engineers are Chartered, whether some functions would be subcontracted out, and to whom;
- Estimated duration of project; and,
- Cost, in terms of daily or hourly rates, or fixed price, or percentage of total construction costs, or some combination of these.

2.14 Specific contractual requirements would then be discussed. Details negotiated could include project specification for the engineering service to be judged against, incentives to meet certain requirements like timelines, details regarding any subcontracting, or provisions to provide the client with the necessary degree of flexibility. Different clients may emphasise different requirements depending upon their needs; for example, some clients may wish to ensure they receive competitive daily rates and the ability to adjust the project specifications if they desire flexibility in the project, whereas buyers who have a well-defined, finalised project may seek a fixed fee for a specified quality of service.

2.15 Another approach adopted by some private buyers is to use a specific engineering business for all their engineering requirements, rather than undertake the competitive process outlined above. This approach is only likely to be used if the clients consider that the engineering businesses provide satisfactory services for satisfactory fees. Moreover, such contracts are likely to be reviewed regularly, thus ensuring the engineering firm is kept exposed to competitive pressure.

2.16 The market for engineering services for large-scale private projects appears to be highly competitive. There are a large number of firms, both national and international, competing for such projects, and large private-sector buyers have proven to be sophisticated and knowledgeable in ensuring they use the competitive process to obtain their desired combination of price and quality. The recent economic boom in the State has meant that demand for this type of service has been very high, and it seems likely to continue in the immediate future.

2.17 A related segment of demand is that of large public buyers, which constitutes a substantial portion of the demand for engineering services. Such buyers include bodies as the Office of Public Works, the National Roads Authority and the Department of Education and Science. It is also anticipated that the State will continue to be a major purchaser of engineering services in the future, with long-term investments in roads and infrastructure likely to generate substantial demand for some time.

2.18 Government Departments and agencies that purchase engineering services are governed by the Public Procurement Guidelines, and European Union Directives, regarding the awarding of public service contracts. The Public Procurement Guidelines stipulate that different processes are to be used for projects of different values. During the consultation process it was suggested that the relevant departments and other state organisations could use their buyer power more effectively to obtain the best value possible but that they are hampered by restrictive procurement rules. This is unfortunate, because many departments possess in-house expertise, in the form of engineers and architects, who are well-placed to assist in selecting engineering businesses and ensuring that services offered are of sufficient quality and the fees charged are competitive. Semi-state organisations undertaking large-scale projects are more likely to operate a competitive tendering process similar to that undertaken by the private buyers described above.

2.19 At the other end of the demand spectrum, smaller private buyers appear to take diverse approaches. These buyers are likely to be less well informed about the market or to have much experience in engaging engineers. When considering smaller projects, such buyers occasionally hire an architect who will have the responsibility of choosing an engineer or undertaking a study to evaluate the options available to a client. Architects may undertake some form of selection process or, more probably, may select engineering businesses based upon past experience of working with such businesses. In this situation, any relationships built up between architects and engineering businesses may influence architects' decisions.

2.20 Selection of engineers may also be based upon advertisements in publications such as the Golden Pages, or on word of mouth recommendations. Amongst these buyers it is difficult to gauge the prevalence of pro-competitive practises, such as requesting quotes, or to gauge the importance placed upon membership of various organisations or word of mouth recommendations. There are no further obvious restrictions to prevent these buyers from shopping around.

Supply of engineering services

2.21 The supply of engineering services is distributed amongst a variety of organisational forms. Some engineers will work for non-engineering firms, and will provide internal engineering services for such firms, generally relating to maintenance and ensuring continuity of services.

2.22 Other engineers work for firms who offer engineering services (sometimes along with other services) in one or more areas. There are no regulatory restrictions on the way engineers can choose to organise themselves, and consequently, engineers will typically work in limited companies of varying size.

2.23 From a supply perspective, individuals and engineering firms often tend to specialise according to a specific discipline. Although it is possible for individual engineers to retrain in a different discipline, the time required for retraining would appear to prevent this from occurring to any large degree. Therefore, engineers of one discipline are not likely to be good substitutes for engineers of other disciplines.

2.24 However, larger engineering firms or multi-disciplinary practises, are able to adapt to changes in demand across disciplines (including changes in demand for multi-disciplinary services) by hiring the necessary specialist engineers either from within Ireland or from other jurisdictions. Similarly, other professionals, such as architects, may also provide similar services to some engineers, potentially widening the pool of practitioners available to buyers.

2.25 Within the different disciplines, markets could be further categorised on the basis of the project size. On the demand side, large-scale project purchasers are more likely to be able to exert some countervailing buyer power and ensure that the fees charged are competitively priced and the service provided is of a satisfactory quality. This is because, compared with the high cost of undertaking large-scale projects (some of which can run into hundreds of millions of euro) search costs would be a relatively low proportion of the total cost of the project. This makes undertaking competitive tendering processes and in-depth investigations into engineering services more viable.

2.26 On the supply side, the size of high-value projects means that this type of work is typically only performed by large engineering firms, although these firms may sub-contract out parts of the project to smaller engineering businesses. Although the number of large engineering businesses is not high compared to the number of smaller ones, high-value, large-scale projects are likely to attract foreign firms, creating competitive pressure.

2.27 Larger engineering businesses may focus on competing for larger scale projects and may not compete with smaller engineering businesses for smaller projects. This is likely to be the case particularly if a small project is outside the location where a larger firm is based.

National and international markets

2.28 For large-scale projects, the market for engineering businesses is international, as evidenced by the number of foreign engineering businesses working on and tendering for large projects in Ireland. This openness to foreign competition is a desirable feature of the market for engineering services. The level of concentration of domestic engineering firms is not that high, but even if it were, the exposure to foreign-competition offers customers a wide range of alternatives and choices.

2.29 For smaller projects the relevant markets are likely to be smaller geographic areas, as buyers are not likely to indulge in extensive search activity outside of their particular location. Similarly, businesses are not likely to incur the additional costs associated with providing engineering services a significant distance from where they are based.

The role of buyers

2.30 Engineering services are often characterised by a degree of asymmetric information, i.e., the purchaser is less well-informed than the supplier about the quality of the service offered. This is a common issue in the supply of

professional services. This can lead to a degree of market failure, and is put forward as the main reason why professional services are often heavily-regulated. However, buyers of engineering services seem to obtain consistent quality of service, and we now discuss why that is so.

2.31 One relevant factor is the buyer's level of knowledge or experience in purchasing engineering services. Regular clients of engineers are more likely to be informed as to the likely fees for a specific project and the quality that can be expected from different engineering businesses. Buyers that have previously engaged in sophisticated purchasing activity, such as competitive tendering processes, may be better prepared to use these processes for subsequent purchases.

2.32 Large private buyers are adept at tailoring the contract so as to obtain the best possible value for money. Market investigations showed that such buyers frequently used a "fix-price" contract, where the supplier contracted to perform the task at a fixed price in a certain time period, with clauses inserted to modify this price in a specified manner should circumstances change. Such contracts are effective in utilising buyer power by tying the supplier down to provide projects at a certain cost when they win the contract.

2.33 In particular, large private buyers often avoid using percentage fees, where the overall fee paid the engineer is determined as a proportion of the value of the contract. Such fees can give an incentive to increase the cost given that the fee will rise commensurately. Also, if material costs increase, this means the professional fee will also increase, even though the work done is exactly the same.

2.34 Moreover, percentage fees can facilitate collusive behaviour in a market by increasing transparency as to price. Collusive behaviour is usually easier when participants can pick a simple and clear "focal point" as the price. A percentage fee is an excellent example of such a focal point, and widespread use of them could create a market that facilitates tacit collusion, with corresponding harm to consumers.

2.35 Irregular or one-off buyers, however, are not likely to be as well informed as larger ones, and may find it much more difficult to judge quality prior to contracting an engineer. Furthermore, for an irregular buyer who requires an engineer for a small project, the search costs involved with engaging in a sophisticated competitive selection process to choose an engineer may constitute an excessive proportion of the total costs of the project. The fact that specific engineering service characteristics, including fees, are generally a matter of private negotiation between engineers and clients and are not easily or publicly available, means that many prospective buyers will not know the price and quality that other larger or more knowledgeable buyers face for similar services. This could enable engineers or engineering firms to discriminate between uninformed, irregular buyers and regular, well-informed buyers with regard to the fees or quality of service that is offered.[6]

2.36 These factors may be at least partially offset if a buyer employs the services of another individual, typically an architect, to advise on the selection of an engineer. An architect is likely to be better placed to judge engineering services and appropriate fees. The success of this approach will, in turn, depend upon the incentives faced by the architect to operate in the client's best interest.

2.37 Some parties suggested that there is potential in some cases for engineers to take advantage of any information asymmetry between providers and clients, and thus provide substandard services. In practice, this has not led to widespread dissatisfaction amongst buyers regarding quality, and engineering services are generally of a sufficiently high standard.

