THE INSTITUTE OF CHARTERED ACCOUNTANTS IN ENGLAND AND WALES

Market Foundations

REGULATION IN THE MARKETPLACE: AN ECONOMIC LITERATURE REVIEW

By cebr, an independent research consultancy

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This publication was commissioned by the ICAEW but is an independently written viewpoint. It is based on recent developments in the economics research literature on the impact of regulation on the economy, both from a microeconomic and macroeconomic perspective. The report looks in detail at the effect of regulation on business start ups and recent comparative UK performance on regulatory issues, as measured in international surveys.

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1 Summary

1.1 Objectives

This report aims to consider the role of regulation in the economy, specifically in terms of its impact on entrepreneurship. Through examination of the economic literature, we explore the benefits and costs associated with regulatory interventions and analyse, in particular, evidence on the potentially disproportionate impact that regulation may have on small and medium-sized enterprises (SMEs). We also consider the growing evidence outlining the critical role played by SMEs in driving the economic performance of knowledge-based economies such as the United Kingdom. The report is not an effort to refute the important role of regulation; rather, it aims to illustrate some of the potential, unintentional effects it may have on markets and business activity.

We first set out the economic theory behind regulation and establish how regulation might sometimes work counter to sound economic principles. We consider, in particular, the effect regulation may have on new business start ups and how this affects competition. We illustrate briefly the important role played by competition in improving the efficiency of market outcomes. In this context, we also consider the attempts made in the United Kingdom to ensure regulation is of the highest quality and any negative impact on the economy is mitigated.

Building on the theoretical assessment, we consider the international empirical evidence on the impact of regulation on business start ups, competition and the overall performance of the economy. From a microeconomic perspective we review studies on the determinants of entrepreneurship and business start-ups across countries, looking at the role of regulation in explaining cross-country differences. From a macroeconomic perspective, we review the empirical literature looking at the effect of regulation on macroeconomic variables such as productivity and economic growth.

We then consider different ways regulation can be measured and how the UK matches up to international competitors under these different metrics. We briefly consider how effective recent reforms such as regulatory impact assessments have been in improving the regulatory regime.

Finally, we look at the role of SMEs and, more generally, entrepreneurship in the economy and study how it affects key economic outcomes. Through this we aim to demonstrate the importance of creating a regulatory environment in which SMEs can thrive and contribute to the UK economy.

1.2 Key findings

The key findings in this report are:

Notwithstanding that, in many contexts, good quality regulations may help to correct market failures and improve economic outcomes, recent economists' approaches to regulation emphasise the potential negative consequences of regulation for efficiency in the economy. In particular, recent research has found a negative link between regulation and the rate of entry of new businesses and hence on the degree of competition in markets. This suggests that regulation is likely to play an important role in determining the level of entrepreneurship in the economy; more regulation may lead to entry deterrence.

Linking this microeconomic impact to the macroeconomic consequences, key recent developments in the economics literature have found a significant role for regulation in explaining cross-country variation in productivity and growth performance; regulation tends to reduce productivity and economic growth across countries. Recent studies also confirm the vital role that SMEs and entrepreneurship play in the economy, enhancing growth and productivity. Creating a regulatory environment in which SMEs can thrive is thus crucial to long-run growth, especially in a dynamic knowledge economy in which the role of SMEs is ever more vital.

Recent evidence shows that the United Kingdom performs relatively well in international surveys on its regulatory regime but challenges have emerged and further reform to keep the United Kingdom competitive is essential. One particular area for further action may be with regard to regulatory impact assessments. Although the overall approach has been commended by organisations such as the Organisation for Economic Cooperation and Development (OECD), recent reviews of the way in which these assessments work has revealed scope for improvement.

In particular, regulatory impact assessments could pay more attention to the potential impact of regulations on SMEs and entrepreneurship more generally. Moreover, in light of the findings linking regulation to entrepreneurship and macroeconomic performance, turning to the issue of regulatory exemptions for small businesses as a tool for engendering dynamic, competitive markets should be on the agenda.

1.3 Outline of report

Chapter 2: Introduction

In Chapter 2 we introduce regulation and briefly consider the approaches taken to it in the United Kingdom at present.

Chapter 3 Theoretical framework

In Chapter 3 we present the different economic schools of thought that exist on regulation. We introduce the public interest and public choice theories before looking at where the emphasis of recent research developments lies.

Chapter 4 Economic consequences of regulation

In Chapter 4 we then study the ways regulation, particularly through its impact on competition, may affect three types of economic efficiency: allocative, productive and dynamic efficiency.

Chapter 5 Empirical approaches to regulation

In Chapter 5 we assess the empirical literature on the effects of regulation, looking first at how regulation affects entrepreneurship and business entry. Second, we look at how regulation affects the economy more broadly, looking at attempts to explain variance in economic growth across countries due to differences in regulation.

Chapter 6 Measuring the regulatory burden

In Chapter 6 we look at the different ways in which the burden of regulation across countries has been measured. We first introduce the OECD product market regulation indicators. We then study the World Bank ease of doing business measure and then also consider other indicators. Across the range of different indicators considered, we assess the UK's relative performance. We then discuss the UK government's attempts to mitigate any negative consequences of regulations through regulatory impact assessments (RIAs).

Chapter 7 The importance of entrepreneurship to the economy

In Chapter 7 we look at the role of entrepreneurship in the economy and explain why entrepreneurship is important in an economy. We look at the relationship between entrepreneurship and economic growth across countries.

Chapter 8 Conclusion

We summarise the key findings of the report, drawing together the findings on regulation and on the role of SMEs in the economy.

2 Introduction

The burden of regulation is a key concern for businesses. In the ICAEW *Business Confidence Monitor*,[1] senior business professionals consistently rank regulatory requirements as the factor causing the greatest challenge to their organisation's performance. Indeed, in the latest survey, 41% of UK businesses identified regulation as a greater challenge than one year ago – of all the challenges identified it received the highest rank. Similarly, evidence from the the Federation of Small Businesses finds that small businesses are dissatisfied by the complexity of regulation (HMSO 2008). So, regulation is an economically important issue that businesses are concerned about.

HM Treasury recognises the importance of creating the right conditions for businesses to thrive: the government's approach to improving the UK's long-run growth performance involves implementing microeconomic reforms to remove the barriers which prevent markets from functioning efficiently.[2] The government has recently launched a new enterprise strategy – published jointly by the Department for Business, Enterprise and Regulatory Reform and HM Treasury (HMSO 2008) – identifying regulation as a key driver of enterprise. Consistent with this, in a recent speech the UK Chancellor of the Exchequer referred to plans to impose a limit on the amount of regulation that can be imposed by Whitehall departments.[3] It is clear that the government recognises that the UK regulatory environment needs to encourage and enable enterprise activity.

The European Commision's Lisbon strategy for growth and jobs also identifies the importance of policies that allow businesses to create more and better jobs (EC 2005).[4] Specifically, the EC's strategy pinpoints improving both European and national regulation as well as ensuring open and competitive markets as key components of the Lisbon action programme. The EC recognises that the regulatory climate must improve and explicitly admits that there are too many obstacles to becoming an entrepreneur or starting a business (EC 2005). In the light of this, the recent Small Business Act for Europe (EC 2008) aims to achieve the best possible framework conditions for SMEs, improving the overall policy approach to entrepreneurship. Thus, the effects of regulation on entrepreneurship are also keenly recognised in European Union policy.

