

Regulatory Burdens of Small Business: A Literature Review

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Executive Summary

- The purpose of this study is to review of the academic literature and a variety of reports on the impact of government regulations on small firms in the U.S.A., the U.K., the European Union, Australia and New Zealand.
- There is no definition of compliance costs that has gained wide acceptance. Disagreement exists about whether certain elements should be included in the calculation of compliance costs (e.g. “psychological costs” that are difficult to measure and quantify). The report offers an explanation of a variety of terms that are in common use and summarizes those that are adopted in the remainder of the document. Unless stated otherwise, the estimates of compliance costs presented in this report relate to the administrative costs arising from the introduction or amendment of government regulations and to the day to day record keeping associated with complying with those regulations.
- For the countries included in this study we have sought to identify:
 - models for estimating compliance costs
 - evidence about the nature and extent of compliance costs born by small firms
 - whether U.K. small firms face a smaller, similar or greater level of compliance costs than equivalent firms in other countries
 - ways that governments can minimize the compliance burdens of small firms
- There are a considerable number of techniques and models for estimating the level of compliance burdens. Cost benefit analysis is considered particularly important for regulatory analysis (Froud et al 1998). A pre-requisite for any method is that relevant data should exist (or be collected) and that this data must be assembled in the most appropriate way. In the absence of these requirements even the most suitable techniques will be subject to criticism (Hahn 1999, Kenneth et al 1996).

- When considering the administrative costs of compliance (e.g. preparing records for the purposes of PAYE) a distinction must be made between those activities that a business would undertake in the absence of regulations (such as keeping pay records for the purposes of product costing), and those that are carried out solely as a result of the regulation (e.g. calculating employees tax and social security deductions). In this respect the theoretical framework underlying the MISTRAL approach to measuring administration costs is particularly helpful (EIM 1997).
- Applying the MISTRAL framework in Holland, it was estimated that across the areas subject to regulation (e.g. wages taxes) just over one fifth of all the administration costs borne by businesses were caused solely by their compliance responsibilities.
- From the literature reviewed we identify four main approaches to researching the levels of compliance costs. Type one, synthesizes the results from a number of studies conducted at different times, and aggregates these in order to estimate the impact of compliance costs on the economy as a whole (e.g. Office of Management and Budget, 1996 – 2000). Type two, collects data from government programmes and regulatory impact assessments and aggregates this information at the level of the economy or for an individual agency (e.g. British Chamber of Commerce 1999). Type Three, collects primary data from businesses about the range of compliance costs that is incurred (e.g. ENSR 1995). Finally type four, collects primary data from businesses about the impact of a particular area of compliance such as business taxes (e.g. Walpole et al 1999).
- In the countries studied small firms were concerned about the level of compliance costs that they incurred. Despite initial skepticism on behalf of government departments, in all the countries reviewed government had accepted that the burden of regulation has a disproportionate impact on small firms. All governments stated that they were taking action to reduce this burden.

- For a variety of reasons, it is not possible to provide a “rule of thumb” that can be used to estimate the extent to which compliance costs borne by small firms are greater than those of large firms. However, for businesses with less than 20 employees, the compliance costs borne are at least 35% higher than for firms with more than 500 staff (e.g. ENSR 1995). This figure must be seen as an absolute minimum.
- In the majority of cases the costs borne by small firms are relatively much higher. In some cases large firms actually receive a net benefit from regulations (e.g. as a result of holding cash collected on behalf of government until it is due to be paid over), whilst small firms incur net costs (e.g. Sandford and Hasseldine 1992). It is common for firms with less than 20 employees to incur compliance costs that are several times greater than the costs incurred by large businesses (e.g. Inland Revenue 1998).
- From the literature reviewed it has not been possible to judge whether small firms in the U.K. face smaller, similar or larger costs of compliance than businesses in the U.S.A., European Union and Australia and New Zealand. This is because international comparisons of compliance costs in countries with different systems (e.g. different taxes), different levels of earnings for valuing staff time, and with studies conducted at different times, are extremely tenuous (Sandford 1995). Also, different measures of business size are utilized (even between departments within countries e.g. see Beale and Lin 1998) and (outside the U.S.A.) very few studies present aggregate data on compliance costs at the level of the whole economy.

- Finally, although governments have attempted to reduce the extent to which the burden of compliance falls more heavily upon small firms compared to bigger businesses, there is little evidence of progress. Of course it is impossible to predict the position of small firms in the absence of these government initiatives, small firms may incur lower levels of compliance costs than they otherwise would have done. However in the U.S.A., there is continued criticism of the rising levels of regulation (e.g. Beale and Lin 1998) even though Congress embarked on regulatory reform before other countries (the Regulatory Flexibility Act of 1980 acknowledged the additional compliance burdens faced by small businesses). There are also government agencies charged with scrutinizing new regulations and reporting directly to Congress on the level of regulation (e.g. the Office of Management and Budget, the Office of Advocacy of the Small Business Administration).
- In the countries reviewed it seems that governments have yet to discover how to reduce the relatively higher burden of compliance costs on small firms in a substantive way. As a result the small business sector and the economies of the countries studied are smaller than they otherwise would be (Bannock and Peacock 1989).

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1. Objectives

The purpose of this study is to provide a critical review of the literature on the impact of government regulations on small firms in the U.S.A., the U.K., the European Union, Australia and New Zealand.

Government regulatory bodies such as the Office of Management and Budget (OMB) in the U.S.A. and the Office of Regulation Review (ORR) in Australia were approached directly. In addition their web sites often proved to be useful sources of data. Departments responsible for implementing regulations were also consulted (e.g. the Inland Revenue in New Zealand).

Wherever possible government reports and statistics have been supplemented with publications and data from interest groups outside the government e.g. the British Chambers of Commerce (BCC), UNICE and the European Network for SME Research (ENSR). Bodies representing the interests of small businesses such as the Federation of Small Businesses and the Union of Independent Companies were also asked to contribute. Academic sources e.g. the Yale Journal of Regulation, the Journal of Environmental Regulation (U.S.A.) and the Journal of Public Economics were closely scrutinized.

This document is arranged into six sections. Section two outlines the areas of regulation covered by this review, offers definitions of compliance costs and presents a table of the most commonly used words and phrases. Section three discusses a range of techniques that can be used to estimate the cost and benefits of compliance with government regulations. Section four presents the results of research on the levels of compliance costs that has been conducted in the U.S.A., U.K., European Union and Australia and New Zealand. Section five examines the extent to which compliance cost research has led to changes in government policies relating to the compliance burden in the countries studied. Finally, section six presents the conclusions arising from this literature review. A detailed list of source materials may be found in the bibliography.

2. Background and Definitions

Improving and simplifying the business environment is considered to be of the highest priority, as the level of regulation imposed by governments is claimed to be one of the major obstacles to business success (UNICE 1995). Whilst no society can exist without the state providing some kind of order, reducing the burden of regulation on business is entirely consistent with the objective of increasing the international competitiveness of the U.K. economy.

Small businesses are more severely affected by red tape than large companies because small firms are less proficient in dealing with the complexities of regulation and are unable to spread the costs of compliance across large-scale operations.

2.1 Policy Areas Covered in this Study

The OECD (1994) defines 'regulation' as: *"... A set of "incentives" established either by the legislature, Government, or public administration that mandates or prohibits actions of citizens and enterprises..... Regulations are supported by the explicit threat of punishment for non-compliance."*

The Federal government of the U.S.A. has identified the main areas of government policy where regulation plays a significant role (OMB 2000). These include:

Social Regulations: which cover the social costs and benefits of environmental, health and safety, transport, employment and other similar regulations. The social costs of regulation are the total value that society places on the goods and services foregone as a result of the diversion of resources to, for example, environmental protection. These include:

- the direct costs of the capital equipment and labour needed to comply with regulations;
- the indirect consumer and producer losses that result from reduced or delayed consumption and production opportunities which are caused by the higher prices that must be charged in order to recover the direct costs of compliance;

- the indirect effects on productivity and efficiency that result from price and output changes;
- less any net benefits that accrue.

Process Regulations: create administrative or paperwork costs of completing government forms such as income tax, immigration, social security, procurement etc.

Economic Regulations: restrict firms from charging prices or entering or exiting lines of business that might cause harm to the economic interests of other businesses or consumers e.g. restrictions on the formation of monopolies.

The OECD (2000) have categorized the major focus of regulations in to three areas, which form the basis of this study:

- (a) Employment Regulations cover the hiring and firing of employees, complying with health and safety standards, the provision of facilities (e.g. for the disabled), statistical reporting of employment related data, social security and pensions rights and other employee related benefits such as, maternity leave and sick leave.
- (b) Environmental Regulations include licensing, permits, planning and environmental impact assessments; complying with regulations governing hazardous substances and materials; process and product quality standards; pollution control and product regulations; environmental reporting and testing; record keeping and the day to day administration requirements related to the environment, environmental levies and taxes, etc.
- (c) Tax Regulations covering business taxes / corporate income tax, sales taxes and other taxes.

The literature reviewed has indicated that all three areas of regulatory policy are accorded a high priority by governments in the countries studied.

2.2 Defining Regulatory Burdens

The most commonly used terms are “compliance costs”, “administrative costs” and “regulatory costs” which are used interchangeably.

In the U.K. tax literature, “compliance costs” have been defined as *“the costs incurred by taxpayers, or by third parties (such as businesses), in meeting the requirements of the tax system, over and above the tax liability itself and over and above any harmful distortions of consumption or production to which the tax may give rise”* (Sandford et al 1981).

Administrative costs on the other hand are *“the costs incurred by the revenue authorities in the taxation process”*. The sum of compliance plus administrative costs may be termed “operating” costs (Sandford et al 1989; 1981, p13). Sandford et al (1989) define compliance costs to include:

“..... for individuals, the cost of acquiring sufficient knowledge to meet their legal requirements; of compiling the necessary receipts and other data and of completing tax returns; payments to professional advisors for tax advice; and incidental costs of postage, telephone and travel in order to communicate with tax advisors or the tax office. For a business, the compliance costs include the cost of collecting, remitting and accounting for tax on the products or profits of the business and on the wages and salaries of its employees together with the costs of acquiring the knowledge to enable this work to be done including knowledge of their legal obligations and penalties....”

Sandford et al (1989) also make the distinction between unavoidable / mandatory costs which occur as a direct result of the legislation and avoidable / voluntary costs which are undertaken to minimize taxes.

The Better Regulation Task Force (BRTF 2000) has adopted the words ‘compliance costs’ to include the sum of both recurring and non-recurring costs. The BRTF regard these costs as the direct costs of regulations. Recurring costs encompass additional ongoing costs for businesses as a result of the regulation such as, staff

costs and time, consumable materials and inspection costs etc. Non-recurring costs include one-off costs of plant and machinery, buildings, training etc.

The Cabinet Office guide on the completion of Regulatory Impact Assessments (Cabinet Office 2000) require the distinction to be made between policy and implementation costs: *“Policy costs refer to the costs that can be directly attributable to the policy goal; whereas implementation costs represent all the costs associated with the implementation of regulation. This is sometimes referred to as the red tape burden.....”*.

Froud et al (1998) also make the distinction between direct and indirect costs. Direct costs are incurred as a result of a regulation and may be both recurring and non-recurring. Indirect costs include, for example, psychological costs and opportunity costs, such as the cost of the owner’s time needed to complete tax related paperwork.

Sandford et al. (1989) classify the operating costs of a tax system as social costs (net of benefits) and psychological costs. Psychological costs (such as the stress caused by having to comply with a set of rules that a practitioner does not fully understand) are difficult to quantify and are not included in the total compliance cost estimates provided by Sandford et al (1989; 1995), see section 4.2. Benefits are treated as offsetting social costs and so reduce total compliance costs. An example of offsetting benefits is the extra cash flow collected during each VAT period that can be used by businesses for a time before it is paid over to the tax authorities.

2.3 Summary

Researchers have provided a number of different classifications of compliance costs that have been used interchangeably in the literature (Hahn & Hird 1991; Sandford 1995; Hopkins 1998). The main terms used in this report are set out in Table 1.

Table 1: Classification of Total Compliance Costs

Term	Definition
Total Compliance Costs	The Total Compliance Cost of a regulation can be thought of as consisting of two parts: Direct and Indirect Costs
Direct Costs	Direct Costs of Compliance are the costs related directly to the regulation. Direct costs can be divided into recurring and non-recurring costs. Recurring costs can be further divided into fixed and variable costs. For example the cost of setting up and using pollution abatement

	equipment. Direct Costs can be further broken down into Administrative Costs and Operating Costs.
Administrative Costs (in the U.S.A. these are usually referred to as Process Costs)	Administrative Costs relate to the paperwork burdens imposed on the administrative structures of a business as a result of a regulation. These are necessarily carried out in order to comply with the requirements of a specific regulation. For example labour and time costs of preparing VAT and Income Tax Returns
Operating Costs	Operating Costs refer to the costs incurred in meeting the policy objectives of regulation. For example the cost of labeling a product to meet a product safety regulation which requires that manufacturers attach labels to advise on the safe conditions of use
Indirect Costs	Indirect Costs are not linked with actual compliance costs but are seen as being indirectly related to the purpose of the regulation. For example psychological and opportunity costs; positive/negative impacts on competitiveness and net cash-flow benefits
Internal Costs	Internal Costs can be thought of as the costs incurred by a business internally in meeting the requirements of a regulation. For example businesspersons own labor costs and staff costs in terms of the number of hours spent on preparing formalities
External Costs	External Costs are, for example, the payments made to external advisors for information and activities related to the regulation
Recurring Costs	These are regarded as continuous costs of meeting regulatory requirements.
Non Recurring Costs	Non-recurring costs can be referred to as temporary or one-off costs. For example the initial cost of learning about a specific regulation
Fixed Costs	Fixed costs are the costs of maintaining the systems or knowledge or equipment needed to comply with a regulation. They will not vary with the volume of products or employees. For example every company must have a standard contract of employment regardless of whether they are employing 10 or 100 staff
Variable Costs	Variable costs increase or decrease with the number of employees, products or volume of output covered by the regulation. For example the number of safety guards on equipment will vary with the number of machines in the plant.

3. Techniques for Estimating the Impact of Regulations

There are a variety of approaches that can be adopted to help determine the implications of regulations. The most widely recognized technique is cost-benefit analysis (Froud et al 1998; Pearce 1998).

- Cost-benefit analysis: examines the trade-offs in terms of the costs and benefits of a policy. This method is recognized as particularly important for improving regulatory analyses. However, it has been criticized because of the perceived difficulty of identifying and quantifying the costs and benefits of regulations (Hahn 1999; Kenneth et al 1996; Moyle 1999; Morrison et al 1998). Despite this criticism, supporters of cost-benefit analysis claim that it is the best available technique to inform policy decisions and so improve economic efficiency (Pearce 1998; Lutter 2000; Hahn 1998; Hahn and Litan 1998).