2.38 Some views highlighted the different approaches that clients use to select engineering firms and negotiate appropriate fees. Some of these approaches may not fully utilise competition to their benefit. For instance, some public buyers have asked representative organisations for guidance on appropriate fees. In other cases public bodies have applied their own fee scales despite the fact that these scales may not represent good

6. Table 6.13 of the Indecon report indicates that there is large variation between daily rates charged by engineers, although this may reflect differences in fees across different disciplines.

value. As well as this, some public buyers typically select the supplier of service before negotiating over price, which is not a good use of their buyer power.

2.39 Public buyers should be able to use competitive processes to select engineers and determine fees. They are often repeat purchasers, particularly for large-scale projects where it is worth engaging in a careful selection process. Additionally, many public bodies have in-house engineering expertise that is of significant assistance. Organisations with this expertise should be able to utilise these advantages to allow them to obtain the best possible value for money from engineering businesses.

2.40 It is clear that public procurement procedures are set up for good reasons, such as the need to guard against corrupt practices. However, it is also important that public-sector bodies should attempt to obtain the best value for money for the taxpayer. Market investigations have suggested that large private buyers seem to be more effective in obtaining best value for money than large public buyers. Large private buyers are not constrained by rules that govern public bodies' procurement practices. They include selecting engineering firms randomly from lists rather than using firms for repeat business where these firms have provided value for money previously or not entering fee negotiations until after a firm has been selected. It also appears that large private buyers have typically gathered more specific details before selecting engineering firms for projects. This is unfortunate given the size and importance of public contracts to engineering firms.

2.41 One possible suggestion would be to increase the use of European Union tendering practices – which apply for large public projects, and tend to ensure a reasonably competitive process – for projects of smaller size. The Authority would suggest to thr Department of Finance that further examination be given to ensuring that value for money is obtained, while staying within the public procurement process.

section 3

Pic. on previous page: The Big Lift by Paul Wilcock
Aug 2002 – Prefabricated East Wall Road Rail Bridge deck being lifted over the Dart line at East Wall into its final position by Demag PC9600 crane.

3. ENTRY AND SUPPLY OF SERVICES

Introduction

3.1 This chapter analyses whether entry to the engineering profession is sufficiently open and flexible as to facilitate competition. We first look at the number of engineers who can enter the profession, both from within the State and abroad. We then discuss the issue of Chartered Engineers, including who has the right to use the title of "Chartered Engineer" and the functions reserved to them by statute.

3.2 There is no statutory protection of the title of engineer and there are no legal restrictions preventing anyone from providing engineering services. Despite this, engineering work is typically undertaken by those who have formal degrees, certificates, or diplomas in engineering from universities or other third-level institutions. Students enrolled in academic programmes either follow a common programme before choosing a specific engineering discipline, or choose a particular discipline of engineering at the time they apply. After graduation, it is sometimes possible for students to switch specialisation by completing a postgraduate degree in their preferred specialisation, although this is not common.

Note 3.1: Barriers To Entry

Barriers to entry are direct or indirect limits or restrictions on the ability of potential suppliers to enter a particular market. These restrictions operate to prevent efficient new entrants from coming into a market and offering further choice to buyers. A market with such barriers to entry may see existing suppliers (known as incumbents) protected from competition and the threat of competition. This resulting lack of competitive pressure can lead to serious adverse effects on buyers, as incumbents may be able to charge higher prices, offer lower quality services and offer less choice. This protection may also mean there is less incentive for incumbents to innovate and to respond to the needs of buyers.

Entry barriers to a market may arise naturally, because of the peculiar aspects of an industry that make successful entry difficult, such as difficulties in establishing a reputation. Entry barriers may also arise directly from actions taken by incumbent suppliers that make entry more difficult. For example, incumbents may raise the costs to buyers of switching to a new entrant. Regulations limiting who may operate in a particular market create direct barriers to entry.

Markets for professional services tend to have regulatory barriers to entry. It is usually claimed that these barriers prevent a potential market failure arising from a perceived inability of buyers to evaluate the professional services supplied. That is, restricting who may operate in a market is defended as necessary to ensure that practitioners offer a high quality service despite the potential inability of buyers to distinguish between a high quality service and a low quality service (before or even after receiving the service).

However, such regulatory barriers can operate to deny buyers choice and protect incumbents from any threat of competition without correcting any market failure. In particular, quantitative entry restrictions (where there are direct limits on the number of professionals who may supply a service) are likely to limit competition severely and hurt buyers, without ensuring a high-quality service is provided. Quantitative limits can occur, for example, directly through regulations limiting the number of those who can practise, or indirectly through limitations on the educational opportunities for training in the area.

Irish-trained engineers

3.3 Within the State there are nine third-level institutions, offering a total of 50 different degree-level education courses in engineering, that have been certified by the Institution of Engineers of Ireland (IEI). The accreditation process involves evaluation in accordance with a set of criteria decided by the IEI. Third level institutions wishing to have their engineering degree courses accredited by the IEI must submit a completed Application Form.

3.4 A recent report on the demand and supply of engineers suggests that insufficient applications for engineering courses, rather than the number of places available, is the main factor affecting the number of engineering graduates.[7]

3.5 It is not clear whether educational institutions in general would be able to react quickly if there were changes in the demand for certain types of engineering disciplines. Some institutions do not impose specific restrictions on the numbers entering different courses, whereas others revise the number of places offered in each stream on a regular basis. In any case, the number of places in each stream is usually limited to an extent by the physical resources available. For instance, it is easier to increase the number of places in computer engineering than in chemical engineering because the necessary inputs can generally be acquired at a lower cost.

3.6 There is some evidence to suggest that there are shortages in some disciplines and some lack of responsiveness in terms of provision of certain courses. Anecdotal evidence suggests that there has been a relative shortage of chemical engineers. This has led to firms "poaching" chemical engineers who work for rival firms. This shortage may be remedied to some extent by the projected increase in chemical engineering graduates, though the delays in ensuring that supply expands to match demand can create problems in competition in the short run.

3.7 In response to changes in demand, providing adequate flexibility within overall courses should be an important aim for the Department of Education and Science, the Higher Education Authority, the Higher Education and Training Awards Council, the IEI, and the educational institutions themselves. The IEI has indicated that it is seeking to ensure an adequate supply of new graduate engineers into the industry, and to ensure that the supply of graduates of different disciplines is sufficiently responsive to the changing demands of the marketplace.[8]

Foreign-trained engineers

3.8 Many foreign-trained engineers are permitted to practise in Ireland. In theory anyone with a work permit can practice as an engineer, but in practice foreign-trained engineers are usually employed only if their degrees are recognised here. In recent years, EU Directives regarding recognition of qualifications between various countries have made it easier for professionals from the European Economic Area (EEA) who trained outside Ireland to work here.

3.9 There are also several reciprocal multi-lateral arrangements in place with other non-EEA countries for the recognition of qualifications to allow foreign-trained engineers to become either a Chartered Engineer in Ireland or a member of the Institution of Engineers of Ireland (IEI). There are no additional restrictions on foreign-trained engineers, provided they are employed by businesses that adhere to the relevant work-permit requirements. However, immigration restrictions would appear to prevent individual engineers that are non-EEA citizens from moving to Ireland and setting up a practise. Although this is a barrier to entry, albeit outside of the realm of profession-specific regulation, it has not significantly constrained competition. Indeed, market investigations suggest a large number of foreign-trained engineers have come to work in the State over the last ten years, attracted by the economic boom, particularly in the construction area.

7. The Demand and Supply of Engineers and Engineering Technicians" Expert Group on Future Skills Needs, McIver Consulting, May 2003.
8. "A Review of Our Engineering Manpower Shortages at Degree and Technician Levels Discussion Paper", March 2000; "To Ensure Future Prosperity ... More Engineers Needed Now!", Proceedings, National Conference 2000, October 5th & 6th 2000; "Solving the Shortage of Engineers Problem", Submission to Government, October 2000.

3.10 There are no barriers preventing foreign engineering firms from supplying engineering services in Ireland. A significant number of foreign engineering firms have been involved in large projects here in recent years.

Accreditation of engineering degrees

3.11 As discussed above, engineering is a very international profession. Individual engineers often move to countries where there is a demand for their services. Large engineering firms often seek work in many different jurisdictions. This means that shortages of engineers may be remedied by inflows of foreign engineers and foreign-based engineering firms. However, it is not necessarily prudent to rely solely upon an inflow of foreign engineers, as other variables outside of Ireland's control, such as economic conditions abroad, can change and reduce the supply of foreign engineers. Therefore, it is important to ensure that there are no unnecessary anti-competitive entry barriers. Entry barriers could include restrictions on third-level institutions applying for accreditation for degree courses.

3.12 University courses in engineering do not formally need to be accredited by the Institution of Engineers of Ireland (IEI), but in practice nearly all choose to do so, and it is generally agreed that non-accredited courses would be placed at a disadvantage. To receive accreditation, a third-level institution must provide a four year integrated "ab initio" (a programme entered without any other engineering qualification) programme leading to a Bachelor degree, or a two year 'add-on' Bachelor degree programme that has been preceded by both a one year National Diploma in Engineering and a two year National Certificate in Engineering programme. This add-on degree approach takes five years in total.