As well as businesses and government being concerned by regulation, it is also an issue that has received attention in the academic economics literature. Some key developments have shaped this literature recently. First, the emergence of a comprehensive new data source from the OECD on product market regulation has been the stimulus for influential empirical studies that successfully explain divergence in productivity and growth performance across advanced economies on the basis of differences in the regulatory and institutional environment. Second, developments in economic theory have emphasised the important effect regulation can have on the entry of new firms into the market. Consequently, economic theory has established that regulations can therefore have significant impacts on competition and the efficient functioning of markets.

[1] The ICAEW *Business Confidence Monitor* is a quarterly survey of senior business professionals. It asks a variety of questions on business confidence, performance and the key challenges that businesses face.

[2] HM Treasury policy areas – enterprise and productivity http://www.hm-treasury.gov.uk/documents/enterprise_and_productivity/ent_index.cfm

[3] Speech by the Chancellor of the Exchequer, Rt Hon Alistair Darling MP at The CBI Annual Dinner 20 May 2008 http://www.hm-treasury.gov.uk/newsroom_and_speeches/speeches/chancellorexchequer/speech_chx200508.cfm

[4] Detailed information on the Lisbon strategy for growth and jobs available at http://ec.europa.eu/growthandjobs/index_en.htm

2.1 Definition of regulation

Economic regulations are requirements or restrictions placed on firms by governments and other public bodies, which influence their decision-making process on issues such as pricing, competition, production, employment, market entry or exit. According to the OECD, regulation is perhaps the most pervasive form of state intervention in economic activity, yet the OECD also recognises that an effective and efficient regulatory regime is essential for the good working of a market economy (OECD, 2005).

Examples of regulation include compliance with employment protection laws, public protection and environmental regulation. Further regulations include administrative burdens such as being forced to submit information to the state and health and safety regulations.

In this report, the main focus on regulation is that which affects the administrative burdens that most firms across the economy face in the day-to-day course of doing business. Thus, we do not consider, for example, economic regulation of natural monopolies or competition policy – both of which tend to focus on a specific selection of firms (those that are monopolies which have – or have the potential to have – significant market power in some of the markets in which they operate). Such regulations are unlikely to have much direct influence on SMEs.

2.2 Regulation in the United Kingdom

The United Kingdom government has an active stance on regulation. It has set up the Better Regulation Executive (BRE). This body has five key principles of regulation,[5] which it aims to ensure are reflected across all government regulation. These are that any regulation should be:

1. transparent
2. accountable
3. proportionate
4. consistent
5. targeted.

Another key aspect of the United Kingdom government's approach to regulation is the Small Business Service, now the Enterprise Directorate and part of the Department for Business, Enterprise & Regulatory Reform. This aims to ensure policy is considered from small businesses' perspective.[6] Also important is the use of regulatory impact assessments for new policy proposals. These aim to provide assessment of the costs and benefits of a regulatory proposal on business, charities and the voluntary sector.[7]

[5] Better Regulation Executive http://www.berr.gov.uk/bre/

[6] Government Response: Helping Small Firms Cope with Regulation http://archive.cabinetoffice.gov.uk/brc/government_responses/helpingsmallfirmsresponse.html

[7] Department for Business Enterprise & Regulatory Reform http://www.berr.gov.uk/consultations/ria/index.html

In its most recent review of regulation in the UK, the OECD commended the UK government's initiatives and institution building with respect to regulatory reform. It pointed out that the UK's institutions, procedures and other regulatory tools form an efficient, transparent and accountable regulatory policy relative to most other OECD countries – but guarded against complacency (OECD, 2002). Similarly, the European Commission's assessment of the UK's National Reform Programme for growth and jobs identified considerable progress on structural reforms and provided a relatively positive assessment of the UK's regulatory environment (EC, 2006a). In the 2007 update, the UK was again praised for its moves towards the creation of a business-friendly regulatory environment (EC 2007).

So, the UK government has considerable cognisance of regulatory issues and of the need for quality regulation that fulfils the BRE's objectives. Moreover, the approach it has adopted has been broadly commended by third parties. However, despite this, regulation remains an issue which is of considerable concern to business – as recognised by the Chancellor, the Enterprise Strategy and respondents to the ICAEW quarterly surveys. In this context, we now aim to review the literature on the economic effects of regulation and empirical evidence for this.

3 Theoretical framework

In this chapter we aim to consider the frameworks for thinking about regulation and its impact on the economy. We present the two main 'schools of thought' that have traditionally influenced studies into regulation. Both schools of thought have their merits in considering the appropriate balance of intervention in the economy, and insights of varying value in different contexts. We then look at a recent study on which approach best matches the evidence. Finally, we look at how regulation might have effects on various aspects of economic efficiency in the economy and explain why efficiency is important to the economy.

3.1 Public interest

The public interest approach to regulation dates back to Arthur Pigou in the 1930s. His proposition was that unregulated markets lead to a variety of market failures that have a potentially damaging effect on the economy. Thus, under this approach, regulation is necessary to improve efficiency and outcomes for society. Market failures may occur in a variety of ways. One example is the existence of externalities such as pollution, which firms do not account for in their costs even though there is a cost to society. Under the public interest approach, regulation can help to correct market failures and improve social efficiency. In this approach, benign governments can play a positive role in correcting market failures through regulation (Shleifer, 2005). For example, governments can impose safety standards to prevent accidents that may be more likely to occur in a free market economy (Shleifer, 2005). The public interest school holds that government actions can improve efficiency and welfare outcomes in society.

3.2 Public choice

The other approach to thinking about regulation, and one which has increased in salience of late, is the public choice approach – originally conceived by theorists such as Gordon Tullock in the 1960s. The fundamental premise of this approach sees government intervention and regulation as less benign. According to this approach, regulation interferes with the efficient operation of market forces and that, consequently, in many cases, 'regulatory failure' is likely to be more significant than 'market failure'.

A key paper from George Stigler (1971) argued for the possibility of regulatory capture; that regulations were designed and captured by the industry in question for their benefit. Industry incumbents would acquire regulations that create rents for themselves, keeping out competitors and allowing the incumbent firms to generate higher profits. Further papers since the 1980s argued that regulation may be pursued for the benefit of politicians and bureaucrats, using regulation to create rents for their own benefit.

In general, public choice theory sees regulation as a malignant influence on the efficient activities of businesses and market forces.

3.3 A recent empirical approach to regulation

It is difficult to claim that either one of these approaches is categorically right in all contexts. Different markets, countries and regulations are likely to lend support to either of the two approaches. Nonetheless, some recent empirical studies have played an important role in attempting to consider which approach to regulation matches up to real world findings most closely.

A team of researchers at the World Bank (Djankov et al., 2002) led a seminal study aiming to test the two different approaches to regulation, focussing on the regulation of entry to market. Their work reasoned that a world in which the public interest approach more accurately depicted the impact of regulation would be quite different from a world in which the public choice school was right. According to the public interest school of thought greater regulation would generally be expected to lead to higher quality goods, reduced market failures (reducing negative externalities such as pollution) and increased competition. In contrast, regulation as conceived by the public choice theorists would lead to reduced competition and higher corruption.