Hahn and Hird (1991) describe five general approaches to estimating the costs of regulation.

- Econometric studies: typically measure output markets directly or use production and cost functions to assess the impact of regulatory change. Econometric studies are a potentially powerful means of measuring the impact of regulations. However, their disadvantage is that substantial amounts of data are required in order to conduct the statistical calculations.
- Expenditure evaluations: typically rely on surveys of businesses to determine compliance costs. While such surveys provide quantifiable data, there are a number of problems. Firstly, respondent biases, e.g. a firm may provide inflated estimates of costs, in the hope that politicians will consider regulatory relief. Second, a counterfactual cannot be specified, e.g. an automobile company may choose to install stronger bumpers in response to consumer demand without a regulation forcing it to do so. To include the total cost of such bumpers would overstate the impact of the regulation.

- Engineering approaches: estimate the cost of installing equipment directly in order to comply with a regulation. However, this approach does not take account of adjustments that may occur as a result of a regulation, such as changes in consumer preferences. For example, consumers would be expected to prefer cars with good safety features (e.g. stronger bumpers). Regulation might hasten the adoption of these safety features, but it would be inappropriate to attribute the cost of the installation to regulations for an indefinite period. Thus, like expenditure evaluations, engineering studies may be ineffective in determining the counterfactual.

- Productivity studies: estimate the difference between observed changes in productivity over time and those that would have occurred in the absence of a regulation.

- General equilibrium models: are used to examine how a perfectly competitive market responds to a new policy, e.g. through a change in the levels of output or employment as a result of a new regulation. This approach requires substantial data but it may provide an improved representation of regulatory effects.

The benefits of regulations can be measured using two approaches:

- Asking people what they are willing to pay for changes in regulatory standards

- Inferring from observed behavior the amount actually paid by individuals for such changes (e.g. the value that workers place on safety is assumed to be the wage premium received by those working in more dangerous circumstances).

There are also a variety of general approaches to valuing the burdens of environmental regulations (Hahn & Hird 1991; Hazilla & Kopp 1990; Robinson 1995; Ruteledge & Vogan 1993). Approaches not already mentioned above include:

- Actuarial techniques: involve the statistical analysis of historical data on the costs that can lead to environmental liabilities such as accidents and adverse health outcomes
- Professional judgement: draws upon the expert opinions of engineers, scientists, lawyers and environmental specialists. For instance, scientific judgement may be used to assess the hazardous effects of substances released into the environment and the potential responses of animals, humans and ecosystems.
- Decision analysis techniques: techniques such as probability distributions, level of confidence etc. are used in structuring expert judgment, in order to quantify environmental liabilities.
- Valuation approaches: a variety of legal and economic techniques for putting monetary values on environmental consequences (usually used for the purposes of assessing compensation).

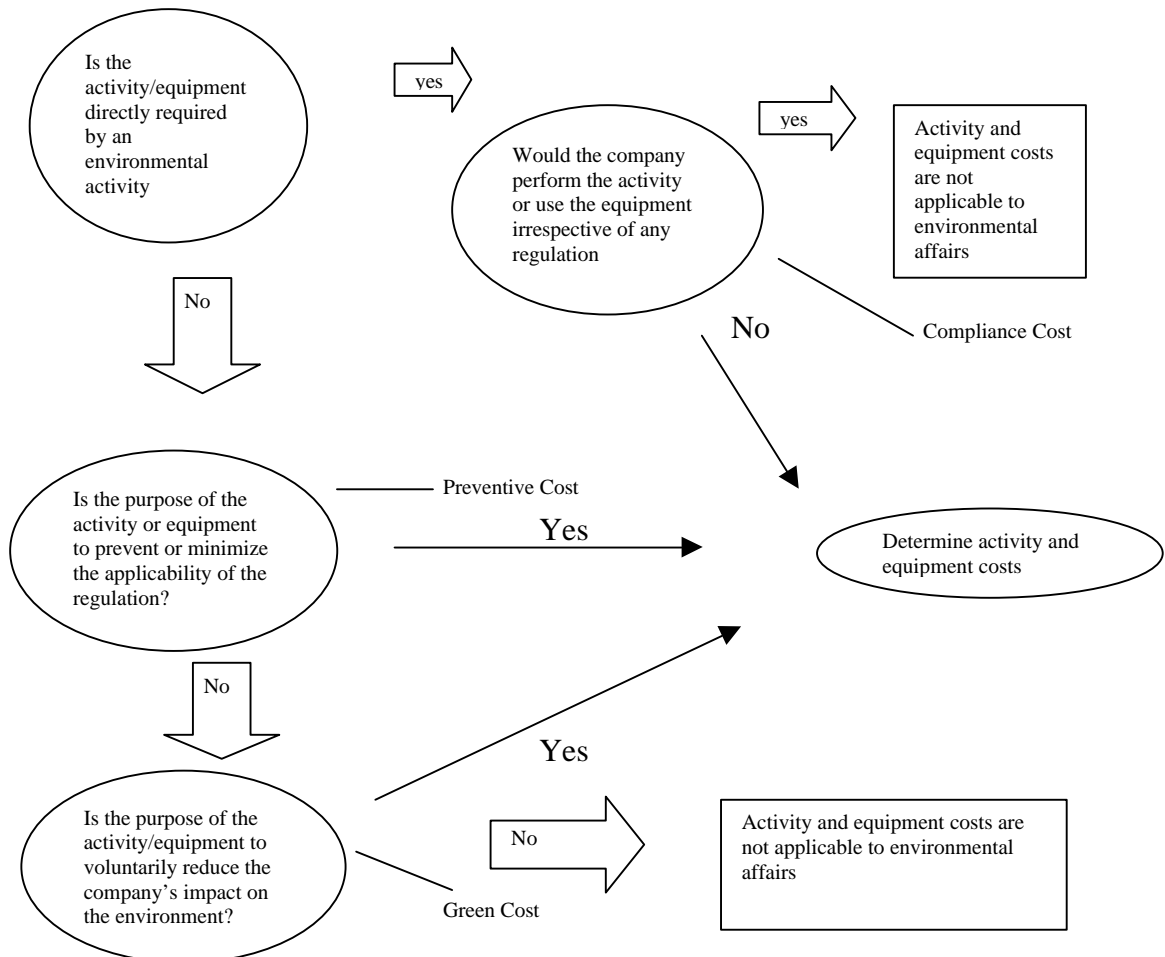
Much of the literature concerning environmental regulations focuses on explaining and describing the technical compliance options that are available to organizations. This literature has been published to help organizations estimate the costs of compliance using “end-of-pipe” abatement technologies. These studies usually employ engineering cost estimation techniques (Donita & Considine 1996).

There are also various methodologies that have been recommended for internal managerial decision-making. More and more organizations of all sizes are becoming aware of the environmental aspects of their businesses and are adopting various approaches to manage their environmental responsibilities (EPA 2000; Alan et al 2000; Boer et al 1998). Conventional methods such as traditional cost accounting systems often conceal the extent to which environmental costs are incurred by companies (EPA 2000; A.D. Little 2000).

Many companies are adopting the use of Activity Based Costing (ABC) in order to assign costs to specific functions. However, the expense of modifying existing cost

accounting systems may be too burdensome for some small firms. Rimer et al (2000) propose that companies that are unable to adopt the ABC method should consider using an “environmental decision tree” (see figure 1).

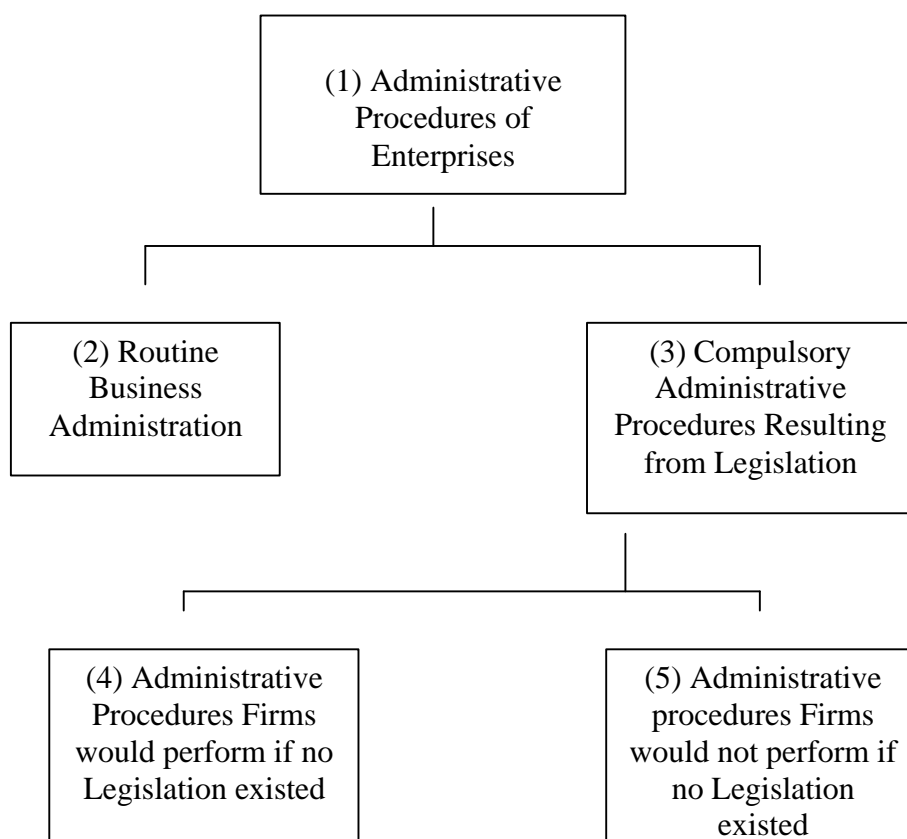
Figure 1: Framework for Assessing Environmental Costs



This framework can be used to evaluate whether or not a particular activity or piece of equipment is environmentally related. Figure 1 represents three types of environmental costs: compliance, preventive and green costs. Compliance costs are associated with the equipment or activities, which are required because of a regulation. Preventive costs are associated with an activity or equipment that will prevent or reduce the applicability of a regulation. Green costs relate to an activity or piece of equipment used to voluntarily reduce the company’s impact on the environment and are not required specifically by a regulation.

In the Netherlands, the development of a measurement instrument for administrative burdens, called MISTRAL (EIM 1997), was initiated based upon a theoretical framework for assessing the compliance costs resulting from legislation (see Figure 2).

Figure 2: The Theoretical Framework



Source: EIM Small Business Research and Consultancy 1997

Initially this framework was applied to costs relating to wage taxes (EIM 1993). Estimates of the administrative burdens on employers showed that ninety seven percent of the total burden was sustained by SME's. This initial study suggested that the theoretical framework and MISTRAL approach to measuring compliance costs, which was still undergoing development, could be utilized to assess administrative burdens.

Figure two (above) identifies the administrative procedures that businesses must undertake. Box one encompasses all the administrative procedures that a firm

conducts. Box two represents the routine procedures that are carried out by firms because they are necessary to conduct their business (e.g. inventory, accounting records, cash flow management, sales administration, etc). Box three comprises the compulsory administrative procedures that are performed as a result of government regulations. The framework also takes account of the fact that some of the administrative procedures that firms carry out, would probably be conducted even if the regulation did not exist (box four). The counter argument is that if the regulation did not exist, firms may carry out the procedure in a different or more efficient way. Finally, box five identifies the procedures that firms would not perform if the regulation did not exist. The report (EIM 1993) then considers the way in which these administrative burdens might be assessed. Both “top down” (i.e. estimating costs at the level of the whole organisation) and “bottom up” approaches (measuring the costs of each element of compliance) are advocated and the characteristics of both are outlined.

The results of applying the theoretical framework and the MISTRAL model (that uses a “bottom-up” approach to estimate the costs of administration that businesses incur) are reported in Section 4.

4. Evidence on the Regulatory Burden

Reports of the regulatory burden on businesses may be classified into four broad types:

- Type 1: papers that synthesize results from a number of other studies. These often comprise data collected over a number of years. In some cases the data is updated in terms of monetary values and by adjusting the results to take account of new circumstances, such as the introduction of additional regulations. Examples of these studies (that are discussed below) are Hahn and Hird's 1991 paper on the costs and benefits of economic and social regulations and the Office of Management and Budgets (OMB) annual reports to congress of 1996 to 2000.
- Type 2: reports that collect data from government programmes and aggregate this information either at the level of the economy, or for a particular agency such as the Occupational Safety and Health Agency (OSHA) (e.g. Harvey 1998). The British Chambers of Commerce Burdens Barometer (1999, 2000) is the only example of the Type 2 approach that we have identified outside the U.S.A.
- Type 3: research that collects primary data from businesses about the costs of compliance that they incur across a range of compliance activities e.g. Hopkins 1992, ENSR 1995.
- Type 4: initiatives that collect primary data from businesses about the impact of one particular area of regulation e.g. ATAX 1995, Inland Revenue 1998.

In reviewing the literature in this field we have found that in the U.S.A. the majority of studies fall into categories one and two, whilst in the U.K. and Europe, Australia and New Zealand types three and four predominate. We have found only one study (ENSR 1995) that collected primary data and then attempted to aggregate this at the level of the economy. This was a type three study conducted in Holland. In the U.S.A., Hopkins applies primary data from his 1992 study (type 3) to the figures from government expenditure programmes (type 2 data) to estimate the impact of

compliance costs on businesses of different sizes. This is a rare example of the combination of two research methodologies.

4.1. The Compliance Cost and Benefits of Federal Regulations in the U.S.A.

The best available evidence of the compliance costs of federal regulations, many of which are not very precise, are provided by the OMB (1997; 1998; 2000). The OMB reports to Congress classified regulations in to three main types:

- environmental, health and safety regulations;
- economic regulations (which address control of entry i.e. imports and prices) and
- social regulations (which include the administrative or paperwork burdens of completing government forms such as income tax).

The OMB reports have been based on Regulatory Impact Analyses (RIAs) provided by federal agencies for major regulations, published reports, peer reviews and literature from outside the government. The reports aim to provide an estimate of the total annual costs and benefits of regulations where these are available. The data are provided in aggregate, by major regulation and agency, by State and local government, by business size, employee's earnings and economic growth.