3.13 The consultation paper asked whether the criteria set down by the IEI are appropriate and are not used to potentially limit the number of university places. No submissions expressed to the Authority suggested that the general accreditation criteria for standard engineering degrees are set at too high a level. Nor were there any suggestions of discrimination between different third-level institutions wishing to provide the same degree programme.

3.14 However, some views questioned the IEI's approach to accrediting add-on degrees, which are available from a number of Institutes of Technology. The IEI specifies that in order for accreditation, entry to add-on degree programmes should be restricted to students who have a Merit Grade 2 in a National Diploma in Engineering along with a Distinction grade in mathematics in a National Diploma examination.

3.15 More generally, the IEI also has been reluctant to accredit add-on courses in general. Although it has given temporary, or short-term, accreditation to a number of such programmes, it has stated its reluctance to do so, suggesting that a full four-year degree programme is the most appropriate training for an engineer. This approach of only offering accreditation to add-on courses on a short-term basis was also questioned. Such views argued that if certain add-on degree courses are currently deemed to be of sufficient standard, there is no reason why this add-on degree approach should not continue. Similarly, the IEI currently recognises degrees obtained by students who have transferred from Diplomas into four-year ab-initio degree programmes. Submissions argued that if this approach is currently deemed acceptable, it should continue.

3.16 The IEI considers that a four year ab-initio degree should be the primary route to fulfilling the academic standards necessary for Chartered membership. It also considers it desirable to have a high level of mathematical and fundamental principles taught in the early stages of a degree course, which is not the case in a standard engineering Diploma course. Therefore, the IEI considers it necessary for candidates to have a sufficient level of mathematical ability to enable them to successfully complete a degree programme.

3.17 The IEI is concerned that if these entry standards were not imposed, there would be an incentive on third-level education providers to lower standards in degree examinations to ensure 'sufficient' pass rates. The IEI could react to any drop in standards by removing accreditation for a particular programme. However, it considers that a more appropriate approach is to remove any pressure on institutions to reduce standards in the first instance.

3.18 Although it has temporarily accredited some two year add-on degrees, the IEI also considers that it is very difficult to design and implement curricula which enable students to achieve the necessary programme outcomes within the two year add-on degree structure. Therefore, accreditation of such programmes is provided only on a short-term basis and institutions offering add-on degrees are encouraged to move to offering four-year ab-initio degrees.

3.19 The IEI states that its accreditation criteria are regularly reviewed for appropriateness by the Institution's Accreditation Board. This Board is comprised of senior engineers from industry, academia and the public sector. The criteria are reviewed, quality assured and approved at international level by other members of the Washington Accord (which includes countries like the US, Canada, UK and Australia) to which the IEI is a signatory. Additionally, the criteria are validated through international representation on IEI's Accreditation Panels. Under the Washington Accord, IEI's accreditation criteria and processes are due to be reviewed in 2004 by a panel of experts selected by the Washington Accord Secretariat.

3.20 The IEI states that it is willing to consider accrediting alternative methods of obtaining an engineering qualification, providing these programmes meet all the necessary accreditation criteria. This flexibility is desirable, as it is important that there are alternative methods by which individuals can progress towards engineering degrees. Specifically, it is important that there are avenues to enter a degree programme that do not rely on academic achievement at secondary school level. The ability of students to transfer from a Diploma to an ab-initio degree, provided they meet whatever standard is appropriate and/or complete any necessary additional courses, provides a welcome level of flexibility.

3.21 It is beneficial if the details of any such approaches, whether they are add-on degrees, transfer mechanisms or any other approach, are decided upon in an open, transparent and objective manner. If differences of opinion exist between the IEI and other interested parties regarding specific aspects of engineering training, all interested parties should have access to the IEI's accreditation process. This could include those with experience of providing engineering training as well as those who specialise in educational systems and options available within these systems more generally. Interested parties could include the Department of Education and Science, the National Qualifications Authority of Ireland, the Higher Education and Training Awards Council and the Higher Education Authority.

3.22 Another relevant consideration is an agreement by the Governments of the EU to create a European system for higher education known as the "Bologna Declaration". This agreement seeks to achieve harmonisation of third-level educational structures by 2010 and will include comparable degrees and titles for each discipline and a two-cycle system (bachelor degrees followed by masters degrees). This has the potential to result in substantial changes across the education system. Any changes brought about by this process will also require the IEI to allow all interested parties to contribute to its decisions on accreditation criteria in an open, transparent and fair manner.

3.23 At present, final decisions on whether to approve applications for accreditation are made by the Council of the IEI, a body elected by the IEI's members. The Council receives recommendations from the Accreditation Board. The Accreditation Board comprises 26 members, including ten university representatives, seven from Institutes of Technology and nine from industry. This Board meets on average three times a year.

3.24 A number of specialist Committees within the IEI also consider accreditation issues relating to specific engineering disciplines and qualifications. These committees have a wide range of members, including representatives from educational institutions offering engineering courses and various industry representatives.

3.25 Together with the Accreditation Board, each of these internal committees can provide a forum where any interested parties can make submissions on any issues regarding the IEI's accreditation criteria. Members of these committees, or the Accreditation Board itself, may also raise specific issues.

3.26 Overall, although a question has been raised regarding the accreditation of courses, there does not appear to be a substantial problem with this structure. Thus, large scale restructuring of this function does not appear to be necessary. However if the IEI is to continue to accredit third-level engineering courses, it is important that the process is sufficiently open, transparent and objective.

3.27 A wide range of interested parties should have input into the accreditation process and accreditation criteria. To facilitate a broader range of parties being included in the accreditation process, the IEI may wish to increase the membership of its Accreditation Board and/or specialist committees to include Government bodies involved in the education sector. This could be beneficial by allowing as wide a range of interested parties to be formally included in the accreditation process. Should the IEI wish to broaden the membership of its Accreditation Board and/or specialist committees, it should not exclude individuals on the basis that they are not IEI members or engineers.

Recommendation 1:

The Authority recommends:
The accreditation system for engineering degree by the Institution of Engineers of Ireland (IEI) must be made more open and transparent. Specifically:

(a) Membership of the IEI should not be a pre-requisite for inclusion in the accreditation process, and;
(b) Interested parties should be provided with reasons regarding accreditation decisions made by the IEI.

Note 3.2: Asymmetric Information and Professional Services

A key issue in relation to professional services is the ability of buyers to judge the quality of services offered by different professionals. Additionally, the complex nature of many professional services means that, professionals supplying these services are often in a better position to judge how much of a particular service the buyer requires, and what a competitive price for that service is. Furthermore, some services are sufficiently complex that buyers may not be able to judge the effectiveness, or value for money, of a specific professional service even after they have consumed the service. This difference in knowledge between the suppliers and buyers is referred to as information asymmetry.

Asymmetric information can lead to market failure, in that buyers may purchase too much, or not enough, of certain services. This market failure can have significant negative consequences over time. For instance, it may prevent high-quality, high-cost practitioners coexisting, profitably, with lower-quality counterparts, because buyers may not be able to distinguish between them. It may even prevent buyers making any purchases and prevent a market from operating at all. Information asymmetry can be moderated if repeat purchases allow buyers to build up experience regarding certain services and/or professionals. Additionally, the issue of asymmetric information can be resolved by the use of various methods of indicating or signalling service quality.

Signalling quality

Professionals may use various methods to signal the quality of their services directly to buyers, such as obtaining titles and/or qualifications, establishing reputations, advertising, or becoming members of professional organisations. Membership of a professional body, for instance, can require members to maintain certain standards, and provides an incentive to ensure that other members do likewise, so that the organisation as a whole can create a reputation that may otherwise be difficult for individual members to create. This can provide buyers with a degree of certainty regarding the quality of service they will receive from these members.

An alternative method by which quality can be gauged, is if the service, or service provider, is evaluated by an independent third party. This evaluation service may be provided by the state or could be supplied by private operators in response to demand from buyers.

An advantage of quality-signalling approaches is that information asymmetries can be resolved by market-based responses to buyers' demands without imposing costly regulation and without restricting competition. Additionally, higher-cost, high-quality professionals can coexist alongside lower-quality, lower-cost professionals, benefiting buyers by providing them with the opportunity to purchase the quality of service that best suits their needs.

This compares with regulatory approaches that do not typically provide specific incentives for professionals to respond to buyers' demands. However, if market-based solutions to information asymmetry are not sufficient to correct market failure, regulation may be appropriate, provided that the benefits of imposing specific regulation exceed the costs. Regulation may target:

i. the specific service in question; or,

ii. the individual professional providing the service

(1) Regulating minimum standards of service

Imposing specific regulations governing minimum standards for professional services can provide certainty for buyers, especially regarding safety. This approach has the advantage of not directly restricting entry to the profession. However, it may not be appropriate in all circumstances as enforcing minimum standards may be impractical or excessively costly given the unique nature of some professional services.