Using a cross-section of 85 countries and data on the regulation of entry – looking at the procedures that must be undertaken and the variance in the official time and cost of starting a business across the countries – Djankov et al. (2002) were able to identify which approach matched up to the evidence. Their research found that stricter regulation of entry was not associated with higher quality products, better pollution records or increased competition. By contrast, stricter regulation was associated with higher levels of corruption and a greater sized unofficial economy. Thus, the exhaustive study came down in favour of public choice explanations of regulation.

The conclusion from this paper was that the public choice explanation of regulation seemed to be somewhat more pervasive. However, this is by no means a case for wholesale de-regulation and a full refutation of the public interest approach. Rather, what it most strongly suggests is that there is likely to be a trade-off between using regulation to promote the public interest and economic efficiency. Understanding the nature of this trade-off and the potentially detrimental impact of regulation is therefore critical to identifying in which contexts it may be appropriate to remove regulation and how better to design regulation in those contexts where regulation is considered to retain a role in promoting the public interest.

Given this, it is important to think through the channels through which regulation may impact on the economy and economic efficiency. Thus, in the next chapter, we turn to look at the mechanisms through which regulation may affect businesses and the efficient functioning of the market economy – paying close attention to recent developments in the empirical evidence on this.

4 The effect of regulation on economic efficiency

The work of Djankov et al. (2002) has been crucial in stimulating approaches to looking at regulation's impact on the economy. With the initial evidence that regulation is not necessarily associated with enhancing the public interest, further work has attempted to study further the specific processes by which regulation can have a negative impact on the economy. In many cases, key to this is thinking about the negative consequences of regulation on competition and the workings of the market mechanism. This has knock-on implications for economic efficiency and hence the long-run growth potential for the economy.

In this chapter we consider the potential transmission mechanisms by which regulation may affect economic efficiency. We examine below three different efficiency concepts and in each case suggest how regulation may distort or limit competition and hence the delivery of these different efficiency concepts. The three types of efficiency are:

1. Allocative efficiency – this involves the efficient allocation of resources such that no one individual can be made better off without making another individual worse off.

2. Productive efficiency – productive efficiency involves the optimal use of factors of production and reform improves the utilisation of production factors by firms.

3. Dynamic efficiency – dynamic efficiency looks at outcomes over time, the long-run efficiency in the economy and is determined by firms' potential to innovate.

4.1 Allocative efficiency

Allocative efficiency is achieved when resources are allocated such that no one in the economy can be made better off without making someone else worse off. This is known to occur when the price of a good (consumers' marginal willingness to pay) is equal to the marginal cost of producing the good. Put simply, in an efficiently functioning market economy, prices should be as close to resembling (marginal) cost as possible.

The importance of competition in delivering allocatively efficient outcomes is crucial. An increased number of competitors being able to enter an industry increases contestability and reduces incumbents' market power (Nicoleme and Sauner-Leroy, 2007), such that incumbents' ability to charge prices greater than costs is reduced. If, therefore, regulation acts to create barriers to entry for any potential new firm then allocatively efficient outcomes are less likely to be achieved.

Furthermore, to the extent that regulation introduces additional (unnecessary) costs then firms' production and pricing decisions will be distorted and different from those that would be expected in a competitive market. Thus, regulation may also have deleterious effects on allocative efficiency by imposing artificial costs for firms that prevent them from producing the most efficient quantity of goods and services.

4.2 Productive efficiency

Productive efficiency improvements occur through firms allocating their resource inputs in such a way to reduce or eliminate under-utilisation of their inputs (Nicoleme and Sauner-Leroy, 2007). Productive efficiency is directly related to productivity – if the same amount of goods can be produced for a reduced given quantity of resources, a direct productivity improvement has taken place.

Productive efficiency improvements from reduced regulation may occur quite simply through the removal of the costs of regulation that eat into firms' resources. Time spent by employees completing administrative requirements, for example, can instead be utilised as an input in the productive process, increasing the output that can be achieved for the given quantity of inputs.

Productive efficiency improvements may also come from new or better productive methods within the firm such as organisational change, which are stimulated by increased competitive pressures if entry barriers associated with regulation are reduced. Faced with increased competitive pressures, firms utilise their inputs of capital and labour more efficiently. Competitive pressures also result in the exit of less productive firms. Thus, market share shifts from less productive to more productive firms.

Finally, productive efficiency outcomes are more likely in competitive markets as competition has incentive effects on managers and workers such that organisational slack is reduced and the workplace is structured more efficiently (Griffith and Harrison, 2004). Incentives for improving productive efficiency are typically channelled through:[8]

- Competition creating greater opportunities for comparison, making manager monitoring easier.
- Competitive markets resulting in productivity improvements that reduce costs and allow for significant increases in market shares or profits – at least in the short term.
- Increased probability of bankruptcy in a competitive environment giving managers greater incentives to avoid such stark failure.

Competition can influence the effort of workers through these sharpened incentive effects – studies have found a direct link between the amount of competition and workers' effort (Nickell, 1996).

[8] Framework taken from Nicoleme and Sauner-Leroy (2007).

4.3 Dynamic efficiency

Dynamic efficiency is efficiency that occurs over time as markets innovate to match changing needs and wants by introducing new products or achieving technological progress. Dynamic efficiency is usefully understood by the notion of creative destruction, an idea popularised by Josef Schumpeter in the 1940s (Schumpeter, 1942). Creative destruction occurs as innovative entrepreneurs enter the market bringing new products, productive methods or technologies that make existing products and technologies obsolete. In this process, some firms or methods will become obsolete and exit the market, while newly entered firms or methods improve dynamic efficiency by satisfying more consumer needs and wants with the same or fewer resources.

In the long run, reduction of unnecessary product market regulation might be expected to lead to improved dynamic efficiency outcomes. Removing regulatory burdens and making market entry easier will increase competition by allowing more firms to enter, acting as a spur for firms to innovate and develop new products in case of increased market share. In this respect, competition from the entry of new firms may increase the speed of technological progress that determines the expansion of the possible productive capacity. These competition effects are likely to be considerable but are likely to occur over a longer time period. Through spurring innovation and technological improvement, competition can raise long-run total factor productivity – the productive potential of the economy for a given set of inputs. Evidence exists from UK industry level data showing that more competitive industries are also more innovative (Blundell, Griffith and van Reenen 1999). An important study by Stephen Nickell also found that market contestability was a key condition for dynamic efficiency, with competition having a positive impact on firm-level total factor productivity growth (Nickell 1996).

4.4 Summary of economic efficiency arguments

Thus, by enhancing competition and encouraging entrepreneurship, the theoretical economics literature shows that reducing the burden of regulation can potentially have a significant impact on all three forms of economic efficiency:

- Reducing regulation and encouraging competition works to promote allocative efficiency by ensuing firms produce closer to the point where price equals marginal cost.

- Reducing regulation can impact productive efficiency directly by reducing the time and cost spent on regulations, allowing more inputs to be spent in the productive process. Furthermore, reducing regulation and enhancing competition between firms may be expected to stimulate improvements in productive efficiency through incentivising new and better productive methods and greater effort on behalf of managers and workers.

- Over time, reducing regulation and encouraging competition has the potential to improve dynamic efficiency by stimulating firms to innovate and allowing innovative entrepreneurs onto the market.