However it must be noted that there are a number of methodological problems inherent in this Type 1 analysis of the costs of regulations. The OMB 2000 report states that:

“it is difficult , if not impossible, to estimate the actual total costs and benefits of all existing federal regulations with accuracy. We lack good information about the complex interactions between the different regulations and the economy. A variety of estimation problems for individual and aggregate estimates distort the results in different ways”

The main concerns include:

- (1) What is the baseline against which costs and benefits should be measured? In order to estimate this it is necessary to determine how things would have been if the regulation had not been promulgated (i.e. to specify a “counterfactual” position).
- (2) What costs should be measured? The majority of studies of the costs of regulations estimates the direct costs of compliance and omits indirect costs and benefits.
- (3) The effect of technological change. The majority of studies are out-dated and do not account for the impact of technological changes that may alter the effect of regulations over time. Technological improvements are often cited as the reason that actual benefits and costs may turn out to be lower than anticipated. For example medical progress may reduce future benefits estimated for health and safety and environmental regulations, just as productivity improvements in manufacturing might ease the burden of the costs of compliance with some regulations.
- (4) Can we determine causality? Because of the many different regulations introduced by a variety of federal agencies, it may be difficult to attribute changes in behavior to a specific regulation.
- (5) How can regulations be assessed once they have been implemented? For example, regulations such as airbags are widely accepted once introduced. Therefore relying on estimates of regulatory costs and benefits that use a pre-regulation (as opposed to post-regulation) baseline may overstate the current costs and benefits of those regulations.
- (6) Is there an “Apples and Oranges” problem? Attempts to summarize the total costs and benefits of federal regulations have simply added together diverse sets of data,

which vary in quality, method, time period etc. While the OMB has attempted to correct for these problems the figures should be used with caution¹.

Table 2 (below) presents data from the OMB (2000) report. It shows the breadth of the estimates of the total costs and benefits of regulation for the U.S. economy in 1988, drawn from a variety of sources. Costs are estimated in the range \$84billion (bn) to \$100 bn and benefits between \$56bn to \$1,510bn. It should be noted that in the U.S.A. the largest area of compliance costs and benefits accrue from environmental regulations. In the other countries studied this area of regulation receives little attention. It is also important to recognize that these estimates do not include transfer costs (i.e. where one group benefits at the expense of others e.g. food price subsidies paid to farmers) or the paperwork costs of compliance. Paperwork costs are referred to as “process costs” in the U.S.A., and represent the majority of the compliance costs borne by small firms.

Table 2. Estimates of Total Annual Monetized Costs and Benefits of Social Regulation as of 1988 (billions of 1996 dollars)

Environment							
	Hahn & Hird (1991)	Environment Protection Agency	Combined Ranges (a)	Transportation	Labor	Other	Total
Costs	76 to 99	54 (b)	54 to 99	9 to 12	11 to 12 (d)	10 to 15	84 to 100
Benefits	22 to 180	1,450 (c)	22 to 1,450	34 to 60	Not available	Not available	56 to 1,510

Source: Calculations based on information from Hahn & Hird (1991) unless otherwise noted

(a) Combined ranges from Hahn and Hird (1991) and EPA section 812 retrospective (1997)
 (b) Includes water pollution control costs from *Cost of Clean (1990)*, air pollution control costs from EPA's section 812 retrospective report (1997), less adjustments for 1988-1990 overlap
 (c) Benefits from air pollution control only, based on EPA section 812 retrospective (1997)
 (d) Based on total expenditures for safety and health rather than regulation induced expenditures

Note: the dollar figures in this table do not reflect benefits that were quantified but not monetized. They also do not reflect benefits and costs that were not quantified.

Table 3 updates the results in Table 2 by estimating the costs and benefits of regulations introduced since 1987. In this period the costs of regulation are estimated to have increased by \$92bn and the benefits have grown by between \$198bn and \$274bn. However, it should be noted that these data are likely to have overestimated the scale of benefits that accrue in practice (Lutter 1999; Moyle 1999; Hahn & Moyle

¹ The OMB report to Congress states that it has not been able to address the possibility of interaction effects between the large numbers of regulations in force.

2000; Hahn & Litan 2000). Even when regulation is justified overall this does not necessarily mean that the benefits outweigh the costs to small firms.

Table 3: Estimates of Total Annual Monetized Costs and Benefits of Social Regulations Issued Between 1987 and First Quarter of 1999

\$ billions	Environment	Transportation	Labor	Other	Total
Costs	71	6	7	7	92
Benefits	75 to 145	50	28 to 30	45 to 49	198 to 274

Source: The 1987 to 1994 estimates of costs are from OMB (1996). The 1987 to 1994 estimates of benefits are calculated by taking the benefit/cost ratios for the final rules issued between 1990 and 1995 from Hahn & Hird (1996) and applying them to our costs estimates to derive benefit estimates. The benefit cost ratios are 1.4 for environmental, 9.7 for transportation, 3.8 for labor and 7.9 for other social regulations.

Hahn and Hird (1991) whose results are referred to by the OMB (above) claim to have produced the first comprehensive type 1 study of the costs and benefits of federal economic and social regulations. The authors argue that earlier studies (for example Weidenbaum 1979; Litan and Nordhaus 1977) failed to address the benefits that may accrue from regulation, particularly in the areas of health and safety and environmental programmes. Moreover, these earlier studies did not distinguish between transfer costs and efficiency costs. Transfer costs relate to payments from one group to another (for example, producers to consumers) and can provide a measure of the winners and losers from regulatory change. Efficiency costs represent net losses in producer and consumer surpluses and can indicate the overall impact of a regulation on the economy or on an industry.

Hahn and Hird (1991) estimated the costs and benefits of both social and economic regulations. Their estimates were extremely broad, for example adding net social and economic costs together provides an overall estimate of the quantitative effects of regulation of between a net cost of \$111.7 billion and a net benefits of \$58.2 billion. Overall the authors “best guess” is that the annual net cost of all economic and social regulations are approximately \$44 billion, less than one percent of the Gross National Product. It is difficult to see how this figure is derived and the authors acknowledge that the results must be treated with caution. As will be seen below Hahn and Hird’s figures probably underestimate the overall impact of regulations on the U.S. economy by a considerable margin.

In a study for the Small Business Administration, Hopkins updated estimates for the total regulatory costs (but not benefits) for the U.S. economy (GAO 1995, SBA 1995) covering five categories of costs. These are:

- (1) Efficiency costs of environmental regulations, which are the direct costs imposed by environmental regulations
- (2) Efficiency costs of other social regulations, which include consumer safety, nuclear safety, workers health etc.
- (3) Efficiency cost of economic regulations, which include agriculture, communications, transportation, energy, finance and construction.
- (4) Process costs which are based on the OMB estimate of tax related paperwork costs
- (5) Transfer costs relating to economic regulations

Hopkins extended this work to identify the costs borne by businesses of different sizes by using data from his 1992 type three study conducted for the Office of Advocacy (OA) (see below). From his original sample of 360 businesses the smaller firms reported costs that were on average 30% higher per employee than for all firms. Hopkins divided the total regulatory costs based upon federal spending on regulatory programs by the number of employees to determine the average cost per employee. The average cost per employee was then multiplied by 130 percent to represent the cost for the smallest firms. The remaining costs were allocated to the 20-499 and 500+ employee size firms. Table 5 indicates that the administrative (or process) costs associated with tax legislation appear to be highest for the smallest firms and are also the most significant compliance costs for small firms.

However the OA maintained that Hopkins' estimates of the burdens on small firms were overstated. The OA argued that Hopkins's use of a 30-percent greater-than average figure per employee for small firms did not take account of firms with minor costs (for example businesses without employees). The OA estimated that a 20 percent greater-than average is more appropriate for all small firms. The Office of Advocacy data (see Table 4) illustrates that even when the analysis is done in this way, small firms still incur significantly higher costs per employee than larger firms. The figures in parenthesis are the estimates that have been calculated by the OA.

Using the Advocacy estimates, the total small firm burden is approximately \$5,000 per employee compared with \$3,400 per employee for firms with over 500 employees. While Hopkin’s average regulatory cost per employee for small firms is higher relative to the OA figures, both estimates indicate that on average smaller firms with fewer than 20 employees face much higher costs per employee compared to larger firms. In addition, using the estimates provided by Hopkins and the OA, the SBA (1995) reported that smaller firms incur between 63 and 67 percent of the total regulatory burden. Using the OA adjusted numbers, the regulatory burden for larger firms is \$148 billion (bn) compared with \$247 bn for small firms².

Table 4: Regulatory Burdens by Employment Size comparing Hopkins and (OA) data (1995 dollars)

Type of Regulation	Cost per Firm	Average Cost Per Employee	1–20 Employees	20-249 Employees	500+ Employees
Environmental	17,467	959	1,246 (1,151)	1,194 (1,115)	671 (767)
Other Social	9,224	506	658 (608)	630 (589)	354 (405)
Economic Efficiency	8,047	442	574 (530)	550 (514)	309 (353)
Taxation	28,261	1,551	2,017 (1,862)	1,931 (1,805)	1,086 (1,241)
Transfers	14,719	808	1,050 (970)	1,006 (940)	566 (646)
Total	77,522	4,255	5,532 86% greater (5,106) (50% greater)	5,298 (4,950)	2,979 (3,404)

Sources: derived from Hopkins and OA data

Hopkins (1995) used a number of approaches to estimate the total costs of federal regulations for 2000 (including federal spending on regulatory programs, data collected from completed tax forms and earlier studies). Hopkins methodology is basically a synthesis of disparate studies and assumptions that are calibrated by the results of other studies (Beale and Lin 1998). This study was published in 1995 and forecast that in the

² In the USA there are estimated to be 4.99 million firms with less than 20 employees; 5.56 million firms with between 20 and 500 employees; and 16,378 firms employing more than 500.

Year 2000 the total cost of federal regulations would be \$662 billion using 1991 dollars and \$721 billion using 1995 dollars (see Table 5). No estimates were made of benefits.

Table 5: Total Federal Regulatory Costs (dollars in billions)

Type of Regulation	1991 Dollars (billions)				1995 Dollars (billions)			
	1977	1988	1991	2000	1977	1988	1991	2000
Environmental	42	87	115	178	47	98	193	199
Other Social	29	30	36	61	32	34	68	68
Economic Efficiency Costs	120	73	73	73	149	86	77	77
Process	122	153	189	221	138	173	236	236
Subtotal	313	343	413	533	366	391	574	580
Economic Transfer Costs	228	130	130	130	288	158	142	141
Total	540	473	542	662	654	549	716	721

Source: Hopkins 1995

Including transfer costs Hopkins estimated the total regulatory burden to be \$473bn in 1988. After deducting process costs this falls to \$320bn, almost three times Hahn and Hird's (1991) estimates of \$111.7bn.

Hopkins (1992; 1996; 1998) has also conducted analysis of primary data on the regulatory impact on firms of different sizes. This type three study was commissioned by the OA to "*measure the regulatory costs of government regulations on small business*". Using telephone survey data collected from 360 firms, Hopkins found that 40% of small firms did not fully comply with regulations. Compliance costs were estimated on a per-employee basis and per-revenue dollar basis across three sector and size classes.

As referred to above, the findings suggested that the smallest firms had substantially higher regulatory costs compared to larger firms (see Table 4) and compliance costs on a per employee basis generally fell as firm size increased. The smallest firms' regulatory costs per employee were 1.86 times those of the largest firms indicating that there were economies of scale in regulatory clerical work. Tax compliance and payroll record keeping were the most burdensome of the regulatory areas, particularly for small firms, which reported that these two areas accounted for 79% of their total regulatory burden (nearly twice as much as for larger firms).

However, it should be noted that substantial variability in perceived regulatory burdens was observed across industries and regions. This is unsurprising given the diversity of the small business sector. A sample of 360 replies would restrict meaningful analysis below the level of broad industry sector and business size groupings.

In a type two study, Beale & Lin (1998) examined the impact of regulations on small business using the RIAs of individual regulations prepared by Federal Agencies such as the Environmental Protection Agency (EPA) and OSHA, rather than the broad groupings used by Hopkins. Estimates of compliance costs for regulations provided in the study are based on a number of business size measures because the OSHA and EPA use different size classifications. As a general rule, analyses use employment and revenue size, with employment being selected when only one measure is chosen. The cut-off point between small and large businesses was 20 employees and in a number of cases this has been used by both the OSHA and EPA.

Overall, Beale and Lin (1998) found that compliance costs were disproportionately higher for smaller firms. For example, the OSHA estimated the compliance costs of regulations on lead exposure in construction to be greater for small firms compared to larger firms (see Table 6 for example data).

Table 6: Compliance Costs for Lead Exposure in the Construction Industry

Compliance costs per employee by sector	Small Businesses (< 20 Employees)	Large Businesses (> 20 Employees)	Compliance Cost Ratio
Plastering Contractors	\$248	\$195	1.27
Carpentry Contractors	\$738	\$583	1.27
Floor Laying Contractors	\$1304	\$286	4.56
Steel Erection Contractors	\$10,907	\$2,229	4.89
Building Operators	\$45	\$28	1.61

Source: Beale and Lin (1998)

The estimates in table 6 are based on data provided by the OSHA and it is only feasible to present a handful of regulations here because of the large number that was assessed.

Table 6 shows two things. First, at the micro-level how diverse the scale of the impact of a regulation can be, depending upon the nature of the specific industry task e.g. plastering contractors (\$248) compared with floor laying contractors (\$1304). Second the extent to which the relative impact on small and large firms can vary e.g. carpentry contractors (compliance cost ratio 1.27) compared with steel erectors (4.89).

In comparison with environmental regulations, the relative impact of health and safety legislation appears to be less significant (Harvey 1998). This is due to the fact that environmental regulations are one of the principal sources of compliance expenditures for U.S. businesses (Hopkins 1995). However, few OSHA studies have attempted to estimate the total compliance costs of health and safety regulations.

Recently, Harvey (1998) examined the economic cost figures provided by the OSHA and compared these with earlier studies, see Table 7. Previous estimates were out of date and different approaches had been used in constructing compliance cost estimates (Denison and Crandall 1975; Denison 1979; Viscusi 1989). These earlier studies had underestimated the actual costs of compliance because the data was only based on the total projected capital expenditures. Furthermore, the studies did not include regulations issued more recently by the OSHA.

Table 7: Compliance Cost estimates for Employees Safety and Health
(billions of dollars)

Source of Study	Year Studied	Cost (current dollars)	Cost (1993 dollars)
Denison	1975	4.1	8.4
Denison	1979	3.2	6.2
Crandall	1985	8.5	9.8
Viscusi	1989	12.7	13.5
Harvey	1998	31.9	33.5

Note: Harvey's estimate of 31.9 billion has been based upon regulations issued between 1980 and 1995

Cost estimates in this type two study were based on RIA's for 25 major regulations issued by OSHA after 1980. Compliance costs were estimated for construction, manufacturing and other establishments by averaging the total cost of regulations across all firms for each industry category. Costs were not estimated across firm size due to limitations in the RIA data. Harvey attempted to extrapolate from the available data and estimated that the full cost of compliance with OSHA's regulations was approximately \$33 billion. However, he acknowledged that considerable uncertainty exists over this figure, which may be either underestimated or overestimated because the process of extrapolation was conducted using data on the distribution of compliance costs that were collected in 1974. He concluded that a more reliable survey of compliance expenditures is required.