Additionally, regulations should not set standards too high, as this could prevent buyers from purchasing services that they would otherwise choose to purchase.

(2) Regulating entry to the profession

Another regulatory approach is to directly restrict the individuals who may provide specific professional services. Although, quantitative entry restrictions are inappropriate, as discussed in Note 3.1, qualitative entry restrictions, relating to characteristics such as qualifications, experience, etc, can ensure that all those providing professional services at least have the ability to provide services to a minimum standard.

However, ensuring that members of a profession are able to provide services of a certain quality is no guarantee that these professionals will have an incentive to do so if there is information asymmetry. Furthermore, in contrast to situations where there is the threat of competitive entry, the existence of regulatory entry barriers may reduce the incentive for incumbent professionals to provide quality services and value for money.

Registration of the title "Chartered Engineer"

Concerns of The Competition Authority

3.28 The title of Chartered Engineer is the only engineering title that has statutory protection and operates as a State-sponsored signal of quality to buyers. Additionally, only a "Chartered Engineer", or “suitably qualified architect”, is permitted to certify compliance for fire safety in nursing homes and childcare centres.[9] Under the Institution of Civil Engineers of Ireland (Charter Amendment) Act, 1969, the Institution of Engineers of Ireland (IEI) has the responsibility for setting the criteria that applicants must meet to obtain the title of Chartered Engineer. The IEI has also suggested that all design and construction work that has a public health and safety aspect should be supervised by Chartered Engineers.

3.29 The potential concern over this arrangement is that there could be a conflict of interest where the IEI, which is a body with representative functions, could have an incentive to exclude suitably qualified engineers from obtaining the title and the functions associated with it.

3.30 To become a Chartered Engineer, the IEI typically requires an applicant to have an appropriate academic qualification.[10] The IEI provides accreditation to third-level engineering courses that meet its specific accreditation criteria.[11]

3.31 There are three stages to becoming a Chartered Engineer. The first is the academic stage which typically involves completion of a primary degree in engineering from a university or college, approved by the IEI. Other avenues by which candidates can fulfil the academic requirements include:

- Having a foreign degree programme accredited by way of reciprocal multi-lateral arrangements;
- Having a certificate or diploma in engineering and going on to degree-level examinations; or
- Obtaining "ordinary membership" of the IEI. There are numerous alternative routes to fulfilling the requirements for ordinary membership, including completion of an IEI examination or a "grandfathering" route for engineers with no formal qualifications.

3.32 Candidates for the title of Chartered Engineer must have practiced as a professional engineer for at least four years. Credit is given for further study, training, lecturing at third level, and for any published research work of an engineering nature.

3.33 After acquiring sufficient professional experience, applicants must submit an engineering practice report and two essays, and undertake an interview. Previously applicants were also required to have their applications supported by four Chartered Engineers who were familiar with all, or part, of their professional careers. If this was not possible, because of the nature of candidates’ employment, the IEI considered alternative arrangements, including the substitution of corporate members of other similar institutions or societies.

3.34 There were also a number of age-based criteria, such as a requirement that candidates be over 25 years of age at the time of application.[12] At an early stage of the consultation process, the IEI agreed to remove this restriction at the Authority’s request.

3.35 The responsibility for deciding whether applications have met the assessment criteria is delegated to the IEI’s Board of Examiners, which is appointed by their Council.

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9. See Nursing Homes (Care and Welfare) (Amendment) Regulations, 1993, and Child Care (Standards in Children’s Residential Centres) Regulations, 1996, Department of Health and Children.
10. In some circumstances it is possible for applicants without an accredited academic qualification to obtain the title of Chartered Engineer, although this is uncommon.
11. The details of these criteria are available from the IEI.
12. Similar age-based requirements also exist for candidates going through the alternative or mature routes.

Views of Interested Parties

3.36 Views obtained through the consultation process suggested that the title of Chartered Engineer can be an important signal of quality to buyers. This title can also favourably affect engineers' professional indemnity insurance costs.

3.37 The existing reservation of the function, whereby only Chartered Engineers can grant fire safety certification for nursing homes and childrens residential centres, was considered appropriate and proportionate.

3.38 The IEI considers that it ensures adequate standards amongst its members by setting and maintaining internationally accepted standards, both for ordinary members and for Chartered Engineers. Specifically, the IEI stated that the reservation of this function:

- Meets its statutory obligations under The Institution of Civil Engineers of Ireland (Charter Amendment) Act, 1969;
- Meets its obligations under a wide range of multinational international agreements and mutual recognition agreements; and,
- Provides employers of engineers with a quality assurance benchmark against which they can make judgements when selecting an engineer either as an employee or as a consultant

3.39 No concerns were raised regarding the role of the IEI in regulating the title of Chartered Engineer.

3.40 The IEI stated that it considers that any approach where it attempted to restrict entry to the profession would be counter-productive. This is because the general demand for engineering work is strongly correlated with the state of the economy. They stated that an anti-competitive regulatory approach would result in higher engineering and construction costs and this would reduce Ireland's competitiveness in relation to other countries, particularly in relation to attracting investment. Thus, ensuring a competitive engineering profession is beneficial for the economy in the longer term. This in turn helps ensure continued demand for engineering services.

3.41 The Consultation Document put forward several draft recommendations for changes. One of these was that the IEI should allow applicants to use supporters who are not Chartered Engineers. The IEI agreed with this draft recommendation and has amended the criteria for Chartered Engineer to allow an applicant to provide supporters other than Chartered Engineers, whom have a similar level of expertise to a Chartered Engineer.

Analysis

3.42 There are two main issues relating to the regulation of the title of Chartered Engineer. The first is its self-regulatory nature. The IEI has the sole responsibility for both setting the criteria for registration and judging whether applicants have met these criteria. It could unnecessarily raise barriers to entry and keep the pool of Chartered Engineers small.

3.43 The second issue is the IEI's request for more regulation that would prohibit individuals without the title of Chartered Engineer from performing certain engineering tasks that they are currently permitted to perform. This request for more regulation appears to contradict the IEI's stated approach that anti-competitive regulation would be counter-productive.

3.44 The title operates as a State-sponsored signal of quality to customers. Generally, any such title should fulfil at least three criteria:

- The registration criteria should not go beyond what is reasonable for such a signal to be a useful indicator of quality;

- The criteria should be proportionate and objective, and the decision-making process for applicants should be suitably transparent; and,
- Criteria should be set by a sufficiently independent body, but one that utilises the experience and expertise of the profession.

3.45 On the first two criteria, many of the academic requirements appear to be highly pro-competitive, especially as they allow the recognition of qualifications of foreign-trained engineers. The flexibility in the system, providing numerous routes for appropriate candidates to fulfil the academic criteria, is exemplary of an open, pro-consumer, pro-competition, flexible system of regulating a professional title.

3.46 Also relevant is that the functions that are restricted to Chartered Engineers are an extremely small proportion of the total engineering services provided by engineers. Additionally, "suitably qualified architects" can compete with Chartered Engineers for these tasks.[13]

3.47 The IEI is also bound by a number of international agreements that require mutual recognition of engineers and engineering titles from a large number of countries. This helps to ensure ease of entry to the Irish market by foreign-trained engineers and can assist in offsetting any shortages of domestically trained engineers. Additionally, some engineers become Chartered members of other professional engineering organisations, typically British-based organisations. These titles are often recognised by buyers in Ireland.

3.48 The IEI has also agreed to remove its previous requirement that applicants must be proposed by a Chartered Engineer and supported by three further Chartered Engineers who are familiar with all or part of the candidates' experience and ability.

3.49 On the third criterion, the IEI is a body that possesses a regulatory function while also representing its members. Generally, this dual role could give serious cause for concern, as regulations could be set to promote its members' interests. However, we believe the consequences of this are extremely limited in the case of engineers. First, the IEI engages in very limited regulatory activities. It reviews educational standards for third-level institutions and administers the title of Chartered Engineer. There are a large number of third-level institutions offering engineering courses, and evidence that the IEI has not sought to limit entry by setting restrictively high standards. Also, the functions reserved to Chartered Engineers are extremely limited, with the majority of engineers being able to practice successfully without being Chartered.

3.50 Moreover, only a minority of the IEI's members operate as consultant engineers. In fact a large proportion of members work for, and represent the interests of organisations that hire consulting engineers. Many IEI members are employed in a range of different organisations, including private companies, local authorities, semi-state companies, the public service, and construction contractors. Many of these organisations purchase engineering services from consulting engineers.

3.51 In fact the majority of the IEI's members are neither Chartered Engineers nor in private practice as consultants. Only about 5000 of its 21,722 members (including 4,302 student members) are Chartered Engineers. This helps to ensure that the IEI is not controlled by Chartered Engineers. To a large extent, this ameliorates the conflict of interest that could arise between the interests of Chartered Engineers and the regulatory functions of setting entry qualifications and adjudicating applicants.