So, reduced regulation and increased competition can lead to improved efficiency outcomes. Improved efficiency leads to direct improvements in macroeconomic outcomes such as economic growth. Allocative and productive efficiency improvements allow the economy to move closer to its current potential growth capacity, while dynamic efficiency improvements can lead to increases in the long-run growth potential of the economy through improvements in productivity.

5 Empirical studies of the effects of regulation

In this chapter we review some of the evidence that attempts to model the effect of regulation on various aspects of economic performance. At a business specific level, we study how regulation may impact business start ups, entrepreneurial activity and the overall competitiveness of markets across the economy in section 5.1 below. This takes account of the findings above regarding the important role played by competitive markets in ensuring efficient outcomes. Then, in section 5.2, we assess the studies that have attempted to link the regulatory burden with key macroeconomic variables such as productivity and economic growth – vital long-run determinants of improvements in standards of living.

5.1 Regulation of entry and the effect on entrepreneurship

Considering the effect of regulation on entrepreneurship requires a measure of entrepreneurship to be established. This, in itself, is an issue of considerable debate (da Silva Martins and Paula, 2007). Nonetheless, much of the literature has focussed on the number of new companies that are established and how the regulation of entry may affect this, although the number of newly established firms may only be an imperfect proxy for entrepreneurship.[9] However, it has the advantage of being reasonably easy to measure.

A recent study by Leora Klapper, Luc Laeven and Raghuram Rajan, using a World Bank dataset,[10] found that the increasing cost of regulation hampers the creation of new firms across different countries, especially in industries that should naturally have high rates of entry of new firms (Klapper et al., 2006). The study also found that greater entry regulations across countries are associated with larger sized businesses – giving evidence that entry regulations discourage small firms from setting up. This has a negative impact on the intensity of competition in markets and hence on the realisation of efficient outcomes.

A related study to the Klapper et al research looked at the time delay associated with entry regulation rather than the cost. Antonio Ciccone and Elias Papaioannou studied the time taken to comply with government regulations when setting up a business across 45 countries in the 1980s. They modelled how red tape requirements affect growth in the number of businesses and employment in different industries. They found that countries where it took more time to register new businesses saw slower growth in the number of businesses in industries with increased global demand and where technology improvements had occurred (Ciccone and Papaioannou 2007).

Another recent study looked at the determinants of entrepreneurship across countries and found that the institutional setting was important in explaining cross-country differences. Kristina Nystrom used self-employment as a measure of entrepreneurship and found that, among other factors, regulation of credit, labour and business was an important determinant of the level of entrepreneurship (Nystrom 2007). The study used self-employment as a measure of entrepreneurship over the period 1972–2002 across 23 OECD countries. The regulation index used in the study referred to the credit regulations in terms of ownership and competition of banks; labour regulations with regards to the ease of hiring and firing workers and unemployment benefits; while business regulations included the ease of starting a business and bureaucracy involved in running a business.

[9] For instance, it fails to consider the quality of the newly established firms.

[10] This dataset is discussed further in Chapter 6.

A National Bureau of Economics Research (NBER) study also attempted to explain international differences in entrepreneurship (Ardagna and Lusardi, 2008). It used the Global Entrepreneurship Monitor, a cross-national harmonised dataset across 37 developed and developing countries, with detailed information about individual characteristics and combined this with information on regulation. Corroborating other studies, this study found evidence that regulation played a critical role in the individual's decision to start a new business – regulation acted as a barrier to entry and hence had a detrimental impact on entrepreneurship, especially for those that pursue entrepreneurship as a business opportunity.

Moving to more specific industry level research, a study by Marianne Bertrand and Francis Kamarz looked at the impact of regulations on the food retail trade sector in France (Bertrand and Kamarz, 2002). They studied the effect of another hurdle being introduced into the start-up process – the creation of retail establishments having to be approved by regional zoning boards. Their modelling work found that stronger entry requirements result in higher market concentration in the retail sector for that area. The consequent reduction in competitive pressure was also found to result in both higher prices and lower employment in the areas considered. This report provides compelling evidence of a specific example of how a higher regulatory burden can result in reduced competitive pressures and an inefficient under-utilisation of resources.

5.2 The impact of regulation on economic growth and productivity

There have also been a number of important studies that attempt to model the effect of regulation on the wider economy. The noticeable difference in growth rates and productivity performance across advanced OECD economies over the last 20 years – particularly across the two sides of the Atlantic – had left economists struggling to explain the variation. A crucial paper from Giuseppe Nicoletti and Stefano Scarpetta sought to look at explanations based on areas in which countries differ most: the institutional environment and how product and labour market regulation influences entrepreneurial choices (Nicoletti and Scarpetta, 2003). They used OECD indicators of product market regulation (discussed in detail in Chapter 6) that look at how regulation affects the ability of firms to enter markets and compete with other firms. As described earlier, healthy competition through its impact on efficiency may be expected to result in increased productivity.

Nicoletti and Scarpetta studied the impact of product market regulation (alongside privatisation and liberalisation) on economic growth by modelling the impact on total factor productivity (TFP) growth – the dynamic aspect of growth that comes from technological progress. They found that TFP growth was negatively correlated with economy wide measures of regulation – support for the view that increased regulation leads to slower growth in productivity. They found that the effect was strongest for the administrative burden indicator. Administrative burdens act as a uniform barrier to entry for businesses, taking up valuable time and costs, thus retarding competitive pressures and corollary effects on incentives to innovate.

Nicoletti and Scarpetta concluded that the wide differences in growth patterns across OECD countries over the last 20 years can be largely explained by variance in the depth and scope of regulatory reform, making the case for reducing the burden of regulation on business.

Similarly, Loayza et al. (2004) provide a comprehensive empirical assessment of the macroeconomic effects of regulation. They use six different sources of data on measuring regulation: the World Bank Doing Business measure, the Index of Economic Freedom, Economic Freedom of the World, Labor Market Indicators Database, The KPMG Corporate Tax Rates Survey and the International Country Risk Guide. The data covered 76 countries. Their analysis found that regulation tends to reduce growth – unambiguously so for product market regulation. They also find that the quality of regulation matters, as measured by their regulation indicators. They find that better institutions help mitigate the adverse impact of regulation on macroeconomic performance (Loayza et al., 2004, p19).

A study by Bassanini and Erst (2002) looks at the extent to which regulation affects innovation and research and development. They found an unambiguous negative association between research and development activity and indicators of (inward economic) regulation. Their findings imply, as suggested in economic theory, that reducing the burden of regulation is likely to spur innovation in the economy – ultimately boosting productivity and economic growth.

6 Measuring the regulatory burden

In this chapter we present some of the different attempts to rate the burden of regulation across countries. We study the OECD's product market regulation indicators, which have become a useful resource of late and look broadly at the issue of regulation. We also look at the World Bank's Doing Business surveys, which more specifically look at the regulation of entry – a highly relevant cross country database on the costs and time involved in setting up budding SMEs. We discuss the UK's relative performance in these and some of the other key economic freedom/doing business indicators. Finally, we discuss one key approach that has been adopted by the UK government to mitigate the detrimental impact of regulation on economic efficiency: regulatory impact assessments.