Despite the lack of specific estimates of the relative impact on small businesses, Harvey reported that several earlier studies observed that small businesses are at a competitive disadvantage when forced to comply with OSHA regulations (Longenecker & Moore 1991; Bartel & Thomas 1987).

The majority of U.S.A. studies examined above use research methods one and two, in other words they report using secondary data. Studies that collect primary data are either quite old or quite rare, and any more recent studies (i.e. since 1990) have not been reported in the literature we have reviewed. It is difficult to see where federal agencies obtain information on which to base the RIAs that form the basis of the type one and two studies reported here. However, given the comments made by Harvey (above), who had to use 1974 data on the distribution of OSHA compliance costs, it could be that there is a paucity of up to date data on the compliance costs incurred by small businesses. As a result federal agencies, policy makers and economists may be

forced to make a number of assumptions about the impact of compliance costs on the economy of the U.S.A.

4.2 Compliance Cost Assessment of Regulations in the U.K.

The majority of studies in the U.K. may be classified as either Type 3 or 4, i.e. involving the collection of primary data from businesses about the impact of regulations. The only type two study encompassing a range of compliance areas for the U.K. is the BCC “Burdens Barometer”. To illustrate the cumulative impact of new regulations, the BCC provide a table of the compliance cost estimates published in RIAs. This data is prepared by government departments in a variety of ways (e.g. in some cases discounted cash flow figures are presented over a 15 year time horizon) but the Burdens Barometer does not always identify this. In particular the Working Time Directive has imposed by far the biggest additional cost that is now facing business amounting to £7.65 billion over the life of the previous parliament (which is taken to run until 2002). Whilst, the BCC emphasize that the cumulative cost of regulations is most pertinent to the small business, their “Burdens Barometer” does not indicate the extent of the regulatory burden for small firms alone. The data relates to the whole economy and shows that regulations introduced by the government will cost U.K. businesses in excess of £10 billion by 2002.

Until more recently studies have tended towards type 4 and have largely concentrated on taxation alone (see for example Sandford et al 1973; 1981; 1989). In a departure from this pattern a series of type three surveys conducted by the SBRT for NatWest have tracked business owners’ perceptions of the problems facing their businesses. Since the end of the last recession Government regulations and paperwork have emerged as being one of the most important problems for small firms (SBRT 1998; 1999; 2000). SBRT surveys are conducted quarterly and are mailed to small firms who are members of the SBRT volunteer group. SBRT conducted 41 surveys between 1990 and 2000 and recorded the problem of government regulations and paperwork at its highest in two of their surveys conducted in 2000. In 1990, just 3.1% of their respondent panel rated government paperwork as the most important problem facing their business. This rose to 18.9% in the second quarter of 2000, falling back

to 12.5% in the third quarter. Table 8 shows the number of responses and the change in proportions for government regulations and paperwork in the last six surveys.

Table 8: The Percentage of Small Firms Reporting Regulations as their Most Important Problem

Problem	Survey 59 (1999)	Survey 60 (1999)	Survey 61 (2000)	Survey 62 (2000)	Survey 63 (2000)	Survey 64 (2000)
Government Regulations and Paperwork	14.8%	13.5%	14.3%	18.6%	18.9%	12.5%
Number of Responses	619	507	1,121	812	866	758

Source: SBRT 2000 (vol 16 / No1; No3)

In survey no. 64 (2000 Quarter 3), the findings illustrate that the burden of red tape falls most heavily on the smallest firms. The survey suggests (see Table 9) that on average, small firms with one or two employees spend 5.1 more hours per person per month dealing with government regulations compared to firms employing 50+.

Table 9: Hours per Month spent on Government Regulations by Size of Business

Number of Employees	Total Hours	Hours Per Person	Responses	Non-Response
0	6.5	4.4	102	13
1- 2	12.8	6.4	153	14
3 – 4	16.4	4.1	94	14
5 – 9	23.8	3.4	130	15
10 – 19	31.8	2.4	88	14
20 – 49	41.1	1.4	82	7
50+	76.7	1.3	23	9
Total	22.6	3.9	672	86

Source: SBRT 2000 (vol 16 / No3)

In terms of the impact on different business sectors, Table 10 indicates that construction, agriculture and business services spend more time per person on compliance with government regulations. Although these results may be partially caused by the relatively small number of employees per firm in agriculture and business services, construction and agricultural firms also have to deal with many health and safety and environmental regulations.

Table 10: Time Taken Per Month to deal with Government Regulations and Paperwork by Business Sector

Sector	Total Hours	Hours Per Person	Average Number of Employees	Responses	No Response
Agriculture	17.7	4.6	8.9	15	1
Manufacturing	28.1	2.8	23.2	129	22
Transport	20.3	3.2	12.3	13	0
Construction	35.5	7.5	11.0	41	4
Wholesale	15.2	2.4	12.7	53	8
Retail	17.2	3.5	9.1	112	18
Hotels & Restr'ts	27.7	2.1	18.4	33	5
Business Services	16.7	5.1	6.4	193	21
Other Services	32.9	3.1	13.6	83	7
Total	22.6	3.9	12.5	672	86

Source: SBRT 2000 (vol 16/No3)

The SBRT quarterly surveys also indicate that taxation is the area of red tape that has caused the most work for small firms (see Table 11).

Table 11: Area of Red Tape that has caused the biggest increase over the past year in Compliance Time by Size of Business

Regulation	0	1 – 2	3 - 4	5 - 9	10 – 19	20 - 49	50+	Total
Taxation	66.7%	69.1%	56.4%	48.7%	44.2%	39.0%	37.9%	52.3%
Non Tax Employment Regulations	4.4%	10.6%	12.8%	8.5%	12.8%	13.0%	20.7%	11.2%
Health and Safety Regulations	6.7%	6.4%	6.4%	23.1%	27.9%	24.7%	10.3%	16.5%
Environmental Regulations	8.9%	2.1%	6.4%	3.4%	1.2%	3.9%	3.4%	3.8%
Statistical Enquiries from Government	6.7%	2.1%	1.3%	1.7%	4.7%	9.1%	17.2%	4.6%
Other	4.4%	6.4%	12.8%	12.8%	8.1%	10.4%	6.9%	9.5%
No Response	2.2%	3.2%	3.8%	1.7%	1.2%	0.0%	3.4%	2.1%
Sample Size	45	94	78	117	86	77	29	526

However, while Table 11 shows that employment (i.e. Working Time Directive/WTD, Minimum Wage, Working Families Tax Credit/WFTC) and health and safety regulations appear to be less significant, they tend to be of greater importance for firms with more than 10 employees. SBRT state that over 30% of firms with 20 or more employees attribute the increase in red tape to new regulations such as the WTD and WFTC.

The SBRT survey appears to be the most recent study that has captured the opinions of a number of small businesses concerning a range of regulatory burdens (study type 3). However, it must be noted that these findings are based on small firm respondents that are voluntarily registered with SBRT. As a result it is often claimed that their

responses may be subject to bias, although there is no objective data available to either support or deny this assertion.

More importantly, it should be recognised that the methodology adopted for identifying the perceived business problems on a longitudinal basis (Table 8) is a relative measure, i.e. respondents identify their most important problem from a list of 13 possible alternatives (plus an “other” category). The problem faced by the largest number of businesses is “low turnover/lack of business” identified in Survey 64 (2000 q.3) by 26.8% of respondents. Government regulations and paperwork (12.5%) is of a similar order of magnitude to “lack of skilled employees” (12%) and “other” problems (13.9%).

In the U.K. a series of compliance costs studies have been undertaken (Sandford et al 1973; 1981; 1989; Inland Revenue 1998). These studies estimate the actual costs incurred by small firms in complying with the tax system, including the value of the time spent in compliance by the business owners and their staff, as well as fees paid to professional advisors and other costs e.g. computing and stationery. The most comprehensive research to date on the compliance costs of taxation has been the Sandford et al. (1989) study, which estimated the compliance and administrative costs of U.K. taxes.

Compliance costs represent “*the costs incurred by taxpayers, or by third parties (such as businesses), in meeting the requirements of the tax system, over and above the tax liability itself and over and above any harmful distortions of consumption or production to which the tax may give rise*” (Sandford et al 1981). Administrative costs on the other hand are “*the costs incurred by the revenue authorities in the taxation process*” (Sandford et al. 1989).

Business taxpayers were stratified in terms of annual turnover involving three categories: “small” (up to £100,000), “medium” (between £100,000 to £1 million) and “large” (over £1 million). Table 12 shows these costs as a percentage of turnover and illustrates the regressive pattern for each tax and for all the taxes taken together. For example, for every £1000 of sales for companies with a turnover below £100,000,

the average cost is £33.60 compared to £1.70 for companies with a turnover over £1 million.

Table 12: Compliance Costs as a Percentage of Taxable Turnover 1986-87

Size	Respondents	VAT %	PAYE %	CT %	All Taxes %
Small	9	1.48	1.39	0.79	3.36
Medium	28	0.28	0.19	0.15	0.62
Large	17	0.05	0.08	0.04	0.17

Corporation tax imposes a lower compliance burden than VAT and PAYE. This is unsurprising as, at the time these studies were conducted, Corporation Tax was, for most businesses, assessed and paid annually. In contrast, VAT and PAYE are continuously recorded and generally paid over to the Revenue authorities either monthly or quarterly.

4.2.1 Value Added Tax

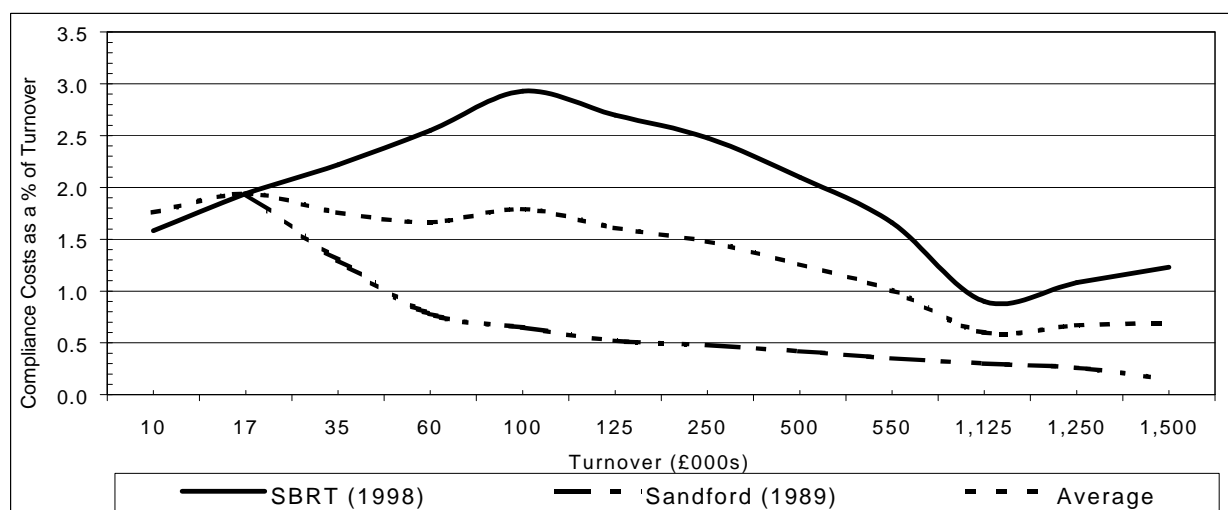
Parallel studies of the compliance costs of taxation have been undertaken by the Small Business Research Trust (SBRT 1996, 1998). SBRT (1998) estimated the perceived compliance costs for VAT as a proportion of annual turnover and found that businesses with a lower turnover experienced proportionally higher costs when compared with larger businesses (see Table 13).

Table 13: Perceived Compliance Costs for VAT as a % of Annual Turnover

Turnover	Sample	Percentage
< £20,000	20	1.58
£20,000 - £49,999	57	2.22
£50,000 - £149,999	127	2.93
£150,000 – £349,999	122	2.48
£350,000 – £749,999	90	1.66
£750,000 - £1,499,999	66	0.90
£1,500,000 and over	48	1.23
All	547	2.07

In the SBRT studies business owners were asked to report their perceived costs expressed as a percentage of sales turnover. The survey did not seek to quantify and value the actual time spent on compliance activities. Figure 3 shows that VAT compliance costs estimated by SBRT are higher than those estimated by Sandford et al (1989).

Figure 3: Compliance Costs: SBRT (1998) vs. Sandford et al. (1989)



Source: Sandford et al. (1989), SBRT (1998)

Chittenden et al (1996, 1998, 1999a, 1999b) in type two studies estimated the aggregate compliance costs for VAT in the small business sector for limited companies with less than 100 employees and unincorporated businesses with less than 20 staff. Compliance cost estimates for VAT were £2,695 million when using Sandford et al (1989) estimates compared to £16,987 million when based on SBRT (1998) estimates.

In the SBRT (1998) study respondents were asked to estimate their compliance costs as a percentage of turnover. Thus, the SBRT estimates were based on the beliefs of small business owner/directors, and it could be argued that these estimates were overstated. The Sandford et al (1989) study calculated compliance costs by measuring the costs incurred by small businesses in administering VAT. These costs included the value of time spent in compliance by partners, proprietors, qualified accounting staff and other staff as well as fees to professional advisors and other costs. The sum of these costs was then expressed as a percentage of taxable turnover, and result in considerably lower estimates of the costs of compliance with VAT. However, this does not imply that the SBRT data is inaccurate. In fact the SBRT data shows that business owners believe that the costs of compliance with government regulations are higher than they are when measured in a structured way.

Compliance costs for VAT based upon the Sandford et al (1989) type four study data are expressed as a percentage of turnover across different size bands in Table 14. The Sandford data has been adjusted for inflation up to 1999 levels as shown in column two, and the results are presented in column three.