3.52 This means that it is less likely that the IEI will regulate the use of the title of Chartered Engineer in manner that is anti-competitive. The IEI has also worked closely with the Authority to amend its rules to ensure they do not give rise to any anti-competitive behaviour. Overall, therefore, in this specific case the Authority does not see substantive problems in this issue. However, should the range of statutory functions given to the IEI expand it is possible that could give rise to concern.

3.53 The second main issue in respect of the title Chartered Engineer is that the IEI has suggested that further

13. See Nursing Homes (Care and Welfare) (Amendment) Regulations, 1993, and Child Care (Standards in Children's Residential Centres) Regulations, 1996, Department of Health and Children.

regulatory intervention is required to ensure adequate protection to clients and the general public from substandard engineering work.[14] Specifically, the IEI's view is that any design and construction work that has public health and safety aspects should be supervised by Chartered Engineers. The IEI considers that, in the absence of an effective independent inspection regime, Chartered Engineers have the ability to ensure that all the necessary planning and building regulations will be met.

3.54 No quantitative evidence has been presented that demonstrates the extent of any problem of non-compliance with the planning and building regulations. The IEI suggests that 95 percent of construction with a public health element is already supervised by Chartered Engineers. No evidence has been presented that indicates that the remaining five percent of this work is supervised by individuals that are of insufficient standard.

3.55 Increasing restrictions on who may provide certain engineering services would reduce the number of engineers available to buyers, could raise competition concerns and would not guarantee compliance with all planning and building regulations.

3.56 If the Government wishes to reconsider the regulatory environment in relation to engineering, any analysis should be consistent with the principles outlined in the Government's White Paper, 'Regulating Better'.[15] This would involve gathering information concerning non-compliance within the construction industry. This information would assist in determining the prevalence of any non-compliance with public health requirements, or a significant risk of non-compliance and its likely effects.

3.57 If such analysis suggested that the potential for market failure warrants regulatory intervention, the Government should undertake a more extensive Regulatory Impact Analysis (RIA). An RIA would include a complete evaluation of all alternative methods of regulatory intervention.

3.58 One alternative to the reservation of more engineering functions is direct regulation, such as a requirement to submit construction designs for approval coupled with an extensive construction inspection regime. This approach could provide a better guarantee that all design and construction work is of a sufficient standard to ensure public health and safety. It also has the advantage of ensuring that the competitive environment is not negatively affected because no engineers are prevented from entering the market.[16]

14. IEI position on Enforcement of the Building Regulations as a Matter of Public Health and Safety, Submission to Minister for the Environment & Local Government, May 2001.
15. Department of the Taoiseach, January 2004, www.betterregulation.ie.
16. See The Competition Authority's report on Architects for further information.

Authority's Conclusions

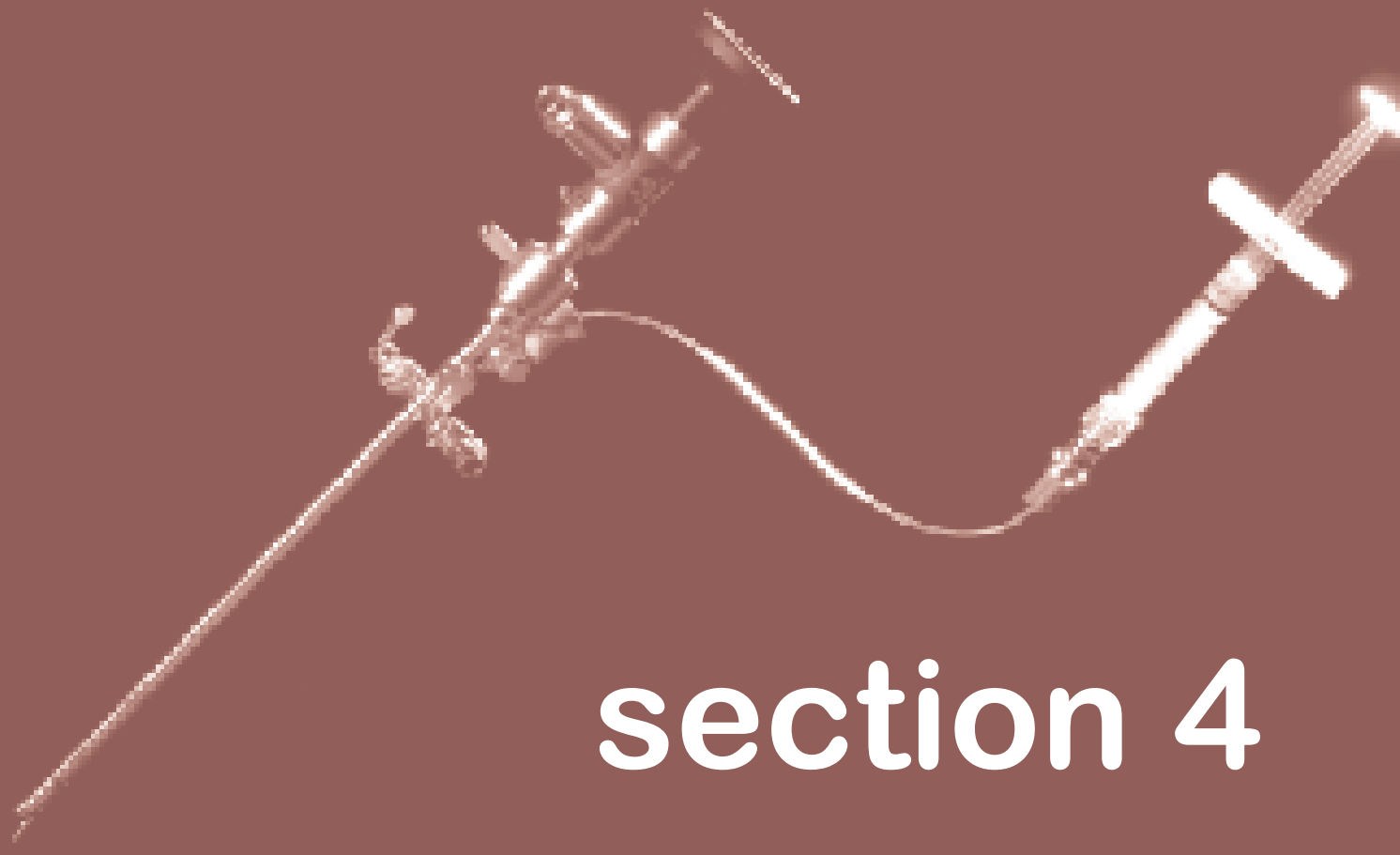
3.59 The Competition Authority does not consider that the existing regulation of the title of Chartered Engineer restricts competition, especially as the IEI has amended its membership rules following the consultation process. There is a significant proportion of the IEI's members that represent organisations that purchase engineering services. Therefore, the IEI does not face an incentive to restrict access to this title. Moreover, very few functions are reserved to Chartered Engineers.

3.60 The Competition Authority does not consider that a sufficient case has yet been put forward for increased restrictions on the provision of engineering services. The argument that is made for more restrictions – to protect the public – would, in the Authority's opinion, be better achieved by other means such as a more extensive construction inspection regime. Unlike the further reservation of functions, such a regime would not reduce competition within the profession and would provide buyers with a greater level of choice.

3.61 The Government should ensure that any regulatory proposals are carefully analysed and evaluated in an open and objective manner. Any analysis should focus on protecting buyers and the public from potential market failure and regulatory failure. Regulatory failure can occur where badly designed regulation hinders competition to the detriment of buyers by reducing value for money and quality of service, and does not adequately safeguard the public.

Recommendation 2:

The Competition Authority recommends:
No further regulation should be imposed on the engineering profession without a Regulatory Impact Assessment (RIA) being carried out by the Minister for the Environment, Heritage and Local Government.



section 4

Pic. on previous page: Endoscope poised to deliver a "sting" by Dave Cullen
The picture is of an Endoscope with a syringe loaded with Teflon for injection to a part of the bladder to cure reflux.

4. RIVALRY AND COMPETITION AMONG ENGINEERS

Introduction

4.1 Regulatory barriers to rivalry in the engineering profession are limited. However, despite the general pro-competitive regulatory approach, the Authority identified some barriers that may harm buyers and, therefore, warrant further consideration. These were outlined in the Consultation Paper, and included:

- Association of Consulting Engineers of Ireland (ACEI) membership criteria; in particular, a requirement that membership applications must be supported by existing members, and an apparent prohibition on multi-disciplinary practices;
- Restrictions on advertising imposed by the Institution of Engineers of Ireland (IEI) and ACEI on their members;
- Requirements imposed upon IEI and ACEI members regarding competing with, and taking over the work of, other members;
- Publication of information regarding recommended fees by the ACEI.

Membership criteria for professional organisations

4.2 The articles of association of the Association of Consulting Engineers of Ireland (ACEI) outline the criteria engineers must meet to become members. The ACEI has approximately 200 member engineers and 100 member firms. Membership of the ACEI is an additional signal to customers regarding standards in consulting engineering.