In general, the UK performs relatively well in international comparisons but the advantage is being challenged. Overall it achieves the joint best score for product market regulation on the OECD measure – but the data for this is for 2003 – and is ranked in the top 10 in the World Bank and two other economic freedom indicators. The UK's performance is good but it could improve on licensing, employment and property registration regulations. Moreover there is evidence that other countries are catching up on the UK's good performance on these and other key measures. For example, the UK fell back outside the top 10 countries in the latest 2007–8 *World Economic Forum Global Competitiveness Report*. As other countries work to improve their regulatory regime, a sound business environment in the UK is essential to allowing businesses to thrive in today's highly competitive global economy. In this context, some of the findings of how the UK could improve its approach to regulatory impact assessments are likely to be crucial.

6.1 OECD product market regulation indicators

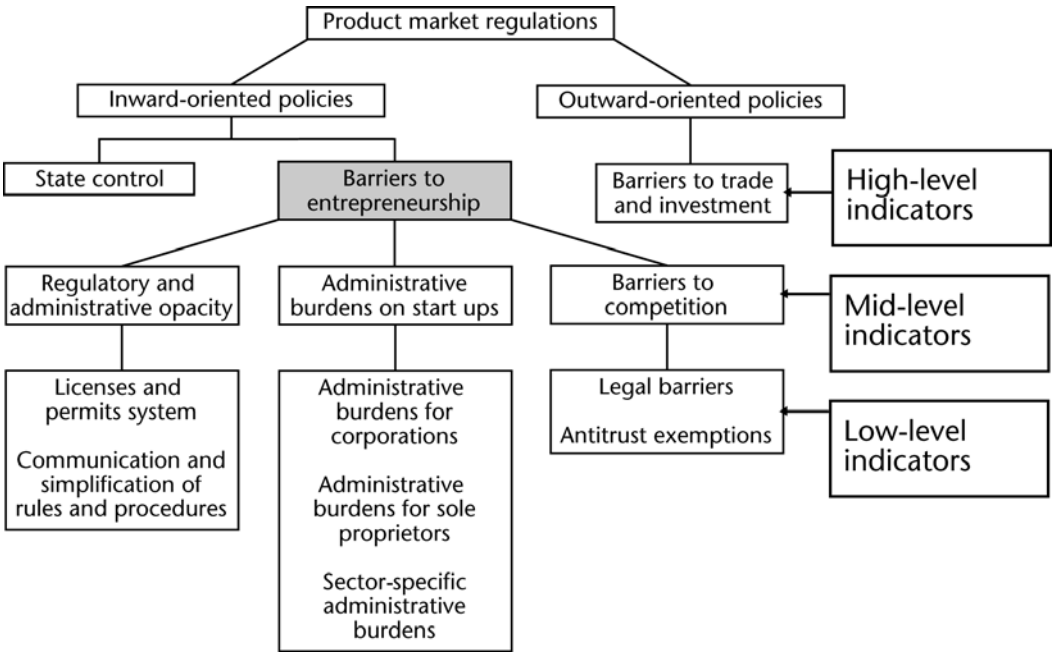
The OECD has led the way in producing indicators for product market regulation that give an idea of the extent to which policies promote or inhibit competition. Their measures are focussed and objective in that they are based entirely on the analysis of official policies of each OECD national administration rather than a subjective business survey – unlike some of the other measures such as the *World Economic Forum Global Competitiveness Report*. The OECD has built bottom-up indicators so that specific underlying policies feed into the overall score for different areas of regulation. Further to this, the OECD product market regulation indicators look at the economy at large rather than specific sectors.

The OECD product market regulation (PMR) indicators are based on questionnaire data in six categories, with the number of data points for each in brackets:

- General policies (223)
- Regulatory and administrative policies (44)
- Administrative requests for business start-ups (129)
- Regulation of professional services (227)
- Regulation of transport (131)
- Regulation of retail distribution (51).

These data points feed into 16 low-level indicators in the product market regulations indicator system. The 16 low-level indicators feed into seven mid-level indicators, three of which are relevant to this study: regulation and administrative opacity, administrative burden for start-ups and barriers to competition. These mid-level indicators feed into three high-level indicators, one of which is relevant here: barriers to entrepreneurship (highlighted in figure 1 below). The overall PMR indicator then summarises the main features of the regulatory framework in the product market in each country and is derived from three high-level indicators: state control, trade and investment and entrepreneurship. The construction of the PMR indicator, with the constituent component indicators relevant to this study is shown in figure 1 below.

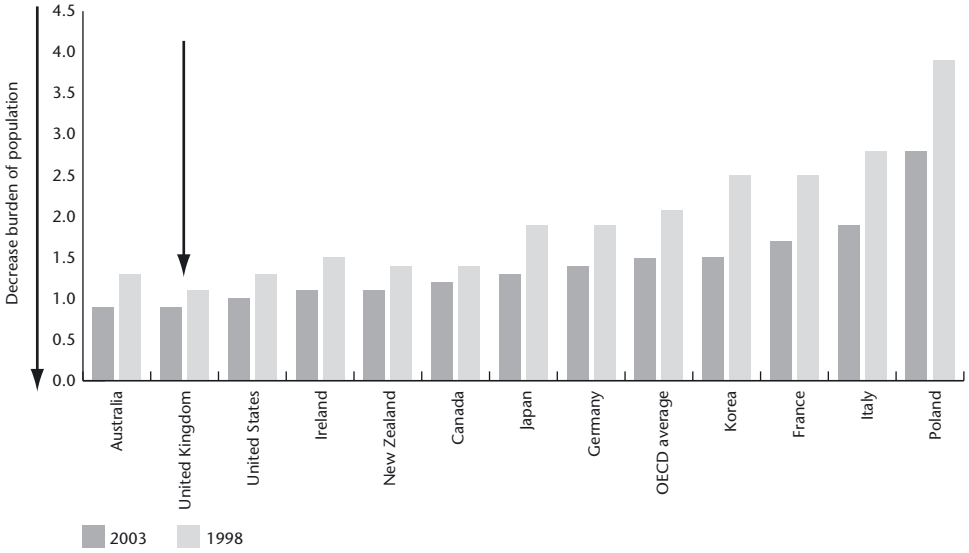
Figure 1: Constructing OECD product market regulation indicators[11]



The most recent update to the indicators provided detailed cross-country data for 2003, allowing comparison with the original indicators in 1998. Looking overall, the UK is ranked alongside Australia, United States, Canada, New Zealand, Denmark and Ireland in having the least restrictive regulatory environment since 1998 (Conway et al., 2005). The overall variation in product market regulation across selected OECD countries is shown in figure 2 below. A score close to 0 is relatively liberal whereas a score closer to 4 is relatively restrictive. The UK performs well; joint first with Australia for the lowest product market regulation – achieving a score of 0.9 on the overall indicator compared to 1.5 for the OECD average (Conway et al., 2005). The UK performs considerably better than neighbouring European counterparts such as Germany (1.4) and France (1.7). However, the United States is only just behind the UK on 1.0 and Ireland scores well at 1.1, while most of the OECD countries have improved considerably since 1998.

[11] Adapted from Conway et al. (2005).