Table 14: VAT Compliance Costs

Turnover Bands	Turnover Bands Adjusted for Inflation	VAT Compliance Costs (% of Turnover)
£0 - £20,499	£0 - £33,999	1.94
£20,500 - £49,999	£34 - £82,999	0.78
£50,000 - \$99,999	£83,000 - £165,999	0.52
3100,000 - £499,999	£166,000 - £832,999	0.42
£500,000 - £999,999	£833,000 - £1,664,999	0.26
£1,000,000 - £9,999,999	£1,665,000 - £16,649	0.04
£10,000,000 +	£416,650,000 +	0.003

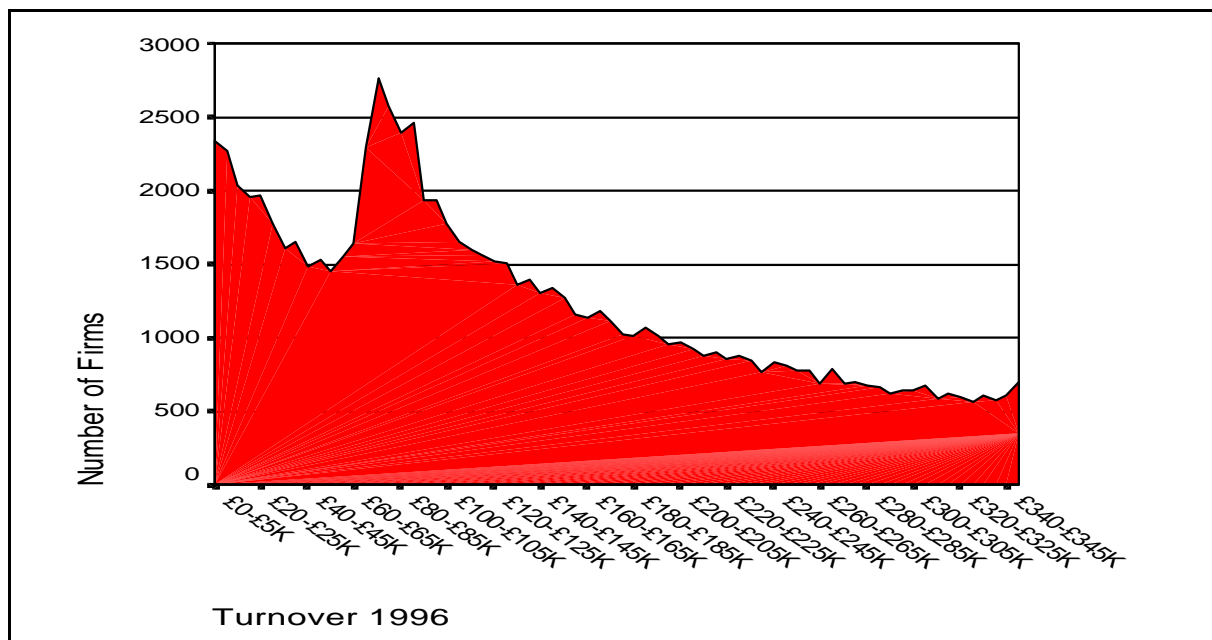
There is evidence to suggest that costs for administering VAT fall most heavily on smaller firms. The VAT registration threshold is currently £52,000. While over the years the main thrust of representations has been to increase the threshold, more recently there have been indications of increasing concern about the effect of the threshold on competition between registered and unregistered businesses.

It has been pointed out that the current tax regime, and the VAT registration threshold in particular, acts to restrain the growth and development of small

businesses. SBRT (1998) found that overall, 15.3 percent of VAT-registered firms have expressed the view that the registration threshold is a significant problem for them, and that 18 percent of non-registered businesses state that they intentionally forego growth so that their turnover remains below the VAT-registration limit.

Figure 4 illustrates the distribution of companies across turnover bands. The number of businesses has been plotted across different turnover bands based on the financial accounts of 87,872 limited companies with a turnover of less than £350,000 in 1996. This data was compiled using the Fame Database.

Figure 4: Number of Firms in Turnover Bands



Source: Chittenden et al 2000

As can be seen in Figure 4 there appears to a distortion in the distribution of firms around the registration threshold. We can see that the number of firms within each turnover band is decreasing as we move towards the registration threshold and begins to increase again after the £60,000-£65,000 turnover band. Evidently, setting the VAT registration threshold at around £50,000 creates a ‘distorted business behavior zone’ in the turnover range of £30,000-£65,000 which firms try to avoid. It appears that some firms will try to grow above the £65,000 level or avoid growing large enough to reach the registration threshold.

Customs and Excise see a significant reduction in the threshold as a possible anti-avoidance measure (HM Customs and Excise 1999). However, the increased burden of compliance for the smallest businesses would be considerable.

In the May 2001 pre-budget statement Gordon Brown announced a package of changes to VAT to assist small businesses, especially those entering the VAT system for the first time. The measures to be introduced are intended to reduce VAT red tape and improve small business cash flows. The package:

- Raised the turnover limit for “cash accounting” to £600,000, thus allowing 40,000 additional businesses to pay VAT based on the cash they receive and pay. This aimed to reduce red tape and improve business cash flows especially where customers take a long time to pay their bills.
- Reduced red tape for more than 100,000 firms by allowing businesses to calculate their VAT payments once per year (known as the annual accounting scheme). For the first time, it became possible for traders entering the VAT system to join this scheme without having to wait for 12 months.
- Introduced a new lower SME turnover limit of £100,000. Businesses below this limit will be able to calculate their VAT payments as a proportion of turnover without having to record VAT on every purchase and sale. Consultation is taking place about this proposed scheme, which is believed to be similar, in principle, to arrangements that operate in France. If the scheme is well designed it could enable large numbers of small firms with turnover of less than £100,000 to grow without the owners having to incur the full cost of compliance with VAT regulations.

4.2.2 Pay As You Earn

The publication of the Inland Revenue (1998) report on the compliance costs for PAYE has made it possible to compare the SBRT (1998) data, and the Sandford (1989) study with the latest Inland Revenue (1998) results. Using the Natwest-MBS

Tax Models Chittenden et al observed that the Inland Revenue's (1998) estimates of compliance costs were proportional to the figures produced by Sandford et al (1989).

Other research concerning the tax burden incurred by the U.K. small business sector has been conducted by Chittenden et al (1998; 1999; 2000). Together with NatWest, Chittenden et al (1999) have developed (*NatWest/Manchester Business School Tax Models*) a framework to measure changes in the total tax burden of U.K. small businesses.

Chittenden et al (2000) applied the Inland Revenue (1998) data to their Tax Models to calculate aggregate compliance costs for PAYE and NICs. In the NatWest MBS Tax Models the compliance cost estimates are amended over time to reflect changes announced by government departments. In Table 15 the Inland Revenue (1998) estimates of PAYE and NIC compliance costs are presented as a fixed amount per employee across different business size bands. The figures in column two, estimated by the Inland Revenue (1998) are higher than the costs applied in the Tax Model (column 4). In the 1999 Budget it was announced that where businesses collect PAYE of less than £1000 per month (previously £600) from their employees, they will be able to make these payments to the Inland Revenue once each quarter instead of monthly. According to government estimates, this will cut smaller business (less than 10 employees) PAYE compliance costs, by an estimated 15%. This reduction is reflected in the PAYE and NIC costs in table 15 (column 4).

Table 15: PAYE and NIC Compliance Costs Per Employee Per Year

Size Band (Employees)	PAYE & NIC Compliance Costs	% Decrease in Compliance Costs (as per 1999 Budget Statement)	Adjusted PAYE & NIC Compliance Costs Applied in the Tax Model
1 - 4	£288	15%	£244.8
5 – 9	£143	15%	£121.6
10 – 49	£89		£89
50 – 99	£58		£58

The merger of the Contributions Agency and the Inland Revenue will help to further reduce these costs and improve the transparency of the tax system, making tax planning more straightforward (Chittenden et al 1999).

4.2.3 Corporation Tax

In terms of compliance costs for corporation tax the Sandford et al (1989) estimates are expressed as a percentage of taxable turnover adjusted for inflation in Table 16. However, in the light of the recent introduction of the Self-Assessment for Corporation Tax Regime, there is a need for up-to-date research into the current level of compliance costs, with this element of the tax system. The Inland Revenue has commissioned this work.

Table 16: Compliance Costs of Corporation Tax

Taxable Turnover	Turnover Bands Adjusted for Inflation	Compliance Costs as a % of Income
£0 - £49,999	£0 - £80,539	0.77
£50,000 - £99,999	£80,540 - £161,080	0.20
£100,000 - £499,999	£161,081 - £805,402	0.17
£500,000 - £999,999	£805,403 - £1,610,806	0.07
£1,000,000 - £9,999,999	£1,1610,807 - £16,108,066	0.03
£10,000,000 +	£16,108,067	0.01

4.2.4 Employment and Environmental Regulations

While, most research in the U.K. has concentrated on the compliance costs of business taxes, there has also been considerable interest in other policy areas such as employment regulations, health and safety and environmental protection. A review of the literature has identified that apart from taxation, another main concern for small businesses is the burden of new employment legislation (SBRT 2000; FPB 2000; CBI 2000). It has been suggested that the introduction of new employment regulations

such as the Working Time Directive (WTD), National Minimum Wage (NMW), the Working Families Tax Credit (WFTC), and Parental Leave have affected many businesses in the U.K.. However, we identified little evidence regarding the assessment of the compliance and administrative costs for environmental regulations.

In a survey by The Forum of Private Business (FPB 2000) the cost of administering employment regulations for firms with less than 10 employees is estimated to average £6,500 per year. The study found that nearly half of owner/manager businesses (47%) perceived an increase in their compliance costs for existing and new employment regulations. Table 17 shows that while the average weekly additional cost is greater for larger firms, smaller firms spend more time complying with employment regulations.

One surprising finding was that firms employing 20-49 employees had incurred the highest costs. This pattern is not repeated in the SBRT studies (see table 8 above).

Table 17: Mean Number of Hours Spent on Compliance with Employment Regulations

Number of Employees	1 – 4	5 - 9	10 – 19	20 - 49	50 - 99	100+
Average Weekly Additional Hours	4.75	6.94	6.35	13.16	6.95	3.67
Average Weekly Additional Costs	£81.45	£84.80	£140.12	£184.18	£174.57	£133.33

Source: FPB 2000

The survey also indicated that the majority of small firms were concerned about the timing of new regulations introduced. Over 50% of very small firms reported that the government did not provide sufficient notification for new employment regulations introduced. In addition 64.1% of firms rated the quality of advice on new employment regulations introduced to be very poor. FPB maintain that as a result of inadequate and insufficient information businesses expend a greater amount of time on administrative procedures thus resulting in the additional high costs associated with employment regulations.

Of all the employment regulations, respondents reported that the WTD, WFTC and Stakeholder Pensions were causing the most problems in terms of the number of records that had to be maintained (see Table 18)

Table 18: Cause of the Most Problems for Record Keeping

Regulation	% of responses
Working Time Directive	38.7%
Stakeholder Pensions	38.1%
Family Tax Credit	36.20%
Employment Contract	34.6%
Time off Dependents	29%
Maternity Leave	27%
Paternity Leave	25.6%
Minimum Wage	18.8%

Source FPB 2000

4.2.5 Working Time Directive and Parental Leave

The Confederation of British Industry (CBI 2000) conducted a type 4 survey over the summer of 2000. They received 424 replies (a 21% response rate) and report that red tape caused by the Working Time Directive and Parental Leave is likely to adversely impact 85% of firms questioned. Similarly, a survey carried out by Kingston Smith (2000), found a number of firms were concerned about red tape and stated that employment regulations and the Working Time Directive were preventing their businesses from growing. However, it is believed that this was a small-scale study and no statistics about the number of respondents were presented. The FPB (2000) also found that the Working Time Directive created the most problems for record keeping in small the business (see table 18 above).

Increases in the overall burden of regulation have also been highlighted by the BRTF (1999; 2000). The BRTF state that as the result of the governments' mandate to introduce new employment protection law under the E.U. Social Chapter, U.K. businesses are having to deal with additional regulation of employment practices.

In a recent consultation exercise concerning the hotels and restaurant sector, the BRTF (2000) found that these small businesses are heavily burdened by the introduction of the WTD, WFTC and the minimum wage, because of the labour intensive nature of the sector, which maintains low wages and a high staff turnover. Whilst these findings complement the BRTF's previous work on the overall regulatory impact on small businesses (BRTF 1999), this type four consultation exercise used a case study approach and does not provide overall estimates of the compliance costs for small businesses in the hotels and restaurants sector.

4.2.6 Food Regulations

A study of the compliance costs of food regulations in the U.K. was conducted by Henson and Heasman (1996). The costs were quantified on the basis of 67 case studies covering both small and large firms. While compliance costs were estimated on the basis of recurring and non-recurring costs, Henson and Heasman (1996) constructed a framework within which to assess these costs. The evidence reported that the level of compliance varied ranging from 35% to 95% with those firms facing higher costs achieving a lower level of compliance. The researchers concluded that there are substantial difficulties inherent in estimating compliance costs for the food industry because many businesses do not routinely assess these costs and so were unable to provide the relevant information. Henson and Heasman argue that their framework is a starting point for assessing costs and benefits although a more comprehensive system is needed. Examples of the data that they collected are presented in Table 19. In the Henson and Heasman study it is noticeable that the majority of the costs incurred relate to non-recurring expenditures.

Table 19: Total Cost of Compliance for Fresh Meat Regulations

Respondent	Non Recurring Costs	Recurring Costs
3	3,000	1,800
1	4,000	3,100
4	5,600	0
8	13,700	3,000
7	17,200	0
6	98,800	1,200
5	409,000	5,100
2	1,449,663	0

Source: compiled from Henson and Heasman 1996

4.2.7 U.K. Summary

The evidence for the U.K. suggests that the area of red tape that has caused the greatest concern for small businesses is taxation (SBRT 2000). SBRT observed that over 60% of businesses with 1-4 employees suggested that they spent most time dealing with taxation issues compared with less than 10% of small businesses who felt that other regulations such as employment, environmental and health and safety were more burdensome. However, the WTD, WFTC and minimum wage are of increasing importance at the present time.

4.3 The European Union

In terms of the EIM/ENSR (1995) framework referred to on page 17 above, the study was conducted in the Netherlands (1993) to assess the average costs of the compliance burdens on businesses by size and sector. Unusually for a type three study the results were also grossed up to provide estimates of the total compliance burden for all businesses in the Dutch economy. Respondents were asked how much time was required annually to deal with administrative burdens in the different policy areas, as well as the average labour costs per hour and external costs (such as professional fees). The study estimated:

- the total costs of administrative procedures for businesses in the Netherlands to be 16.5 billion ECU³ (box 1 of the MISTRAL theoretical framework)
- 63% of these costs (10.4 billion ECU) were routine business administration costs (box 2)
- The remaining 37% of the costs (6.1 billion ECU) were costs related to compulsory compliance procedures resulting from the legislation (box 3). (EIM (1995) defines these costs as administrative burdens)
- 41% of the administrative burdens (2.5 billion ECU) were related to the procedures that firms would carry out if no legislation existed (box 4)
- The remaining 59% of these administrative burdens (3.6 billion ECU) are the result of procedures firms would not undertake if legislation did not exist (box 5). Put simply, in this study just over one fifth of all the administration work undertaken was conducted solely for the purposes of complying with government regulations.