4.3 In addition to being a Chartered Engineer, applicants for ACEI membership must satisfy several other criteria, including:

- A requirement that they be engaged wholly or mainly in practice as a consulting engineer; and,
- A requirement that they be proposed and supported by three existing members of the ACEI.

Note 4.1: Rivalry

Along with entry, the other main force ensuring competition in any market is rivalry. Rivalry refers to the competitive process whereby suppliers operating in a market compete for buyers via such means as price, quality, and innovation of products and services. This incentive to attract buyers can, in a well-functioning market, lead to each firm offering lower prices, higher quality, etc, with corresponding gains for buyers.

To ensure buyers benefit fully from competition, the rules and practices should enable suppliers to compete freely. Activities that reduce buyers' ability to make informed decisions regarding the price, quality, and specifications of the service that best suits their needs, hinders the competitive process to the detriment of buyers. Thus, any barriers to buyers' ability to gain this type of information, such as advertising restrictions, are undesirable barriers to rivalry.

Professionals should also be free to join and establish other professional organisations that compete with existing organisations in terms of representing the interests of professionals or administering any self-regulation required within a profession.

Another type of barrier to rivalry is high switching costs, which prevent buyers from switching easily between different suppliers. An example of imposing high switching costs to reduce rivalry is where a buyer is locked into a long-term contract with a certain supplier which includes a penalty for opting out of the contract early, for instance if the buyer wishes to switch to an alternative supplier that offers superior value for money

4.4 According to its articles of association, ACEI members are entitled to reject membership applications without having to provide specific reasons.[15]

4.5 To obtain firm membership, the majority of a firm's partners or directors must be ACEI members and the control and management decisions of the entire organisation must be made by persons who are qualified to be ACEI Registered Engineers. These requirements do not appear to preclude existing ACEI member firms from offering services other than consulting engineering, provided that they are primarily engaged in engineering consultancy. However, these rules could be applied so as to prevent some multi-disciplinary practices (MDPs) from obtaining ACEI membership where these practices provide a range of different services, and consulting engineering services do not constitute the majority of their work.

4.6 The Articles also include several provisions that prevent membership by a subsidiary or a holding company of a company that is primarily engaged in manufacturing or contracting.

4.7 The ACEI has stated that, in the absence of any legal requirement for those setting themselves up as consulting engineering practices in Ireland, setting standards for the profession establishes a quality assurance benchmark against which clients can make judgements when choosing a consulting engineer. It also stated its belief that professional experience is essential for determining codes and standards for public and private design and is of particular importance in the areas of environmental protection and public health and safety. The ACEI considers that "the entry restrictions imposed by the Association help to maintain high standards of integrity and quality within the profession, which we believe is in the interests of both the clients and the public."

4.8 The ACEI has indicated that the restrictions on certain ownership and control structures are to ensure that all ACEI members are independent of any other interests in the construction sector. The rationale for this independence is to remove any potential incentive for ACEI members to alter their design work or to advise clients to select other construction service providers, for example builders, on the basis of interests in or payments from these other service providers.

Note 4.2: Rules of representative bodies

Representative bodies can benefit buyers and sellers of professional services, as membership of these organisations can convey useful signals regarding the quality of service from different service providers. However, to ensure that rivalry between professionals is not diminished, especially between members of representative bodies, the rules of these organisations should meet certain criteria.

The membership criteria of professional organisations should be objective and transparent, particularly if membership of these organisations provides a competitive advantage to its members (for example by allowing suppliers to utilise a reputation for high quality or by providing access to reduced rates of indemnity insurance). In the absence of such criteria, non-members providing equivalent services and having identical characteristics as members may be placed at a competitive disadvantage and any signal of quality that membership conveys may not be accurate.

The rules of any professional body should not have either the object or effect of diminishing the level of rivalry between members. Notable examples of such rules are those that attempt to specify prices, limit price competition in other ways, or prevent members from competing against each other for work. The use of broad and subjective terms, such as "unfair competition", should also be avoided as these have the potential to be used in an anti-competitive manner.

In many cases professional organisations may be "associations of undertakings" within the meaning of section 4 of the Competition Act, 2002, and their rules may be "decisions of associations of undertakings" within the meaning of that section. Therefore, such organisations need to ensure that their rules do not infringe Section 4(1) of the Act, or the Authority may take enforcement action.

15. The Articles of Association, section 9.

4.9 The ACEI itself stated that its ownership restrictions were to prevent conflicts of interest from arising between engineering businesses and other businesses that engineers may refer clients to. No concerns were raised in response to a consultation question regarding the ACEI's exclusion on some multi-disciplinary practices from membership.

4.10 Not all of the current entry requirements are based on objective criteria. Although there is no evidence that these requirements have been used to prevent appropriately qualified and experienced engineers and engineering businesses from obtaining ACEI membership, the Authority's concern was that these criteria could potentially be used in this manner

4.11 Because ACEI membership is not a requirement for providing engineering services, concerns over ACEI's membership criteria are only relevant to the extent that ACEI membership is important and provides engineering businesses with an advantage over rival non-member businesses in any specific market.

4.12 The Authority is satisfied that there is scope for engineering businesses to build up a reputation for quality, value for money and independent advice without ACEI membership. Factors such as the relatively small size of the Irish market and the use of word of mouth recommendations may assist in creating an incentive to ensure engineering businesses provide appropriate quality services and value for money. The ability of non-ACEI members to compete with ACEI members is also evidenced by the number of non-ACEI members who obtain large public and private sector contracts.

4.13 Evidence from the Indecon report suggests that ACEI member firms tend to be involved in larger projects.[16] For these types of projects, it is likely that ACEI membership is not a decisive factor given the level of information concerning engineering businesses gathered by buyers undertaking large projects. For this reason, the fact that some multi-disciplinary practices may not be eligible for ACEI membership does not restrict competition.

4.14 The Consultation Document suggested that the ACEI should amend its membership criteria so that an applicant's supporters do not need to be ACEI members. The initial concern was that, to the extent that ACEI membership can offer engineering businesses a competitive advantage, applicants could be unfairly excluded from joining if existing members considered certain applicants a competitive threat.

4.15 The requirement that an applicant must be supported by three existing ACEI members provides a mechanism whereby members of an organisation could potentially prevent new members from joining so as to maintain a competitive advantage. A provision in the ACEI Articles of Association exists whereby existing ACEI members can object to a candidate's application for membership. The relevant clause does not set out any grounds for such objection, and this provision could be used by members to prevent their competitors from obtaining ACEI membership.

4.16 The Authority is now satisfied with the availability of membership to applicants and there is no evidence that the ACEI has unfairly excluded any applicants. The significant number of engineering businesses that are not ACEI members that have been able to expand successfully, create positive business reputations and compete against ACEI member firms means that there is no incentive on the ACEI to unduly limit membership. The ACEI has indicated that it wishes to expand its membership and that, if an applicant does not have members as supporters, the ACEI will obtain the necessary references from other relevant organisations.

16. Indecon's Assessment of Restrictions in the Supply of Professional Services, March 2003, Table 6.11.

4.17 The Consultation Document also suggested that the ACEI should amend its membership selection process so as to require members to provide reasons when objecting to new applicants. In response, the ACEI stated that no applicant has ever been denied membership and there is no evidence to suggest that it has discouraged any potential members from joining. The ACEI agreed that in the event that a member raised an objection to an applicant, an objection would need to be objectively justified, and considered that its application process was sufficiently transparent so as to ensure this.

4.18 The Authority is satisfied that the ACEI does not engage in anti-competitive practices in relation to membership applications. Additionally, firms that are not members of the ACEI are not placed at a competitive disadvantage in the market for engineering projects. This means that the rules governing ACEI members would not necessarily have a significant affect on competition within the profession.

4.19 The Authority will continue to investigate any substantive complaints relating to the construction industry in general, and the behaviour of engineering businesses specifically.

Restrictions on advertising

4.20 The Institution of Engineers of Ireland's (IEI's) Code of Ethics had previously stated that engineers should not advertise their practice or availability except in a manner that is in accordance with the IEI's Code of Practice for Advertising by Corporate Members. The Advertising Code stipulated that publications and expressions of opinions should be moderate and discreet in tone and that statements shall not be self-laudatory. Furthermore:

- Advertisements or announcements in the press were not to occupy a space exceeding 15,000mm2 (equivalent to approximately one-quarter of an A4 sheet);
- Commemorative tablets or inscriptions bearing members' names were not be placed on completed works;
- sign-boards or plates were only to be placed on members' premises or on works sites; and,
- all such displays were to be discreet and moderate.

4.21 The advertising restrictions imposed upon members of the Association of Consulting Engineers of Ireland (ACEI) were contained in the ACEI's Code of Conduct and were largely similar to those of the IEI, the exception being that the ACEI did not place size restrictions on press advertisements.