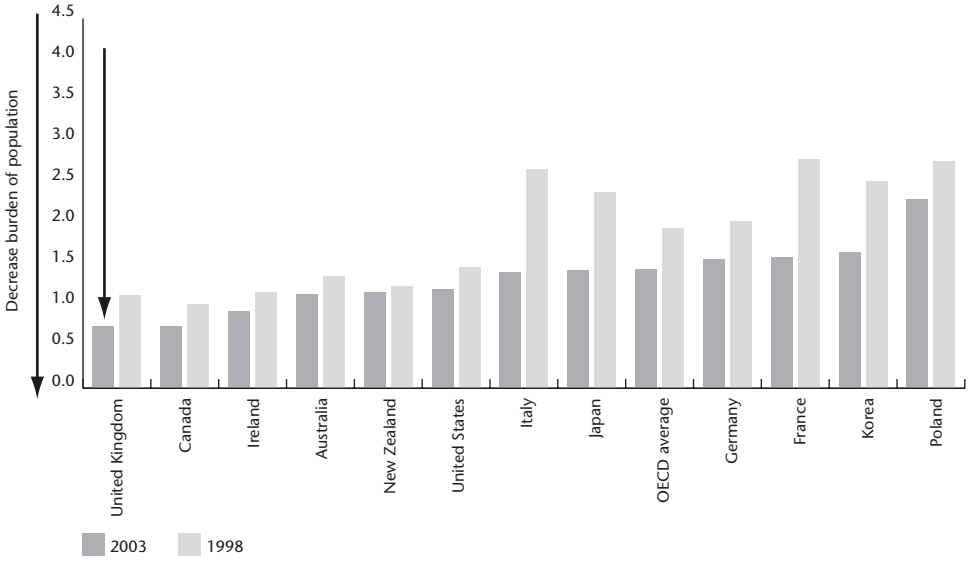
Figure 2: OECD overall product market regulation indicators across selected OECD countries, 0 is least regulated



Source: Conway, P., Janod, V. and Nicoletti, G. (2005) 'Product Market Regulation in OECD Countries', OECD Economics Department Working Papers, No. 419.

The bottom-up approach taken by the OECD allows us to focus on the indicators particularly relevant to the effects on small and medium-sized enterprises and entrepreneurship generally. Figure 3 below shows the scores on the high-level barriers to entrepreneurship indicator. According to this measure, in 2003 the UK was the joint (with Canada) least regulated OECD country, achieving a score of 0.8 compared to an OECD average of 1.5 in 2003. This was an improvement from a score of 1.1 in the previous 1998 survey – which still compared favourably with the OECD average at the time of 1.9.

Figure 3: OECD barriers to entrepreneurship regulation indicator, across selected OECD countries, 0 is least regulated



Source: Conway, P., Janod, V. and Nicoletti, G. (2005) 'Product Market Regulation in OECD Countries', OECD Economics Department Working Papers, No. 419.

Looking at the mid-level indicators, on the administrative burdens for business start-ups measure, only Ireland and Denmark score better than the UK in 2003. The UK scores 0.7, compared to an OECD average of 1.8 in 2003. On regulatory and administrative opacity the UK again scores well, scoring 1.2 compared to the OECD average of 1.3 in 2003.

Digging deeper, analysis of the lower-level constituent components of the administrative burdens for business start-ups measure can also be undertaken. In 2003 the UK had the best score for administrative burdens for sole proprietor firms, scoring 0.5 compared to an OECD average of 1.9. The UK has significantly improved on this indicator since 1998, when it scored 1.5 compared to the OECD average of 2.2. On licensing and permitting, the UK scored 2.0 in 2003, down from 4.0 in 1998 and slightly below the OECD average of 2.2. This is a less strong performance than in the other measures so far discussed – suggesting an area where UK performance could be improved.

Overall, the OECD indicators paint the UK in a relatively positive light, especially compared to other OECD countries. However, the 1998 and 2003 indicators show there has been a considerable improvement across the OECD, so the UK's comparative advantage is being challenged. Further to this, while the robustness of the indicators is notable – the findings are now five years old.

6.2 World Bank Doing Business project

Another way of looking at the impact of regulation on business is the World Bank Doing Business project. This uses a simple business case, with assumptions about its size, location and operations, to look at the burden of regulation – and the ease with which one can do business in that country. Surveys are administered through more than 5,000 local experts, including lawyers, business consultants, accountants, freight forwarders, government officials and other professionals routinely administering or advising on legal and regulatory requirements.[12] The Ease of Doing Business survey 2008 looked at the regulatory burden over the period April 2006 to June 2007, providing a ranking for 178 countries on a number of metrics.

Overall, the UK ranked sixth among the 178 countries for the Ease of Doing Business survey 2008, unchanged from the previous year. The top ranked country was Singapore with New Zealand, the United States, Hong Kong and Denmark making up the rest of the top five. While the UK is the best place to obtain credit and starting a business is relatively easy in the UK (it also ranks sixth for this), there is considerable scope for improvement among some of the other metrics. The UK ranks fifty-fourth for dealing with licenses, twenty-fourth for enforcing contracts, twenty-first for employing workers and nineteenth for registering property. These factors contribute to creating challenges for businesses in the UK. The comparative performance of the UK with other major advanced economies in some of the key domestic policy areas for entrepreneurs in the World Bank survey is shown in figure 4 below. The UK is behind the United States but performs well relative to advanced economies such as Japan, Germany and France. Interestingly, despite their recent stellar economic performance, China and India perform relatively poorly on the World Bank survey, suggesting the institutional set-up in advanced economies such as the UK still offers a favourable environment for many businesses.

[12] World Bank http://www.doingbusiness.org/MethodologySurveys/methodologynote.aspx

Figure 4: World Bank Ease of Doing Business survey 2008 selected categories, selected economies ranking out of 178 participating countries

	Singapore	United States	United Kingdom	Japan	Germany	France	China	India
Starting a business	9	4	**6**	44	71	12	135	111
Dealing with licenses	5	24	**54**	32	16	17	175	134
Employing workers	1	1	**21**	17	137	144	86	85
Registering property	13	10	**19**	48	47	159	29	112
Getting credit	7	7	**1**	13	3	36	84	36
Ease of Doing Business	**1**	**3**	**6**	**12**	**20**	**31**	**83**	**120**

Source: World Bank Ease of Doing Business survey 2008.

6.3 Other studies

Further similar surveys are the Fraser Institute's Economic Freedom of the World (EFW),[13] looking at 42 data points across 141 countries and the Heritage Foundation Index of Economic Freedom (IEF),[14] looking at 10 specific freedoms across 162 countries. The United Kingdom ranks fifth in the *Economic Freedom of the World 2007 Annual Report*,[15] covering the year 2005, and tenth in the Index of Economic Freedom in 2008.[16] In addition, the World Economic Forum's Global Competitiveness Index ranks competitiveness across 131 countries, part of which pays close attention to the business environment. On both the overall Global Competitiveness Index and the quality of the business environment measure, the UK has fallen from a rank of 7 in 2006 to a rank of 11 in 2007. Within *The Global Competitiveness Report 2007–2008*, one of the surveys underlying this report showed 13.2% of respondents, or the fourth highest out of 14 factors, identifying inefficient government bureaucracy as a problem.[17] Further to this, the burden of government regulation was found to be a considerable competitive disadvantage with the UK ranked 58 out of 131 on this measure within *The Global Competitiveness Report 2007–2008*.