Based on this information, the administrative costs were calculated by size and sector (Table 20). The findings indicate that although the administrative costs are higher for larger firms, costs per employee are higher for smaller firms.

Table 20: Average costs of Administrative Burdens per Size Class, Business and Employee in the Netherlands for 1993

Number of Employees	Costs Per Enterprise in ECU	Costs Per Employee in ECU
0	2,800	0
1 – 9	12,100	3,500
10 – 19	20,500	1,500

³ The ECU was the predecessor to the Euro and was worth approximately 60 pence.

20 – 29	47,100	1,400
50 – 99	62,000	900
100 or more	171,000	600
All size classes	9,800	1,800

Source: (ENSR 1995)

ENSR (1995) also report that research conducted in Germany, Finland and Belgium has shown that small businesses make more use of external sources to deal with administrative duties, while larger firms have the resources to meet their administrative obligations within their own organizations. For example, in Germany, 46% of the total administrative costs for businesses with less than 10 employees were external compared to 14% for businesses with 1000 to 5000 employees.

4.4 Australia and New Zealand

In Australia a series of studies were undertaken by Pope (1992) and Pope et al (1989; 1990; 1991) to estimate the compliance costs of the major taxes. Whilst these studies provide a picture of overall compliance costs of taxation they do not include information about the impact on small firms. The overall findings of the research were that the estimated burdens are high with company income tax being the most onerous. At the time the Pope studies were the only source of research data into the compliance costs of taxation in Australia. The Australian Tax Office (ATO) however, expressed doubts about the reliability of the results of these studies. The 1995 ATAX study attempted to provide a more comprehensive picture of the compliance costs of taxation. The results of the ATAX (1995) study imply that the Pope estimates may have overstated the compliance costs of taxation.

However, the research conducted by ATAX (1995) and Walpole et al (1999) has shown that small businesses are significantly burdened with compliance costs particularly in terms of the total number of hours taken up. Column three of table 21 indicates that approximately 90% of compliance costs are borne by small firms. For example, small firms incur 90.7% of the total time costs associated with taxation work in the Australian economy.

Table 21: Tax Compliance Costs of Small Business in 1994-95

Cost Components	A\$ Millions	Small Business Costs/benefits as a
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		% of costs of all businesses
Time Costs	5,470	90.7
Advisors Fees	2,430	85.5
Social Compliance Costs (SCC)	7,900	89.0
Deductions	(2,181)	89.2
Time Costs (after tax deduction)	3,934	90.6
Advisors Fees (after tax deduction)	1,785	85.6
SCC minus tax deductions	5,719	88.9
Cash flow benefits	(753)	42.3
Small business taxpayer compliance costs	4,966	106.9

In addition, ATAX observed that compliance costs for large firms are negative because of the resultant tax deductions and cash flow benefits. Their research confirms the regressive nature of compliance costs (see Table 22).

Table 22: Average Compliance Costs per A\$000 of Turnover in 1994-95

Type of Business	Small (< A\$100,000)	Medium (100,000 to A\$9,999 999)	Large (> A\$10 million)
Sole Traders	27.72	1.28	N/A
Partnerships	31.74	1.54	0.72
Trusts	65.44	1.55	0.32
Superannuation Funds	32.08	1.78	1.49
Companies	36.68	1.98	1.93
Overall Compliance Costs	34.13	1.74	1.84
Overall Compliance Costs after Tax Deductions	26.96	1.18	1.34
Overall Average Compliance Costs	24.71	0.98	0.60

Source: ATAX 1997

In 1996 the Australian government established a Small Business Deregulation Taskforce report (SBDTF 1996 a) to review the compliance burdens imposed on small businesses. The Task Force commissioned the Australian Bureau of Statistics and the Yellow Pages Small Business Index to undertake a national survey of small businesses in order to establish the level of administrative burdens. Evidence was also obtained from various industry based surveys and studies. Furthermore, the Task Force commissioned its own research to gather evidence from individual companies, trade associations, focus groups and other experts. The methodological details of this survey are not available, a summary of the findings have been reported by SBDTF (1996 a). The SBDTF define small businesses as having a turnover of less than A\$10 million per annum and having less than 20 employees in the case of non-manufacturing businesses and less than 100 employees for manufacturing businesses. In addition, small firms are owner managed with most of the capital provided by the owners. The Working Overtime Survey 1996 highlighted that the majority of small firms were frustrated with:

- the complexity of taxation and employment regulations
- administrative and compliance costs of dealing with regulations
- lack of coordination between government agencies
- poor scrutiny of regulation and review processes
- lack of effective monitoring mechanisms

The key findings of the survey are summarized as follows:

- On average small businesses spend 16 hours a week on administrative activities. Of this total twelve hours were taken up with accounts, bookkeeping and paying wages, four hours are spent doing paperwork and three hours on taxation matters. Table 23 shows that the average time spent on accounting and compliance is higher for firms with a turnover above A\$500,000 compared to very small firms and the amount of time spent on tax activities are also higher than those spent on other matters.
- Total compliance costs for small businesses are estimated to average A\$7000 a year. Of this \$3000 is spent on external advice. These figures do not capture the lost opportunities and disincentive effects created by the compliance burdens.

Table 23: Time Spent on Compliance Activities

Hours per year	All Small Businesses	Turnover up to A\$500,000	Turnover over A\$500,000
Accounting, bookkeeping etc (non compliance)	615	409	1112
Tax Matters	141	120	200
Superannuation	21	12	43
Workers Compensation	10	7	18
Other Compliance	45	35	75
Sub Total	75	54	136
Total	832	582	1447

Source SBDTF 1996

The SBDTF believe that such surveys are valuable in contributing to their understanding of the burdens imposed on small businesses and from survey findings the SBDTF have proposed more than 60 recommendations to help reduce red tape (Time for Business 1996).

In New Zealand a comprehensive study into the compliance costs of business taxes was conducted (Sandford and Hasseldine 1992) to determine the impact of costs faced by employers. Compliance costs were estimated in relation to business turnover and size. The findings (see Table 24) indicated that compliance costs are regressive and particularly severe for smaller firms. The results show that mean net compliance costs are estimated at NZ\$141 million. Furthermore, when cash flow benefits are accounted for the level of compliance costs remains extremely high for smaller firms compared to larger businesses that experience a net benefit from compliance.

Table 24: Total Compliance Costs (NZ \$)

Size	Mean Compliance Cost	Mean Value Cash flow	Mean NET Cost	Total Gross Costs (000's)	Total Value Cashflow (000's)	Total NET Cost (000's)
1 – 2	929	63	866	77,288	5,241	72,047
3 – 5	1,394	206	1,188	49,709	7,346	42,363
6 – 10	1,795	394	1,401	24,466	5,370	19,096
11 – 20	1,425	494	1,931	17,070	3,477	13,593
21 – 50	4,019	1,049	2,970	15,795	4,122	11,673
51 – 100	1,409	2,507	(1,098)	1,726	3,071	(1,345)
101 – 500	7,618	7,608	10	6,993	6,984	9
500+	9,539	92,152	(82,613)	1,898	18,338	(16,440)
TOTALS				194,945	53,949	140,996

Source: Sandford and Hasseldine 1992

4.5 Conclusions

A review of the evidence on the regulatory burden on small businesses in the U.S.A., U.K., E.U. and Australia and New Zealand has shown that there is a large volume of literature about compliance costs, but the nature and extent of this material varies from country to country. In spite of this there is broad agreement about a number of key facts.

First, in all countries it is recognised that small firms bear a relatively higher burden of costs than larger businesses (see for example, Sandford 1989, ENSR 1995, Hopkins 1995, ATAX 1995). The extent to which this burden is disproportionate is harder to judge because many studies do not produce information about the impact on businesses of different sizes, or do not summarize data in a way that can be generalized (e.g. BCC 1999, Henson and Heasman 1996). Where data is produced by size band, the categorization of small firms often varies (even between agencies within countries) as do measures of size (turnover or employment size are the most frequently used measures) (see for example Beale and Lin 1998). Finally, because of the heterogeneity of the small business sector, modest sample sizes often reduce the amount of sub-analysis that can be conducted (e.g. see Hopkins 1992).

However, where it is possible to quantify the differential impact on small businesses it appears that the burden faced by businesses with up to 20 employees is at least 35 per cent higher than for the largest size of firm (see for example Harvey 1998, ENSR

1995, Sandford 1989, Small Business Administration 1995). Unfortunately this minimum differential cannot be used as a rule of thumb as a single area of regulation can affect businesses in particular industry sectors very differently (Beale and Lin 1998). In addition in some areas (particularly taxation) large firms actually benefit because of the inter-action of economies of scale and cash flow benefits (see for example Sandford and Hasseldine 1992). As a result, in certain circumstances, small firms may bear compliance costs that are several times larger than the costs borne by large firms (e.g. Inland Revenue 1998, Sandford 1989, Beale and Lin 1998).

5. Impact of Research on the Regulatory Burden

5.1 The U.S.A.

In the last 20 years there has been an enormous growth in the number and scope of federal environmental, health and safety and tax regulations. The cost of federal regulations has become a high profile issue for the government as well as businesses and this concern has prompted several studies of the costs of regulations across business types and sectors (referred to in section 4.1 above). This section will consider the effect of these studies and more general political pressure in encouraging reform in the area of regulation, specifically regulations that affect small businesses.

5.1.1 The U.S. Approach to the Development and Monitoring of Regulations

In attempting to reduce the burden of federal regulation, paperwork and tax compliance on the small businesses, the President initiated the Small Business Forum on Regulatory Reform. This Forum brings together small businesses and federal agencies to develop new solutions that make regulations more cost effective. In 1993, the President issued Executive Order (E.O.) 12866 to ease the regulatory burden on small businesses. This E.O. requires federal agencies to assess the most significant regulations and ensure that they have the minimum impact on society. The regulatory impact analysis (RIA) required by the E.O. provides the primary source of

information on the benefits and costs of all “significant” regulations⁴. A “significant” regulation will have an impact of \$100 million or more on the economy; lead to increases in costs / prices for businesses and consumers; and have significant effects on competition, employment, investment, productivity and innovation.

A primary objective of the E.O. is to reduce the disproportionate share of the federal regulatory burden that falls on small businesses. Under the E.O each agency must.:

- Choose the regulatory mechanism that maximizes net benefits, unless the statute specifies another approach;
- Assess the costs and benefits of regulatory alternatives, including the alternative of no regulation; and
- Tailor its regulations to impose the lowest possible burden on society, including businesses of different sizes, consistent with achieving the regulatory objectives.

Each regulation is to be accompanied by a formal regulatory analysis that includes an assessment of the costs and benefits of each regulatory alternative. Under the Regulatory Flexibility Act (1980) an assessment of regulatory alternatives minimizing the impacts on small firms⁵ is required if there is likely to be a significant impact on a large number of small businesses. The Regulatory Flexibility Act provides no definition for "significant" and it can mean anything depending on the requirements of the regulation and the structure of the regulated environment. In addition the act requires all agencies to submit proposed regulations and economic analysis to be reviewed by the Office of Management and Budget (OMB) for compliance. The regulatory accountability provisions of 1996, 1997 and 1998 require the OMB to assess the benefits and costs of existing federal regulatory programs and to recommend programs or specific regulations for reform or elimination.

⁴ The Agency responsible for the regulation determines whether or not it will have a “significant” impact. (source: Shawne Carter McGibbon, Acting Director of Interagency Affairs, SBA).

⁵ The RFA 1980 does not provide a size classification for small businesses. The Small Business Act defines a small business as one that is not independently owned and operated and not dominant in its field. The Act then refers you to SBA's regulations for more specific definitions. In the case of manufacturing a small business is defined as one with fewer than 500 employees, whereas, service type businesses would be classified as one with annual receipts of \$5 million or less. (source: Shawne Carter McGibbon, Acting Director of Interagency Affairs, SBA)

Several statutes have been enacted to reduce the costs and burdens of Federal regulations, including the Paperwork Reduction Act of 1980, the Regulatory Flexibility Act (1980), the Small Business Regulatory Enforcement Fairness Act of 1996, and the Unfunded Mandates Reform Act of 1995. Congress has also considered but not enacted other initiatives to reform the regulatory process. Currently, Congress is considering Section 981 of the Regulatory Improvement Act of 1998 with the intention of improving the quality of regulatory decision-making. The aim will be to codify many requirements of E.O 12866 and establish a requirement for independent reviews of economic evaluations.

These initiatives have attempted to relieve the regulatory burden of small firms in a number of ways:

- The Regulatory Flexibility Act (RFA 1980) is the pivotal act for small business regulatory reform, in which it was acknowledged that small firms suffer disproportionately from the impact of federal regulations.
- The Paperwork Reduction Act (PRA 1980) was strengthened in 1995, requiring agencies to reduce paperwork requirements by 10% in 1996 & 1997 and 5% each year thereafter
- Between 1994 and 1995, over 20,000 small businesses engaged in state and regional meetings to make recommendations concerning small firms and federal policies. This led to the 1995 White House Conference on Small Business, which made a number of recommendations concerning regulations, paperwork, cost/benefit analysis etc.
- The Office of Advocacy is required to report to Congress every year on federal agencies compliance with the RFA 1980. As a result of these reports the Small Business Regulatory Enforcement Fairness Act (SBREFA 1996) came in to force. The Act was an attempt to reinforce and strengthen the RFA of 1980. This amendment allows small businesses to challenge agencies on proposed regulations. The Act also covers regulations enforced by the Internal Revenue Service and requires that both the Environmental Protection Agency (EPA) and the Occupational Safety and Health Administration (OSHA) receive input from

affected small businesses before proposed regulations are published. Key provisions of the Act include:

Regulatory Compliance Simplification: Agencies are required to develop comprehensive guidelines in plain English that can be understood by small businesses. This must be done for all new regulations

Participation of small businesses: Federal agencies are required to ensure that small businesses are engaged in the process of regulation development, for example through industry publications, direct mail, public meetings and electronic communications.