Note 4.3: Advertising and professional services

Advertising provides buyers with information regarding both the availability and quality of services and, therefore, helps to reduce the costs incurred by buyers in the process of selecting the appropriate service provider (search costs). Any increase in search costs can lead buyers to reduce the extent to which they "shop around", thus, reducing the intensity of competition in the market place. Therefore, so long as it is truthful and not designed to deceive, advertising plays an important role in facilitating the competitive process and benefiting buyers.

Furthermore, advertising restrictions can also work as barriers to entry. New entrants can be prevented from aggressively pursuing both on-going and one-off buyers. It is in the interests of incumbents, who have built up a sufficient body of goodwill and consumer recognition, to curb the effectiveness of new entrants' promotional efforts. Thus, advertising restrictions and objections to advertising being undertaken by the new entrants can solidify entrenched market positions and limit innovation. Thus, any restrictions on advertising except those preventing untruthful adverts is likely to limit competition.

4.22 The IEI said that its Code was aimed solely at ensuring ethical and professional conduct in advertising. An objective of the IEI is that all its members will act in an ethical and professional manner in their dealings with employers, clients, colleagues and the general public, and it argues that the Code of Ethics and Code of Practice for Advertising are aimed at providing comfort to the general public in this regard.

4.23 The ACEI argued that the objectives of its Code of Conduct are to ensure that members at all times provide a professional, impartial service of high quality to clients and act in an ethical way in all dealings with clients and members of the public.

4.24 Nevertheless, because of the Authority's concerns, it was suggested that IEI and the ACEI should remove all restrictions on members' advertising except for the requirement that advertising must be truthful and capable of verification, or if not, clearly expressed as personal opinion. These organisations have now amended their advertising rules so as to removed restrictive aspects.

4.25 In the market for large projects, these advertising restrictions may not have a significant anti-competitive effect because of the opportunity for engineering businesses to obtain work through mechanisms such as competitive tenders. Given the relatively competitive environment in this market, any advertising restrictions by professional bodies may have even harmed member firms because of the prevalence of non-members who are not bound by such restrictions.

4.26 For many of the more localised or specialised engineering markets where the engineering businesses and clients tend to be smaller, a large proportion of engineers are likely to be members of the IEI, and perhaps the ACEI. In these markets any anti-competitive advertising restrictions could have had an influence in the market. Advertising that is factual, and not designed to mislead, is the best means of reducing buyers' search costs in a way that facilitates competition in the marketplace.

4.27 Limitations on taking out full-page advertisements could have reduced the effectiveness of any advertising campaign. Once a firm becomes known, it is likely to wish to scale back its advertising spending with a view to re-enforcing the public's awareness of its offerings. In this manner, the IEI's restrictions on advertisements could have restricted competition, making it more difficult for new firms to make themselves known to potential buyers. This would have provided implicit assistance to incumbent firms. This ultimately works to the detriment of buyers, as an important function of advertising is to provide buyers with information.

4.28 Neither is it apparent that the public interest was served by the restriction that advertising must be modest and discreet, as advertisements must be noticed by the public to be effective. In any advertising campaign the strength of the message being conveyed is important. This is particularly important for one-off or irregular customers who have not built up knowledge of the firms in the marketplace. It is more likely that the public interest will be better served if the engineering contractor for projects can be easily identified at workplaces, as this provides potential buyers with something to refer to. Effective advertising on sites may help to increase the overall demand for engineering services.

4.29 The removal of unnecessary advertising restrictions by the IEI and the ACEI has alleviated the Authority's concerns.

Membership rules of professional organisations

4.30 Specific membership rules of organisations may have the potential to affect competition within a particular market if:

- members of a specific organisation have collective or individual market power. For example, if membership is considered an important characteristic by a large proportion of buyers or if all businesses within a specific market are members, or
- membership rules or practises become norms throughout the market, including amongst non-members.

4.31 Although membership of the Institution of Engineers of Ireland (IEI) is not compulsory to those providing engineering services, membership is relatively widespread throughout the profession. Membership may be considered by potential buyers as an important characteristic when selecting an engineer. Therefore, any IEI rules that have the potential to restrict competition amongst rivals or even have the effect of facilitating co-operation and information exchange, could have a significant effect on the competitive environment in various engineering markets.

4.32 In contrast, membership of the Association of Consulting Engineers of Ireland (ACEI) is less extensive amongst consultant engineering and consulting firms. It is possible that rules or practices established by the ACEI could become norms within the profession.

4.33 The stated objective of the rules of both organisations is to ensure that members behave in an ethical and professional manner. Requiring members to behave ethically and focus on building reputations based upon providing quality services is beneficial to buyers, as such rules ensure that membership provide signals to buyers regarding the quality of services. This can work to offset any inherent information asymmetry and enhance competition.

4.34 The precise wording of some of these rules, and the resulting potential for them to be interpreted in an anti-competitive manner, creates certain concerns.

4.35 The IEI's Code of Ethics stipulated that members must:

- Not compete unfairly with other consultants; and,
- Not take over the work of other consultants, without having either obtained the written consent of such engineers or having satisfied themselves that such engineers association with the work has been properly and equitably terminated.

4.36 The ACEI's Code of Conduct contained similar requirements in sections regarding Fairness to Others and Taking Work Over. The specific requirements that raised concerns were:

- A member shall build its professional reputation on the quality of its service and shall not compete unfairly with others;
- Members shall, neither carelessly nor intentionally, do anything to injure the reputation or business of others;
- Members shall, neither directly nor indirectly, knowingly attempt to take the place of another member already appointed for specific work;
- A member shall not take over the work of a fellow member, for the same client, unless it has satisfied itself, as far as it reasonably can, that the connection of such member with the work has been terminated; that the legitimate interests of the member have been protected, and that it has notified the member concerned and received a request in writing from the client to take over the work;
- A member shall not take over the work of another member until that member's appointment has been terminated by the client in writing; and,
- A member shall not knowingly solicit project work from a client who has a member or members already engaged for the same project.

4.37 The IEI said that the intent of the relevant rules in its Code of Ethics was to ensure that members behave in a manner that is ethical and professional rather than to restrict competition. The IEI contends that the public interest is thereby protected.

4.38 The ACEI said that the intent of the rules outlined above was not to lessen competition, but to ensure that members display a high standard of ethical behaviour and business integrity. According to the ACEI, some of these rules also have the objective of ensuring that members are not exploited by dishonest clients, while others seek to prevent any conflict between members concerning responsibility for work that can affect professional indemnity insurance cover.

4.39 Nevertheless, in light of the Authority's concerns, the Consultation Document included the following draft recommendations:

- The IEI and the ACEI should clarify prohibitions on unfair competition to ensure that only misleading or unethical behaviour that is clearly harmful to buyers is prohibited;
- The IEI and the ACEI should remove any requirements that members must look after other engineers' interests, or decide upon the status of agreements between other parties, before taking over the work of other engineers; and,
- The ACEI should not prevent its members from soliciting work from other members' clients.

4.40 Both organisations then further justified the requirement on their members who take over projects to communicate with engineers who were previously hired, on the following basis:

1. The requirement is necessary to ensure that engineers taking over projects are informed of all relevant technical aspects. Failure to notify new consulting engineers of all relevant project details could lead to extra time and resources being spent on projects and, consequently, be costly to clients, and,

2. It is often necessary, for professional indemnity purposes, to determine exactly which consultant engineer is responsible for particular aspects of a job before taking over. This means that it can be necessary for an engineer to decide upon the status of previous contracts for legal reasons. The Authority accepts these justifications and considers that, on balance, these requirements to communicate with other engineers do not raise competition concerns.

4.41 The ACEI also said that restrictions regarding soliciting work from other members' clients do not apply to the large proportion of consulting engineering firms that are not ACEI members. The ACEI also said that this rule would only apply to unethical badgering of clients and was aimed at preventing ACEI member firms from making misleading statements about other engineering firms engaged for a specific project. It is not aimed at preventing firms from "cold calling" or making other approaches to prospective clients.

4.42 The broad and subjective wording of the rules that prohibit IEI and ACEI members from competing "unfairly" or doing "anything to injure" the business of others, could be interpreted as prohibiting healthy rivalry that would be beneficial to buyers, such as aggressive price competition or offering better services.

4.43 The requirement upon members to reach positions on disputes between rival members and potential clients before being able to provide services to those clients could also make it difficult for buyers to switch engineers, and consequently, could inhibit competition. This is especially the case as decisions on contractual matters between other parties would be dealt with more appropriately through established legal processes. The Authority is not satisfied that this rule was justified on the basis that it is necessary to ensure the working of the engineering profession. Neither is there any evidence that it benefited anyone other than engineers involved in disputes with clients.

4.44 Prohibitions on taking over work from other members without contacting the other members may have raised concerns if it made it harder for clients to switch engineers they are unhappy with. However, the need for engineers taking over projects from other engineers to contact each other has been adequately justified on the basis that engineers taking over projects need to be informed of any relevant technical issues. Engineers also need to establish responsibility for certain tasks for professional indemnity purposes.

4.45 In general, any rules that require co-operation between competitors raise concerns, as buyers may be less willing to shop around for engineers if they perceive a significant degree of co-operation between rivals. Care should be taken when drafting such rules to prevent the possibility that they could be interpreted in a manner that could restrict competition.