6.4 Regulatory impact assessments

In the context of analysing the UK's international performance on the regulatory burden, it is useful to consider one of the key ways in which the UK has sought to reduce the regulatory burden on some occasions and improve the quality of remaining regulation: 'regulatory impact assessments' (RIAs). These aim to ensure new policies and regulations are of the highest quality and that their burdens on businesses are minimised. The OECD defines regulatory impact analysis as:

> 'An information-based analytical approach to assess probable costs, consequences, and side effects of planned policy instruments (laws, regulations etc). It can also be used to evaluate the real costs and consequences of policy instruments after they have been implemented.'

[13] The Economic Freedom of the World accessible at http://www.freetheworld.com/

[14] The Heritage Foundation accessible at http://www.heritage.org/research/features/index/countries.cfm

[15] *Economic Freedom of the World 2007 Annual Report* http://www.freetheworld.com/2007/EFW2007BOOK2.pdf

[16] 2008 Index of Economic Freedom http://www.heritage.org/research/features/index/chapters/pdf/index2008_execsum.pdf

[17] *The Global Competitiveness Report 2007–2008*; Country/Economy Analysis: United Kingdom – The Most Problematic Factors for Doing Business http://www.gcr.weforum.org/

In the UK, RIAs replaced 'costs of compliance' assessments in 1998 and various reforms have been made attempting to improve the regulation assessment process. One example of this was the move in 2000 to require an assessment to be made early in the policy-making process of the impacts of policy on small businesses and the alternatives to regulation. From September 2002 onwards, effects on competition had to be considered in RIAs, as the government recognised the importance of the potential effects on economic efficiency.

The most recent (2002) OECD report into the performance of regulatory reform in the UK found there to be a strong and dynamic focus on proactive measures to address the regulatory problem of the day, including the use of RIAs.

However, a more recent paper from David Parker (2006) argued that there are a number of areas in which the UK's RIA infrastructure can be improved. A key point is that much of the RIA has been applied ex ante – on new regulation – but has failed to be applied ex post to existing regulations – which may be just as, if not more, burdensome than new regulation. Indeed, the OECD study mentioned above also pinpointed the need to pay close attention to the cumulative burden of regulations over time in order to improve the regulatory environment and cautioned that the launching of many new initiatives without eliminating past procedures may have caused some duplication and increased compliance costs (OECD 2002). Further to this, Parker argues insufficient attention has been paid to identifying alternatives to regulation – in particular, the 'doing nothing' option is rarely recommended by RIAs.

Parker also points to the findings of the series of National Audit Office (NAO) reports on RIAs – with one key finding that the quality of RIAs varies considerably across government departments. Moreover, a more recent NAO report found that RIAs were not always being used effectively and that there were continued weaknesses in the quality of economic analysis and insufficient consideration of the impact of proposed changes (NAO, 2007). The NAO recommended more explicit consideration of the impact of legislation when it comes into force, ensuring that departments explicitly consider how and when post-implementation reviews will be conducted and earlier consideration in the policymaking process given to potential regulatory implications.

6.5 Summary

Various regulatory indicators have emerged in recent years. The UK performs relatively well in many of them; ranked joint first overall in the 2003 OECD product market indicator and in the top 10 of the World Bank Ease of Doing Business survey, the Index of Economic Freedom and the Economic Freedom of the World. However, in the influential World Economic Forum survey, the UK has fallen outside of the top 10 in the latest year of the survey. Challenges are evident in improving regulatory burdens such as dealing with licenses, property and employment law. In the World Bank survey, for instance, the worked example showed it would take 19 procedures, 144 days and cost 65% of income per capita to build a warehouse – resulting in a relatively low rank of 54 on dealing with licensing in the UK. Further to this, the UK has slipped to twenty-first from nineteenth place on the World Bank employing workers rank.

Moreover, at the same time that there is some evidence that the UK's performance is either stagnating or declining somewhat, there is also evidence that other countries are improving their performance. For instance the average OECD regulatory regime has moved towards more liberal practices – shown by a reduction in the average OECD

product market regulation indicator from 2.1 in 1998 to 1.5 in 2003. Over the same period, the UK score declined from 1.1 to 0.9. In addition, the more diverse surveys show particularly strong performance from the Asian Tiger economies such as Singapore and Hong Kong. So, in the face of improving regulatory standards among competitors across the globe, the UK must continue to work to ensure a competitive business environment with continual regulatory reforms in order to maintain its position as one of the best places to do business. One of the key ways by which this might be improved is through more effective use of RIAs. Although the UK's overall approach to conducting RIAs has been commended by the OECD, recent research has found flaws in the implementation of RIAs and found that further attention needs to be paid to the economic impact of regulations.

7 The importance of entrepreneurship to the economy

In this chapter we aim to assess the economics literature on why small businesses and entrepreneurship are important to the economy. We look at the economic theory behind entrepreneurship and its importance. We then turn to empirical evidence on the contribution of entrepreneurship to the economy, looking at the impact on macroeconomic variables such as economic growth and productivity.

7.1 Entrepreneurship

The European Commission defines entrepreneurship in the following way:

> 'More broadly, entrepreneurship is a mindset. It covers an individual's motivation and capacity, independently or within an organisation, to identify an opportunity and to pursue it in order to produce new value or economic success. Thus, entrepreneurship is about people, their choices and actions in starting, taking over or running a business, or their involvement in a firm's strategic decision-making.' (EC, 2003)

Entrepreneurs are risk takers that play key roles in efficiently satisfying needs and wants throughout society. Entrepreneurs set up dynamic small and medium-sized businesses (generally less than 250 employees) as they attempt to innovate and take advantage of gaps in the marketplace. Some 23 million SMEs in Europe make up 99% of companies and provide 67% of private sector employment, supporting 75 million jobs (EC, 2006b).

SMEs play a crucial role in introducing new products and innovations and play a vital role in the evolution of industries. The entry of SMEs to markets results in increased competition, a vital part of ensuring the efficient functioning of the market economy and improvements in productivity. Entrepreneurs enhance knowledge of consumers' preferences and what is technically viable by introducing new products onto the market and formulating best combinations of product market goods and services (van Stel et al., 2005). Entrepreneurs may also be inclined to work longer hours with greater efficiency due to the incentive effects of their income being directly linked to their own effort.

Recent economics literature argues that the twenty-first century is seeing a fundamental shift in the model of economic development – giving a vital role to entrepreneurial activity. David Audretsch and Roy Thurik argue that there has been a shift away from what they call 'the managed economy' towards the 'entrepreneurial economy' (Audretsch and Thurik, 2001a). The managed economy is reliant on large scale production, based on comparative advantages in capital and/or labour. In recent years, emerging economies like China and India have successfully established an important role in the world economy based on this form of economy. In contrast, the entrepreneurial economy is based on the dominance of knowledge as a factor of production and entrepreneurial activity that facilitates knowledge spill-overs (Acs and Audretsch, 2003). The notion of moving to a knowledge economy is well-documented and supported by an established literature. For example, both Romer (1990) and Mankiw, Romer and Weil (1992) identify the significant role for human capital in explaining variations in growth performance, rather than just capital and labour.

In the entrepreneurial economy, innovative entrepreneurs challenge current firms by introducing new products and inventions that move existing technologies forward and make old technologies obsolete. In this economic world, the role of innovative firms such as internet companies (Google and Facebook being two of the most salient recent examples) and financial and business service start-ups (hedge funds and consultancies for example) are increasingly vital to growth in the economy.