Equal Access to Justice Amendments: If a number of small businesses are adversely affected by an agency's proposed regulation, the small businesses have the power to take the agency to court. The court will examine the agency's economic analysis. If an agency claims that the regulation does not have a significant economic impact on a large number of small businesses, the agency must justify this assertion with a quantitative analysis. If an agency determines that a regulation will have a significant impact, it is mandated to complete a full regulatory and economic analysis and ask small businesses to provide feedback. Essentially, a court will critically review the data used in the decision-making process. The court may examine:

- The agencies definition of a small business
- Its regulatory analysis
- The agency's attempts to collect comments from small businesses
- Agencies decision-making process to support a regulation and the basis for reaching their conclusions.
- Compliance with a requirement for periodic reviews of regulations at the 10-year anniversary of every regulation.

Attorney Fees: Small businesses can be awarded attorney fees and other expenses related to defending any unreasonable court action taken against them for violations of statutory or regulatory requirements. If the government agency's

claims are unreasonable when compared with the verdict or decision granted by the courts, then a small business can be awarded attorney fees and other expenses related to defending the action. Attorney fees can be recouped under the Equal Access to Justice Act. Allowable attorney fees have been increased from \$75 to \$125 per hour. It is understood that these fees can only be awarded in retrospect. Several successful cases include Northwest Mining Association versus Babbitt, 5F. Supp. 2nd 9 (D.D.C 1998.); and Southern Offshore Fishing Association versus Daley, 55 F.Supp.2d 1336 (M.D. Fla.1999). Attorney fees were granted in the first case. In the second case, the Judge appointed a special master who recommended attorney fees, but the case was eventually settled.

Congressional Review: Congress is required to review each major regulation that has to be made public before it can take effect. All “significant” regulations, defined under EO 12866 (see above) are subject to review by Congress. This provides small businesses with an opportunity to discuss the regulation with government officials. Regulations cannot be brought into effect until the Congressional review is complete.

Regulatory Enforcement Reform of Penalties: Agencies are required to enact a policy for reducing or in some cases waiving fines for the violation of regulations. If penalties are imposed, small businesses are allowed to use the money to rectify the problem rather than pay a fine to the government. In 1997, in accordance with the SBREFA, the Occupational, Safety and Health Authority (OSHA) offered more than \$107 million in penalty reductions for small companies.

Small Business Ombudsman & Boards: The SBA are required by law to appoint a small business and agriculture regulatory enforcement ombudsman to work with each agency to receive comments from small businesses concerning enforcement activities of federal agencies. The national ombudsman must report to Congress annually on her findings.

5.1.2 Evaluating Federal Regulations

The reliability of federal agencies economic analysis with regard to regulatory reform has been regarded as inadequate and there is evidence to suggest that programs are inefficient (Lutter 1996; 1998, Hahn & Moyle 2000), criticisms include failure to:

- (1) Identify the problem to be addressed and its significance
- (2) Determine whether the benefits justify the costs
- (3) Conduct a risk assessment

Research also suggests that more than half of the federal government's regulations would fail a strict benefit-cost test using the government's own numbers (Hahn 1998).

The General Accounting Office (GAO 2000) investigated the use of economic analysis and reported that some 20 economic analyses from the 5 regulatory agencies reviewed failed to incorporate all of the best practice contained in the OMB's guidance. They found, for example, that the 20 economic analyses varied in the extent to which they considered alternatives, described benefits and costs, explained key variables and accounted for uncertainty.

Federal Focus (1995), a consulting firm, reported that the Environmental Protection Agency (EPA) was not complying with E.O 12866 for most of its regulations. It concluded that many EPA regulations are examples of prescriptions that force firms to use inefficient means to achieve a regulatory aim. It has also been suggested that EPA assessments are too unreliable for use by the public and Congress for the purpose of holding regulators accountable for their decisions (Hahn 1999).

5.1.3 Improving the Quality of Regulatory Analysis in the U.S.

Many studies have also attempted to estimate the impact of regulations. There is a long-standing debate over the economic impact of environmental and occupational health regulation. On the one hand there is the idea that regulations lead to more efficient methods of production and may encourage management to explore new and cheaper ways to promote safety and environmental quality, thus stimulating the competitiveness of firms (Porter 1991; Porter & Van de Linde 1995). On the other hand critics argue that regulations are often badly designed and divert economic

resources and managerial attention, thus hindering technological innovation and productivity growth (Gray 1987; Hazilla & Kopp 1990). Porter and Van de Linde (1995) proposed that *“properly designed environmental standards can trigger innovation that partially or more than fully offset the cost of complying with them”*. For instance many companies are adopting pollution prevention initiatives and best manufacturing practices. However, there is evidence to suggest that regulations intended to reduce risks to health and safety and the environment are inefficient (Lutter 1999).

Evidence also suggests that the inefficiency of federal agencies in designing and implementing regulations result from the considerable independence that Congress and the courts have given to them (Lutter 1999; Hahn 1996). Agency officials however, have argued that statutory mandates limit their use of economic analysis. Officials state that in emergencies they have little discretion or time to react. For instance in the Clean Air Act Amendments of 1990, Congress required the EPA to review and revise its regulations on testing motor vehicles and engines within 18 months, to ensure that the tests reflect actual, current driving conditions, including conditions related to fuel, temperature, acceleration and altitude. Because the agency concluded that the current test procedures had shortcomings including sensitivity to aggressive driving, rapid speed fluctuations and the use of air conditioning, EPA decided that completely new regulations were required.

It has also been argued that most proposed regulations deliver benefits that are small relative to their costs (Lutter 1999; Moyle 1999; Hahn & Moyle 2000; Hahn & Litan 2000). Many studies have assessed the quality of agencies' economic analysis of regulations (Hahn et al 2000). In their review of 20 economic analyses (referred to above) the General Accounting Office (GAO 1998) found that agencies' analyses varied in:

- the number and range of alternatives considered;
- the degree to which benefits and costs were quantified, monetized and described in qualitative terms;
- the degree to which assumptions and key variables were explained;

- and the ways in which uncertainty was accounted for in conclusions.

While E.O. 12866 requires agencies to show that the benefits of economically significant regulations justify the costs, estimates provided tend to be superficial.

In response to growing concern about understanding the impact of regulations on consumers, business and the government, the AEI-Brookings Joint Center for Regulatory Studies was established. A council of academic advisors examines existing and new regulatory proposals and offer suggestions to the OMB and government for reforming regulations. A few examples of the Centre's work are given below:

- Lutter (1998) found that EPA's estimates of the benefits of the Clean Air Act rely on several assumptions that are not well identified and in effect fail to reflect the true range of possible benefits. Lutter argues that these benefits are determined by how one values improvements in health and should be based on the monetary value of presumed health benefits. EPA's estimates (of the benefits) for 1990 were seventeen times greater than estimates provided by Hahn and Hird (1991). Lutter goes on to say that the EPA estimated the advantages that would result from improvements in air quality and then valued these gains in health and the environment by using estimates of how willing people were to pay for them. The analysis did not describe the net benefits of particular pollution control programmes and did not identify programmes that would have offered greater net benefits if the regulations had been more or less stringent.
- EPA's new regulation to protect ground water, the *Pesticides and Ground Water Management Plan* (1996) was criticized for failing to provide an estimate of the benefits and the full costs of contamination reduction in the proposed regulation (Moyle 1999).
- The OSHA's proposed Ergonomics regulation to reduce the risk of musculoskeletal disorders (MSD's) in the workplace was criticized for failing to evaluate the nature and extent of MSD's and for its poor economic evaluation of the costs and benefits (Hahn and Moyle 2000).

- Hahn (1999) maintains that federal agencies often fail to monetize benefits and use different assumptions to estimate the benefits. After standardizing the agencies' numbers Hahn estimates that approximately 43 percent of all regulations (46 out of 106) did not pass a benefit-cost test. Hahn argues that agencies' analyses tend to overestimate benefits and underestimate costs. In contrast, Harrington et al (1999) found that cost estimates of agencies were higher than the cost estimates provided by independent researchers. Thus both costs and benefits may be overstated, implying weak data or methodology rather than any deliberate bias.

As a result a number of suggestions for improving the quality of regulatory efficiency have been proposed (Hahn et al 2000):

- Congress should require that agencies make available each RIA on the Internet before a proposed or final regulation is considered in the regulatory review process. This should result in regulators being more accountable.
- Each RIA should include an executive summary, which should be standardized across agencies to allow comparisons when setting regulatory priorities. This will also promote accountability.
- Congress should create an independent agency or a congressional office of regulatory analysis (CORA) that would replicate regulatory agencies' estimates of the economic effects of current and proposed regulations. The presence of such an agency would improve the reliability of agencies economic analyses and render decision makers more accountable to the public and congress
- A congressional requirement to conduct cost-benefit analysis. Currently, regulatory decision-making tends to satisfy congressional mandates and avoids analyzing costs and net benefits with the result that inefficient regulations are produced.

- All regulatory agencies should be required to follow OMB's "best practice" guidelines when undertaking a RIA.

5.1.4 Summary

It appears, from this review, that the measures and assumptions that have been used in analyzing compliance costs have had a large impact on the estimates produced. As a result there is a great deal of uncertainty surrounding the validity of the results. Different approaches are used to assess the costs imposed on the economy by federal regulations. Depending upon the measures used and the assumptions made, the estimates can vary widely.

Our review also suggests that there is a large degree of uncertainty among academics and agencies about questions concerning costs and benefits of regulations. While agencies maintain that they operate under clear statutory mandates, academics are convinced that agencies take a haphazard approach to reporting and analyzing costs and benefits. Estimates of total regulatory costs can vary depending on assumptions about what constitutes "regulatory costs". For example, economists argue whether or not transfers such as the added cost a consumer pays for goods in the market place because of agricultural price supports, should be included in such estimates. Others are concerned about including process costs, such as those for completing tax returns. These two cost elements account for over half of the estimates in some studies. In addition the cost effectiveness of regulations varies dramatically across agencies, indicating that a variety of factors influence regulatory decision-making.

It seems that there is no archetype that is being used for regulatory analysis that may lead to improvements in both the regulatory process and regulatory outcomes. While the U.S. government has standardized its assessment of the costs and benefits of proposed regulations,⁶ there appears to be little convergence between researchers in estimating the compliance and administrative costs of regulation.

⁶ For a complete discussion of the guidelines see OMB's *Best Practices* Document (1996)

Outside the U.S.A. much less research has been conducted in the field of compliance costs. In the next sections we will review the government literature for the U.K., European Union, Australia and New Zealand and then assess some of the research that has been undertaken in these countries under the three regulatory policy areas that form the basis of this study.

5.2 U.K.: Changing the Regulatory Process for Small Businesses

While the most common approach to U.K. government regulatory policy has been deregulation, more recently the emphasis has been on the production of better regulations.

The first major initiative for small business regulatory reform was the White Paper, *Lifting the Burden* (DTI 1985). This paper concluded that government regulations had imposed significant compliance costs on small businesses. Two later White Papers, *Building Businesses Not Barriers* (DTI 1986) and *Releasing Enterprise* (DTI 1988) prescribed deregulation policy in greater detail. Compliance Cost Assessment's (CCA) were to be conducted to determine the costs to business of proposed regulations. However, in 1993 a DTI *Efficiency Scrutiny Report* found that CCA's had failed to achieve their purpose and did not address the issue of compliance costs. Even so, the U.K. government continued with its stated policy of deregulatory reform and minimizing the burden imposed on businesses remained a key concern. A series of business task forces were established to review over 35,000 regulations and identify areas of government activity, which could be deregulated.

A further a series of White Papers published by the DTI (1994a; 1994b; 1994c) provided guidelines for improving the quality of regulations. Two further measures were aimed at relieving the regulatory burden for small business. Firstly, British Ministers together with European Officials were held to be accountable for ensuring that the burden of legislation was minimized. Secondly, a "think small first" principle was added to the regulatory process: "new regulations must be framed with the interests of small businesses in mind" and this was put into effect by means of a

“small business litmus test”(DTI 1994a).⁷ Since 1996 the Regulatory Impact Assessment (RIA) has replaced the CCA, emphasizing “better regulation” rather than deregulation. In 1997 the government initiated the Better Regulation Task Force to advise on the quality of regulations. In addition the Small Business Service (SBS) was set up in April 2000 to enhance support for small and medium sized businesses (SME’s) and to act as an advocate for small businesses within Whitehall. As part of the Better Regulation initiative, the government has required departments to assess the risks, costs and benefits of new legislative proposals. A deregulation unit has been established within the Cabinet Office.

A recent initiative by the Better Regulation Task Force (BRTF 1999) using RIA’s acknowledges both the contribution of small business to the economy, and the competitive disadvantage they suffer in relation to compliance costs. The BRTF looked at the regulatory barriers to the start-up, success and growth of small businesses and found that small firms are often at a competitive disadvantage compared with larger firms because of the cost and time involved in regulatory compliance. More recently the BRTF (2000) have proposed a number of recommendations to the government to help ease the regulatory burden on small firms. These include greater financial and administrative assistance; better quality and timeliness of information, better consultation and transparent cost assessments (for a detailed review see *Helping Small Firms Cope with Regulations – exemptions and other approaches* 2000). It has been argued, however that the BRTF initiative has yet to achieve a significant impact in reducing the burdens faced by small firms.

5.3 The European Context:

One role of the European Union (E.U.) is to monitor and control the regulatory process of the different member states in order to promote the effective functioning of the Single Market. The E.U. has its own system of regulatory impact assessment, known as the *fiche d’impact*. The purpose of the *fiche d’impact*, like the U.K.’s RIA, is to relieve the regulatory burdens of small business. While the domain of the *fiche*

⁷ In practice, we have found no reliable evidence that these measures produced substantial changes to assist small businesses

was supposedly wider than the RIA in terms of covering impacts on employment and competitiveness, the quality of the *fiches* produced has been subject to criticism. In many instances *fiches* have not been produced and when they have been conducted they contain little information with no quantitative assessment of the costs to businesses (Froud et al 1998). A DTI Efficiency Scrutiny Report (1993) described them as being “perfunctory”. The Cabinet Office (1996) stated:

..... “fiches d’impact are not well developed in the commission and are often not produced until the commission proposal is finalized. This impact assessment is also no substitute for proper assessment of the domestic (i.e. U.K.) compliance costs”

Froud et al (1998) note that producing an E.U. “fiche” is potentially complex, because assessments of regulatory impacts have to be made across a diverse set of member states.

Recently, a number of initiatives have been implemented by the European Commission (E.C) to address the growing concerns about the regulatory process as well as to promote the effective functioning of the Single Market (Cabinet Office 1996):

- Simpler legislation for the internal market (SLIM) designed to find ways of reducing the burdens of existing Single Market legislation
- European Business Test Panel set up in order to obtain feedback from businesses on regulations that have been implemented
- Business Environment Simplification Task Force (BEST) to identify administrative and regulatory burdens impacting small business growth at both the E.U. and national levels.