4.46 During the consultation process the IEI and the ACEI agreed to amend rules that prevent members from competing 'unfairly'. Instead, these organisations will continue to target their rules to prevent instances of unethical behaviour whereby members use illegal or fraudulent means to obtain advantages over other engineering firms.

4.47 The IEI and the ACEI also agreed to amend their rules so as to abolish any requirement on members to act in the interests of competitors. Amending these rules ensures that members are not required to evaluate disputes between other parties and cannot be forced to withhold services to certain clients. This eliminates competition concerns as it removes rules that could be used to justify boycotts of certain buyers.

4.48 Although both professional organisations agreed to amend these rules, they raised concerns that engineers could be taken advantage of by unscrupulous clients who have a history of contractual disputes and of refusing to make payments for services provided. In this regard, the Competition Act 2002 does not prevent professional organisations providing their members with the names of those clients who have acted unscrupulously, and perhaps illegally, provided that members were free to decide whether or not to offer services to these individuals. This approach acknowledges that individual engineers are often not in the best position, or sufficiently qualified, to adjudicate on disputes between other engineers and clients.

4.49 The Authority is satisfied, however, that the amendments made by the IEI and the ACEI eliminate any potential competition concerns.

Publication of fee information

4.50 Until recently the Association of Consulting Engineers of Ireland (ACEI) published a list of recommended fees from 1995 on its website. These recommended fees related to civil, structural, lead structural, and building services, along with report and advisory engineering work. The website also stated "... as part of its concern for quality of service the Association does not permit its members to compete with each other on the basis of fees". The ACEI also included several references to guidance on fees in the ACEI's Annual reports for 1999/2000 and 2000/2001.

4.51 The Authority's Consultation Document proposed that the ACEI remove any material from its website that had the potential to reduce competition, including statements prohibiting fee competition between members.

4.52 In response to this draft recommendation, the ACEI has ceased to publish information and statements that have the potential to create anti-competitive effects. Despite publishing a statement that the ACEI prohibited fee competition between its members, the ACEI has said that this was not the case and that its members were permitted to compete on fees with each other.

4.53 The ACEI has also stated that references made in previous annual reports regarding guidance on fees are either no longer relevant or did not result in any fee guidance. Furthermore, the ACEI has indicated that it will not be making any recommendations or providing guidance concerning fees in the future.

4.54 Even if competition on the basis of fees, and other factors, was permitted between ACEI members, publishing a statement that the ACEI prohibits competition between its members with respect to fees may have led buyers to believe that there is little or no fee competition within the industry. This perception may lead buyers to believe that there is little point in spending time and other resources in an attempt to seek the most competitive price and quality.

4.55 Aside from the statements previously published on its website and in annual reports, The Competition Authority has not obtained any further evidence that fee competition between ACEI members was prohibited. Ceasing to publish recommended fees and other anti-competitive statements removes competition concerns.

section 5

Pic. on previous page: Arcs of light in the night by Jonathan Noonan Feb 2004 – James Joyce Bridge, Dublin. It illustrates the symbiotic of Engineering and Architecture. The designer of the bridge, Santiago Calatrava is both a qualified engineer and architect.

5. COMPLAINTS AND QUALITY

5.1 Both the Institution of Engineers of Ireland (IEI) and the Association of Consulting Engineers of Ireland (ACEI) have clearly established procedures for dealing with complaints made by members' clients. These include the consideration of any complaints by panels or committees formed specifically for this purpose.

5.2 No concerns were raised regarding the complaints procedures currently administered by the IEI and the ACEI.

5.3 Because professional engineering organisations may compete with each other in terms of attracting both members and buyers, there is an incentive for these organisations to establish sufficiently impartial complaints processes to ensure that membership is considered an accurate signal of quality. However, the information asymmetry between members and their clients can mean that the incentive to ensure an impartial complaints process is reduced.

5.4 The absence of any concern regarding the complaints processes provided by the professional organisations suggests that the existing system is satisfactory.

5.5 More importantly, the lack of any substantive reservation of functions to either of the two institutions implies that the need for a wholly independent complaints system is lessened. Given the scope for competition between organisations referred to, and the lack of substantive statutory functions given them, the overall complaints system seems to function reasonably.

Note 5.1: Complaints procedures

Given the difficulty that buyers may face in judging the quality of professional services, even after purchase, an issue arises as to how best to deal with complaints relating to service quality, professional misconduct or other harm to the buyer. Legal processes may provide an ultimate avenue for seeking any redress, but both the cost and the time required can reduce their usefulness. Specific professional organisations may also provide self-regulation of such matters. However, there may be concerns about the ability and effectiveness of a professional body to regulate its own members.

A possible solution is the establishment of an independent complaints body to deal with complaints from buyers. Such a body, while having expertise in the relevant area, would not be primarily composed of people working within the specific profession.


section 6

Pic. on previous page: Diminishing Curves of Steel: by Gerry O'Leary
May 2003 - National Aquatic Centre.

6. CONCLUSIONS

6.1 The engineering profession is characterised by relatively low barriers to entry. As a result of the consultation process and the co-operation from the Institution of Engineers of Ireland (IEI) and the Association of Consulting Engineers of Ireland (ACEI), relatively minor regulatory impediments to rivalry between engineers have now been removed.

6.2 The light regulatory approach and competitive structure within the profession has created an incentive for businesses to provide a high quality of service and competitive prices as evidenced by the general level of client satisfaction. This regulatory structure can provide a useful model for other professions. The emphasis on low regulatory barriers to entry, coupled with a form of direct regulation of engineering services and a functioning complaints process means that sufficient standards of service can result without the need for restrictive regulation. This pro-competitive regulation has contributed to a competitive structure where buyers are well served in terms of choice between engineering firms.

6.3 During the consultation process, it became apparent that not all buyers take full advantage of the level of competition within the profession. Some buyers, particularly large private companies, obtain large amounts of detailed information regarding prospective engineering firms, individual engineers, expected timelines and fees, in relation to specifically defined projects and/or hourly rates.

6.4 Although some smaller buyers are not able to invest the same time and resources into selections of engineers, some buyers, particularly public bodies, can take advantage of the competitive regulatory structure within the engineering profession, by:

- Obtaining quotations and service specifications from rival engineering businesses rather than by relying on professional organisations to provide information regarding average fees;
- Approaching fees based on percentages of the total construction costs with caution. Especially in relation to well defined projects where clients may be able to negotiate lump sum fees, with the potential for negotiating competitive hourly rates for any alterations buyers request after the projects have commenced; and,
- Seeking to use the most competitive selection procedures available, such as competitive tenders, taking into account the feasibility of these procedures.

6.5 Along with the relatively minor issues that have been resolved during the consultation process, the Authority has two specific recommendations concerning the regulation of the profession.

Further regulation

6.6 It is common amongst professions for representative organisations to demand regulation that reserves functions to their members. Although the justification put forward for these demands is typically to protect the public interest, the type of regulation demanded often raises barriers to entering the profession and restricts competition. Although such restrictions can sometimes provide much needed protection, they may also be detrimental to buyers and the general public.

6.7 Therefore, it is important that the Government acts to ensure that all regulatory proposals are carefully analysed and evaluated in an open, transparent and objective manner. This analysis should not only focus on protecting buyers from potential market failure, but should also ensure that buyers and the public are protected from regulatory failure. Regulatory failure can occur where over-regulation hinders competition to the detriment of buyers. Any hindrance to competition can reduce the value for money and quality of service received by buyers, and may not even adequately safeguard the public.

Recommendation 2:

The Competition Authority recommends:
No further regulation should be imposed on the engineering profession without a Regulatory Impact Analysis (RIA) being carried out by the Minister for the Environment, Heritage and Local Goverment.

Accreditation of third-level degrees

7.1 The IEI is responsible for accrediting third-level engineering courses. This function is important as it can have a direct impact upon the number of engineering graduates entering the profession. It can also affect the number obtaining the title of Chartered Engineer.

7.2 It is important that this process is sufficiently open, transparent and objective. Therefore, a wide range of interested parties need to have input into the accreditation process and accreditation criteria. This helps ensure that there is adequate flexibility in the academic options available for engineering students to obtain the qualifications required for various types of IEI membership, including Chartered Engineers. The Competition Authority considers that the existing IEI Accreditation Board and specialist committees can provide avenues for interested parties to provide such input.

7.3 The IEI may wish to increase the membership of its Accreditation Board and/or specialist committees to include Government bodies that are involved in the education sector. This could be beneficial by allowing as wide a range of interested parties to be formally included in the accreditation process.

Recommendation 1:

The Competition Authority recommends:
The accreditation system for engineering degrees by the Institution of Engineers of Ireland (IEI) must be made more open and transparent. Specifically:

(a) Membership of the IEI should not be a pre-requisite for inclusion in the accreditation process, and;
(b) Interested parties should be provided with reasons regarding accreditation decisions made by the IEI.