7.2 Evidence on the impact of entrepreneurship

Empirical work on the effects of entrepreneurship has until recently been largely lacking due to the difficulties in measuring entrepreneurship. As with regulation, the emergence of an important new dataset has helped to challenge this. The Global Entrepreneurship Monitor (GEM) started in 1999 and provides unique information on entrepreneurial activity and detailed information on entrepreneurs in countries across the globe – 60 countries have so far participated. Using measures of total entrepreneurial activity (TEA) derived from this dataset, researchers have been able to estimate the impact of entrepreneurship on economic growth. TEA is defined as the percentage of the working age population (18-64) that is actively involved in starting a new venture or is the owner or manager of a business that is less than 42 months old (Reynolds et al., 2002).

Using the TEA indicator and data on growth rates across 36 countries, controlling for the impact of existing levels of income and structural indicators captured in the global competitiveness indicator, van Stel, Caree and Thurik (2005) find a strong significant positive impact of entrepreneurial activity on economic growth in rich countries. They are able to demonstrate that entrepreneurship matters for economic growth. They also find that the effect of entrepreneurship on economic growth is not straightforward. They find evidence in support of the differential effect of entrepreneurship in managed economies and entrepreneurial economies; the effect of entrepreneurship on growth is stronger in entrepreneurial knowledge economies.

Similarly, an OECD research paper from Audretsch and Thurik (2001b) studied the relationship between two different measures of entrepreneurial activity: the share of small businesses in the economy and the share of self-employment and two measures of economic activity – economic growth and unemployment. They studied data for 23 OECD countries over the period 1974 –1998 and found that, even when mixing samples and the different measures of entrepreneurship, increasing entrepreneurial activity results in higher subsequent growth rates and a reduction in unemployment.

Further corroborative evidence is provided in a recent World Bank paper (Beck et al., 2005) which studied the relationship between the relative size of the SME sector and economic growth using a database on the share of SME labour in the total manufacturing labour force. Using a sample of 45 countries, they found a strong, positive relationship between the relative contribution of SMEs to the economy and economic growth per capita (as measured by gross domestic product per capita). An illustrative example of their results comes from comparing the countries at the twenty-fifth and seventy-fifth percentiles of SME share: Romania, with 37% of employees in the manufacturing sector employed in SMEs, and Denmark, with 69% employed in SMEs. In the time period considered (1990–2000), the research estimated that if Romania had the same share of SMEs as Denmark (ie, 32 percentage points more employees in the SME sector), its growth performance would have improved by 1.4%. So, there is strong support for the positive impact of a thriving SME sector on economic growth in this study.

Hence, entrepreneurship and the role of SMEs are important for economic growth. For the UK, firmly established as a service-based knowledge economy, entrepreneurship will play a key role in promoting economic growth through its effect on competition and innovation.

7.3 Summary

The evidence presented above shows that entrepreneurship plays a vital role in ensuring a dynamic, growing economy. Small and medium-sized businesses innovate and drive progress in the economy. Academic papers find that increased entrepreneurial activity contributes to improved macroeconomic outcomes such as increased economic growth.

These results need to be seen in the context of the earlier findings (section 5.1) which demonstrated strong empirical evidence that increased levels of regulation have a detrimental impact on the numbers of new SMEs setting up, with increased regulation being correlated with fewer start-ups and the greater prevalence of larger businesses (Klapper et al., 2006). Thus, poor quality regulation that acts as a barrier to the efficient functioning of competitive markets can lead to a decline in the level of entrepreneurship and, according to the evidence presented in section 7.2 above, a corollary negative impact on growth in the economy.

8 Conclusion

This report has shown that regulation can have potentially negative effects on economic efficiency. These negative effects arise through the impact of regulation on entrepreneurship and competition in particular. A preponderance of regulation that acts as a barrier to the free operation of businesses, both in theory and in practice, leads to a reduction of the number of firms entering the marketplace and a consequential lessening of competitive pressures. Therefore, although regulation often corrects market failures or promotes the public interest, it is important to realise that there may be a trade-off between these goals and economic efficiency. Hence, overbearing regulation can diminish competition and hold back entrepreneurship. Therefore, the impact of new and existing regulations on businesses – especially SMEs – needs to be considered thoroughly.

In theory, as competition is eased, there are deleterious effects on economic efficiency. Reduced competition is likely to lead to greater price cost margins as incumbent firms have greater market power, reducing allocative efficiency. It is also likely to lead to a reduction in productive efficiency; firms' utilisation of inputs is improved by greater competitive pressures impacting on workers and managers. Finally, reduced competitive pressure will have an effect on long-run dynamic efficiency as there will be lower incentives to innovate.

A series of recent economics research papers have looked at the practical consequences of regulation, especially on the small firms and the level of entrepreneurship across different countries. As the regulatory burden increases, these papers tend to find that the number of new firms entering the market is reduced, resulting in higher prices, less choice for consumers and a reduction in economic activity. These international studies have also suggested that increased regulation has an impact on the distribution of firm size in the marketplace with increased regulation resulting in larger-sized firms in the marketplace – implying reduced competitive pressures from the entrepreneurial activity of dynamic SMEs.

At a macroeconomic level, the consequence of greater regulation can be to reduce competitive pressures across the economy, reducing productivity and economic growth. Recent international research confirms these suppositions, with variations in product market regulation across countries able to explain a considerable amount of the divergence in economic growth performance across advanced economies.

We also examined the importance of entrepreneurship in the economy. The dynamism of entrepreneurs is a key driver of competition, innovation and efficiency improvements in the economy. Further to the importance of entrepreneurs, such as small and medium-sized businesses, in theory and practice, evidence exists that greater levels of entrepreneurship result in increased economic growth in advanced economies. This is particularly true in the 'knowledge-based' economic structure that has become so characteristic of recent years in advanced economies such as the United Kingdom.

Turning to the United Kingdom's recent performance, evidence has shown the UK generally performs well in international surveys of the regulatory and business environment but challenges are emerging. In a highly competitive global environment, the United Kingdom has slightly slipped in some of the recent rankings. Further to this, within the UK, the National Audit Office has been critical about the extent to which one of the cornerstones of regulatory reform in the United Kingdom – regulatory impact assessments – effectively addresses the economic impact of regulations. With a disproportionate effect of regulation on SMEs, a robust consideration of the impact of proposed policies is essential to allow entrepreneurship to continue to flourish, while at the same time allowing policies that are in the public interest to be enacted.

This report has shown that the theory and evidence on the potentially negative impacts of regulation continues to build, at the same time that the role played by SMEs and entrepreneurship in the economy has been increasingly acknowledged. Therefore, there is a key role for the government to ensure that an appropriate business environment exists in which SMEs can flourish. An important aspect of an efficient business environment is reducing the regulatory burden faced by SMEs. In its *Helping Small Firms Cope with Regulation* report (BRTF, 2000), the Better Regulation Task Force recognised the 'disproportionate effects of regulations on small businesses'. Given this, the case for considering the issue of regulatory exemptions for small firms is increasingly salient. The potential impact on competition, efficiency and ensuring long-run improvements to productivity and economic growth makes the case for keeping the regulatory burden on entrepreneurs as low as possible, allowing entrepreneurship to flourish.

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