While these initiatives may go some way to improving E.U. legislation, we found little evidence of empirical research concerning the administrative burdens of small businesses in most European countries.

The European Network for SMEs (ENSR 1995) has considered the current state of administrative burdens on businesses in European countries. ENSR suggest that

because of the lack of research in most E.U. states, it is not possible to provide specific information on the administrative costs of regulations for each of the countries. As a result it is not possible to make comparisons between countries concerning the total costs of administrative burdens. Overall, most administrative burdens are the result of taxation legislation, with the lowest level of burden resulting from environmental legislation. In terms of policies being implemented, some E.U. countries and in particular the U.K. and Sweden (to some extent France and the Netherlands) have relatively advanced strategies for dealing with administrative burdens and utilize an array of measures. This position may be compared to countries like Italy, Belgium, Luxembourg, and Spain where initiatives to ease the burden of regulation have been launched only more recently (ENSR 1995).

5.4 Australia and New Zealand

The Australian Governments “best practice” principles for regulation are the *Guidelines for Ministerial Councils and Standard Setting Agencies*, which are accompanied by a Regulation Impact Statement (RIS). All Commonwealth departments and agencies are required to prepare a RIS for all regulations impacting on business (for more details see *Guideline for Preparing RIS 1998;1999*).

In response to the recommendations of the SBDTF (referred to in section 4.3 above), the government has agreed an action plan to implement initiatives to promote the growth of small businesses (see *More Time for Business 2000* for a detailed discussion). See also the fourth *Annual Review of Small Business*, prepared by the Office of Small Business (OSB 1999), which outlines the actions that the Australian government is undertaking on behalf of small businesses. The SBDTF have proposed more than 60 recommendations to help reduce red tape (SBDTF 1996). The broad recommendations are:

- reforming the tax system (e.g. by simplifying the rules on fringe benefits)
- helping small business employers with employment issues
- streamlining government processes and regulations to help reduce the burden of paperwork and compliance costs

- Change the regulatory culture
- Greater coordination between government and businesses to deal with regulatory issues
- Assisting small businesses in reducing the burden through helping them to improve their management systems
- Improving the regulatory system through the development and monitoring of regulations and ensuring that new regulatory proposals impose the minimum burdens.

A number of regulation reform processes have been initiated to help alleviate the regulatory burdens:

- Regulation Efficiency programs such as the Legislative Instruments Bill to increase parliamentary scrutiny of regulations; Legislative Review Programs and the Removal of Redundant Regulations
- National Competition Principles Agreement to review all existing legislation that restricts competition
- Commonwealth Reviews that could lower the regulatory burdens for small businesses. These include, for example, tourist visas; rural sector reviews; superannuation; intellectual property provisions; review of the Agricultural and Veterinary Chemicals Act 1994.
- State and Territory reviews concerning health legislation; business licensing; agriculture; occupational health and safety; and product standards.

Evans and Walpole's (2000) review of the extent to which *tax impact statements* are used in the OECD countries identified that the U.K., U.S. Australia and New Zealand and the European Union made extensive use of impact statements which they considered to be fundamental to the process of developing policy and legislative change. In comparison, in certain other countries including, France, Germany, and the Netherlands the use of impact statements was a peripheral activity. In addition the survey found that the U.K. and New Zealand had developed the most sophisticated "processes and mechanisms" for assessing the compliance costs associated with taxation.

Evans and Walpole (2000) report on the method used to calculate the regulatory impact of taxes in New Zealand, known as the Compliance Cost Impact Report (CCIR). The New Zealand government guidelines distinguish between two types of CCIR – a quantitative CCIR and a qualitative CCIR. While a monetary valuation is needed for the assessment process, it is recognized that this is not always possible to achieve. Under the New Zealand system, if a monetary value can be assigned to costs, then this is referred to as an “assessment”, otherwise a compliance cost “statement” is required. The guidelines illustrate a six-stage process for assessing compliance costs and completing CCIR’s (see Table 25).

Table 25. The Compliance Cost Impact Report Process (NZ Inland Revenue 1995)

Six Stages
1. Identify the Impacts
2. Identify the Customer Base
3. Calculate the Cost of Impacts
4. Prepare Report
5. Review Report
6. Evaluation

Evans and Walpole (2000) identify a number of key principles incorporated into the CCIR.

- CCIRs are comprehensive and are compiled for changes affecting both business and personal taxpayers.
- The CCIR process is consultative. It is recognised that taxpayers know most about their own compliance costs. Even in cases where consultation appears to be undesirable (such as in cases of budget sensitivity) consultation with suitable confidential parties is recommended.
- CCIRs are refined and reviewed. CCIRs are refined during the process of compilation and a review date is specified at the time of completion.
- CCIRs are flexible. This is evident in the distinction between “assessments” (quantified CCIRs) and “statements” (unquantified CCIRs).
- CCIRs consider incremental costs rather than the overall costs of compliance, i.e. they measure changes in costs.
- The process is monitored by the Compliance Cost Reduction Unit in the Inland Revenue Department.

6. Conclusions

The aim of this section is to provide a brief comparison of the evidence relating to the assessment of the compliance costs of regulations identified for each of the countries referred to above, and to draw conclusions. The review has ascertained that in all the countries studied there is widespread concern about the costs associated with government regulations and their impact on small businesses. In addition we have noted that research in the U.S. has attempted to estimate the regulatory cost to the economy as a whole, specifically for social and economic regulations. Research in the U.K., European Union, Australia and New Zealand has tended to concentrate on the impact of taxation regulations.

The extent to which it is possible to compare research methodologies and results across regulations by business size and country is limited because of the lack of consistency in the empirical data. As noted by Sandford (1995), international comparisons are “*more likely to mislead than to enlighten*”, because there are differences in:

- the time periods studied
- the quality of the data, because of differences in sample frames and response rates
- the definitions used
- the methods used to estimate compliance costs
- the baseline or unit of measurement for international comparisons, for instance, the differences in tax structures, tax populations, tax rates etc.

While these comments were made by Sandford in respect of tax regulations, we consider that they are also applicable to environmental and employment regulations. Therefore, the aim of this comparison is to explore the comprehensiveness or paucity of the empirical findings rather than seeking to identify the differences in compliance costs between the countries examined.

In comparing research that has attempted to assess the compliance costs of environmental and employment regulations, the research studies conducted have taken place in the U.S. and the U.K. In the U.K., a number of RIA's were identified concerning health and safety regulations and a number of surveys have studied the regulatory burdens faced by employers. Empirical assessments of these regulations in Australia, New Zealand and the European Union do not appear to have been reported. The implication here is not that the impact of environmental and employment regulations is insignificant in these countries, but rather that there have been relatively few attempts to quantify the burden imposed by these regulations, particularly the burden on small businesses.

Five recent studies have been identified that assess the costs of complying with Federal regulations in the USA (Hahn & Hird 1991; Hopkins 1995; Harvey 1998; Beale and Lin 1998; OMB 2000). As already discussed, two of these studies (Hahn & Hird 1991; OMB 2000) are concerned with the regulatory burden on the economy as a whole. The other three studies have concentrated their efforts on providing compliance cost data for small businesses. Harvey (1998) provides data on the compliance costs of OSHA regulations and considers the impact of these across firm size. Beale and Lin (1998) on the other hand examine the impact of individual environmental regulations on small businesses. The most extensive analysis of regulatory impacts on firms of different sizes is provided by Hopkins (1995).

All of these studies have shown that the direct costs of regulations fall disproportionately on the small firm (see Table 26). In addition both Hopkins (1995) and Beale and Lin (1998) defined small businesses as those having fewer than 20 employees and demonstrated that the operating, capital and paperwork costs of administering taxation are more burdensome for small firms. However, there are also marked differences in some aspects of these studies. It is difficult to compare the compliance costs identified because the estimates are based on different regulations and different industries.

In section 4, details were provided of compliance costs relative to particular types of regulations by country. For the purposes of comparison, Table 26 illustrates the compliance and administrative costs of regulations for small firms by employee size

or turnover. The impact of the regulations listed has been indexed (taking an index of 100 for large firms) in order to observe any patterns that may be evident. The results in Table 26 have been designed so that the greater the relative burden that small firms face, the higher the index. In some circumstances large business taxpayers may enjoy net benefits from compliance as a result of tax deductions and cash flow benefits. This existence of cash flow benefits reinforces the degree of regressivity of compliance costs by reference to employment size.

Table 26: Data for Compliance and Administrative Costs of Regulations For Small Firms By Employee Size/Turnover

Regulation Examined	Author / Date	Large Firms Compliance Cost Per Employee 500 +	Small Firms Compliance Cost Per Employee 1 – 20	Small Firm Index
Environmental Regulations (total estimate)	Harvey 1998	\$671	\$1,246	185.7
Environmental	(1) Small Business Administration (1995)	\$767	\$1151	150.1
Process Regulations (total estimate)	Harvey 1998	\$566	\$1,050	185.5
Social & tax	Hopkins 1992	\$1025	\$1904	185.7
“Other” Social excl. Tax	(1) Small Business Administration (1995)	\$405	\$608	150.1
Administration	ENSR 1995	1800 ECU	2500 ECU	138.8
Taxation	(1) Small Business Administration (1995)	\$646	\$970	150.1
Taxation (PAYE)	Sandford 1989	£58	£215.5	371.6
Taxation (PAYE & NIC)	Inland Revenue 1998	£49.3	£183.2	371.6
Taxation (VAT)	(2) Sandford 1989	For businesses with turnover >£10m 0.003%	For businesses with turnover between £500k and £1m 0.026%	866.7
Taxation	(3) Sandford & Hasseldine 1992	NZ \$ (82,613)	NZ \$ 1347	Not applicable

Note:

- (1) Care must be taken in interpreting these statistics. It can be seen that, although the OA claims to be offering an analysis by type of regulation and by size of business, the index for each of the categories quoted is identical, leading to doubt about the basis on which the figures have been prepared.
- (2) Compliance costs as a percentage of taxable turnover
- (3) The small firm index is not applicable because of the net benefits enjoyed by large firms

While these results indicate the disproportionate impact on smaller firms, it must be noted that the components of the compliance and administrative costs for individual

regulations vary considerably within and across the countries. For example, the U.K. and New Zealand estimates for taxation regulations take into account indirect benefits such as cash flow. However, the estimates provided for tax regulations by researchers and agencies in the U.S. are usually based on direct costs alone.

Despite the methodological weaknesses and the differences between the countries in estimating the compliance and administrative costs of regulations a number of general conclusions can be drawn. The findings have indicated that:

1. It is apparent that regulatory burdens are a widespread concern in all of the countries investigated
2. The U.S.A. system of assessing regulations is more open and adversarial when compared to the system in the U.K., the E.U., Australia and New Zealand. A detailed description is provided in section 5.1 (above), examples of the openness and adversarial nature of the system include:
 - the existence of statutory bodies with a duty to scrutinize aspects of the regulatory process e.g. the Office of Management and Budgets, the Office of Advocacy
 - all “significant” regulations are subject to scrutiny by Congress before they can be enforced
 - access to judicial review where a number of small firms believe that they will be adversely affected by proposed regulations
 - the award of attorney fees to small firms in defending an unreasonable court action brought by a regulatory body
 - the reduction or waiver of fines for the violation of regulations and the translation of fines imposed into resources to be used for the purpose of meeting the business’s regulatory obligation.
3. All the countries that have been reviewed appear to have guidelines of “best practice” for regulatory agencies to consider in their compliance cost assessments. However, evidence has indicated that regulatory agencies in both the U.K. and U.S. have historically failed to incorporate these fully into their analyses (and this

may also be true for other countries). For this reason it was difficult to assess the quality and credibility of the “best practice” guidance for each country.

4. Our evidence suggests that the issues facing small businesses in relation to the compliance costs of regulations⁸ are comparable for each of the countries. For example, a lack of understanding amongst small firms of the regulatory requirements; frequent changes in regulations, and high fixed costs.
5. In addition, evidence from the U.S.A. and the U.K. suggests that the compliance costs associated with tax related regulations are the major component of the costs of regulations for small firms.
6. The quality of data on overall compliance costs is highly variable. For example, data available on the incidence of regulatory costs is often outdated; cost estimates that have been calculated for either environmental or health and safety regulations offer general profiles of the costs of the regulatory system, but provide no precise methodology. Many conceptual issues such as the assessment of benefits, the aggregation of the cost for all regulations and baseline issues remain unresolved.
7. Overall the review of the literature has indicated that there is no widely accepted and comprehensive system to assess or monitor the full compliance and administrative costs of regulations. While some sophisticated approaches to evaluating capital and operating, as well as administrative costs of regulations have been identified, there is little available evidence that these are being rigorously adopted by governments. However, the U.S. system, whilst being far from perfect, was found to be the best available in terms of the breadth of enquiry, the level of economic expertise and the degree of control over the regulatory process. The review has also highlighted that one of the main issues of concern is the role of economic analysis in regulatory reform. The report has demonstrated that many agencies’ assessments of regulations provide inconsistent and partial estimates of the net costs of compliance. Moreover while the use of cost-benefit

⁸ In this report compliance costs relate to the administrative costs arising from the introduction or amendment of government regulations and to the day-to-day record keeping associated with complying with those regulations.

analysis as an economic tool is highly recommended, it appears that it is not widely or effectively used in practice.

8. The BRTF (2000) have considered a wide range of alternative approaches to reducing the burden of regulation on small firms. These approaches include the use of:
 - Exemptions / voluntary registrations (or kite-marking)
 - Compensation where public sector administrative responsibilities are being transferred to the private sector (e.g. WFTC).
 - Provision of compliance mechanisms (e.g. an automated payroll service).
 - Incentives to comply (e.g. electronic filing of VAT returns)
 - Individual opt-outs (e.g. the WTD)
 - Simplified procedures for SMEs

The BRTF concluded that regulators should consider all of these alternatives and that additional effort should be invested in the rigorous preparation of RIAs.

9. Finally, although governments have attempted to reduce the extent to which the burden of compliance falls more heavily upon small firms compared to bigger businesses, there is little evidence of progress. Of course it is impossible to predict the position of small firms in the absence of these government initiatives, small firms may incur lower levels of compliance costs than they otherwise would have done. However in the U.S.A., for example, there is continued criticism of the rising levels of regulation (e.g. Beale and Lin 1998) even though Congress embarked on regulatory reform before other countries (the Regulatory Flexibility Act of 1980 acknowledged the additional compliance burdens faced by small businesses). Overall, in the context of an environment in which the volume of regulation is growing in developed economies, it seems that governments have yet to discover how to reduce the relatively higher burden of compliance costs on small firms in a substantive way. As a result the small business sector and the economies of the countries studied are smaller than they otherwise would be (Bannock and Peacock 1989).

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